Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

Release Tracking Number
3 - 518

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: GENERAL ELECTRIC CO FMR

2. Street Address: 50 FORDHAM RD

3. City/Town: WILMINGTON 4. ZIP Code: 018870000

☐ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

☐ a. Tier I ☐ b. Tier ID ☐ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Submit a **Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 3. Submit a **Phase II Scope of Work,** pursuant to 310 CMR 40.0834.

☐ 4. Submit an **interim Phase II Report.** This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

☐ 5. Submit a **final Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 9. Submit a **Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report,** pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report,** pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.

☐ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report,** pursuant to 310 CMR 40.0892.

☑ 16. Submit a **Remedial Monitoring Report.** (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☑ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☑ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with a Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☑ iv. Temporary Solution

d. Number of Remedial Systems and/or Monitoring Programs: 3

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status,** pursuant to 310 CMR 40.0893.

☐ 18. Submit a **Status Report to maintain a Remedy Operation Status,** pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS),** pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative: _____

☐ 20. Submit a **Termination of a Remedy Operation Status,** pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

☐ 21. Submit a **Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☑ 23. Submit a **Temporary Solution Status Report,** pursuant to 310 CMR 40.0898.

☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

a. Status of Site: (check one)

☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT
Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation Plan*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report,*** *a* ***Remedy Operation Status,*** *a* ***Phase IV, Phase V or Temporary Solution Status Report,*** *a* ***Status Report to Maintain a Remedy Operation Status,*** *a* ***Transfer or Modification of Persons Maintaining a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP#: 2062

2. First Name: DAVID G 3. Last Name: AUSTIN

4. Telephone: 9789052114 5. Ext.: 6. Email:

7. Signature: DAVID G AUSTIN

8. Date: 5/8/2023
(mm/dd/yyyy)

9. LSP Stamp:



COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: LOCKHEED MARTIN CORP

3. Contact First Name: PAUL E 4. Last Name: CALLIGAN

5. Street: 6801 ROCKLEDGE DR MP CCT 246 6. Title: PROJECT MANAGER

7. City/Town: BETHESDA 8. State: MD 9. ZIP Code: 208171877

10. Telephone: 8188470166 11. Ext: 12. Email: paul.calligan@lmco.com

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS: ☐ Check here to change relationship

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: NON-SPECIFIED PRP

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☐ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@state.ma.us.

☑ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, PAUL E CALLIGAN, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS),** I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: PAUL E CALLIGAN (Signature) 3. Title: PROJECT MANAGER

4. For: LOCKHEED MARTIN CORP (Name of person or entity recorded in Section D) 5. Date: 5/5/2023 (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. Email:

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on 5/8/2023 7:11:35 AM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 1 of: 3

BWSC108 -A

Release Tracking Number
3 - 518

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☐ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☐ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☑ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☑ ii. Natural Attenuation
- ☑ iii. Other Describe: PASSIVE LNAPL RECOVERY

2. Mode of Operation: (check one)
☐ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☑ e. Other: SOCKS DEPLOYED AS NEEDI

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 11/2/2022 (mm/dd/yyyy) To: 5/1/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)
- ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
- ☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:
- ☐ i. Monthly
- ☑ ii. Quarterly
- ☐ iii. Annually
- ☐ iv. Other Describe:

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s):

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☐ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

QUARTERLY LNAPL GAUGING AND PASSIVE REMOVAL AS NEEDED

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 2 of: 3

BWSC108 -A

Release Tracking Number
3 - 518

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☐ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☐ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☑ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☑ ii. Natural Attenuation
- ☑ iii. Other Describe: GROUNDWATER MNA PROGRAM

2. Mode of Operation: (check one)
☐ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 11/2/2022 (mm/dd/yyyy) To: 5/1/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)
- ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
- ☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:
- ☐ i. Monthly
- ☐ ii. Quarterly
- ☑ iii. Annually
- ☐ iv. Other Describe:

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s):

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☐ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 3 of: 3

BWSC108 -A

Release Tracking Number
3 - 518

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)
- ☐ i. NAPL Recovery
- ☐ ii. Soil Vapor Extraction/Bioventing
- ☐ iii. Vapor-phase Carbon Adsorption
- ☐ iv. Groundwater Recovery
- ☐ v. Dual/Multi-phase Extraction
- ☐ vi. Aqueous-phase Carbon Adsorption
- ☐ vii. Air Stripping
- ☐ viii. Sparging/Biosparging
- ☐ ix. Cat/Thermal Oxidation
- ☐ x. Other Describe:

☐ b. Active Exposure Pathway Elimination Measure
Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)
- ☐ i. To the Subsurface
- ☐ ii. To Groundwater (Injection)
- ☐ iii. To the Surface

☑ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
- ☐ i. Reactive Wall
- ☐ ii. Natural Attenuation
- ☑ iii. Other Describe: VOLUNTARY INDOOR AIR SAMPLING

2. Mode of Operation: (check one)
☐ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:

3. System Effluent/Discharge: (check all that apply)
- ☐ a. Sanitary Sewer/POTW
- ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
- ☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
- ☐ d. Drinking Water Supply
- ☐ e. Surface Water (including Storm Drains)
- ☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 11/2/2022 (mm/dd/yyyy) To: 5/1/2023 (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)
- ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
- ☐ ii. Other Describe:

☑ b. Post-system Startup (after first month) or Monitoring Program:
- ☐ i. Monthly
- ☐ ii. Quarterly
- ☑ iii. Annually
- ☐ iv. Other Describe:

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s):

☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)

☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☐ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

VOLUNTARY INDOOR AIR SAMPLING AS NEEDED.

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

POST-TEMPORARY SOLUTION STATUS REPORT NO. 12
FORMER GENERAL ELECTRIC FACILITY
50 FORDHAM ROAD, WILMINGTON, MA
RTN 3-0518

Prepared for:
Lockheed Martin Corporation

Prepared by:
AECOM Technical Services, Inc.

May 2023

Approved by:
Lockheed Martin, Inc.

Revision: 0

Scott G. Olson, PG

David Austin, PG, LSP

TABLE OF CONTENTS

Section **Page**

Table of Contents ..... **i**

List of Figures ..... **iii**

List of Tables ..... **iii**

List of Appendices ..... **iv**

Acronyms and Abbreviations ..... **v**

Section 1 Introduction **1-1**

1.1 Background 1-1

1.2 Objective 1-3

1.3 List of Contacts 1-3

1.4 Report Organization 1-4

Section 2 Monitoring and Field Activities **2-1**

2.1 Groundwater Sampling 2-1

2.1.1 Site-Wide Water Level Measurements – September 27, 2022 2-1

2.1.2 Groundwater-Sampling Event – September-October 2022 2-2

2.2 Monitoring Well Repairs 2-3

2.3 Investigation-Derived Waste Management 2-3

Section 3 Groundwater Flow Evaluation **3-1**

Section 4 Evaluation of Groundwater Quality Concentration Trends **4-1**

4.1 Quality Assurance and Quality Control 4-2

4.2 Analytical Results – Arsenic 4-2

4.3 Analytical Results – 1,4-Dioxane 4-3

4.4 Analytical Results – Petroleum Hydrocarbons 4-4

4.5 Analytical Results – Volatile Organic Compounds 4-6

4.6 Monitored Natural Attenuation 4-9

4.6.1 Arsenic Monitored Natural Attenuation Performance 4-9

4.6.2 1,4-Dioxane Monitored Natural Attenuation Performance 4-10

4.6.3 Petroleum Hydrocarbons Monitored Natural Attenuation Performance 4-12

4.6.4 Chlorinated Volatile Organic Compounds Monitored Natural Attenuation Performance 4-13

Section 5 Demonstration of Effective Institutional Controls 5-1

Section 6 Conditions/Problems Affecting the Remedial Action 6-1

Section 7 Modifications to the Monitoring Program 7-1

Section 8 Future Monitoring 8-1

Section 9 Licensed Site Professional Opinion and Conclusions 9-1

Section 10 Public Notification 10-1

Section 11 References 11-1

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

Figure 1-1 Site Location Map
Figure 1-2 Site Plan
Figure 1-3 Monitoring Well Locations
Figure 3-1 Groundwater Contour Map 0-60 Feet, September 27, 2022
Figure 3-2 Groundwater Contour Map 61-250 Feet, September 27, 2022
Figure 4-1 2017 – 2022 Dissolved Arsenic in Groundwater – Overburden (0-78 ft bgs)
Figure 4-2 2017 – 2022 1,4-Dioxane (SW8270D SIM) in Groundwater – Overburden (0-78 ft bgs)
Figure 4-3 2017 – 2022 1,4-Dioxane (SW8270D SIM) in Groundwater – Bedrock (0-232 ft bgs)
Figure 4-4 2017 – 2022 PCE in Groundwater – Overburden (0-78 ft bgs)
Figure 4-5 2017 – 2022 PCE in Groundwater – Bedrock (0-232 ft bgs)
Figure 4-6 2017 – 2022 TCE in Groundwater – Overburden (0-78 ft bgs)
Figure 4-7 2017 – 2022 TCE in Groundwater – Bedrock (0-232 ft bgs)

LIST OF TABLES

Table 2-1 Summary of September 2022 Groundwater Elevations
Table 2-2 Summary of September 2022 Groundwater Sampling
Table 2-3 Summary of September 2022 Groundwater Field Parameter Data
Table 4-1 Summary of 2016-2022 Groundwater Analytical Results for Arsenic
Table 4-2 Summary of Mann Kendall Results for Arsenic in Groundwater
Table 4-3 Summary of 2016-2022 Groundwater Analytical Results for 1,4-Dioxane
Table 4-4 Summary of 2016-2022 Groundwater Analytical Results for Petroleum Compounds
Table 4-5 Summary of Mann Kendall Results for Petroleum Compounds in Groundwater
Table 4-6 Summary of 2016-2022 Groundwater Analytical Results for Volatile Organic Compounds
Table 4-7 Summary of Mann Kendall Results for Chlorinated Volatile Organic Compounds in Groundwater
Table 4-8 Summary of 2016-2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters
Table 4-9 2016, 2017, 2021 and 2022 Microbial Insights Quantarray Chlor Analytical Results Summary
Table 4-10 2016, 2017, 2021 and 2022 Compound Specific Isotope Analytical Results Summary
Table 7-1 Post-Temporary Solution Operations, Maintenance, and Monitoring Schedule 2022-2027

TABLE OF CONTENTS (CONTINUED)

LIST OF APPENDICES

Appendix A—Groundwater Sampling Field Records
Appendix B—Waste Manifests
Appendix C—Laboratory Analytical and Data Validation Reports – Groundwater
Appendix D—Groundwater Concentration Trend Graphs
Appendix E—2016-2021 Bedrock Plume Figures (1,4-Dioxane, hene, Trichloroethene)
Appendix F—Activity and Use Limitation
Appendix G—Public Notification Documentation

ACRONYMS AND ABBREVIATIONS

AECOM	AECOM Technical Services, Inc.
AUL	activity and use limitation
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene and xylenes
CAM	Compendium of Analytical Methods
cells/mL	cells per milliliter
CHES	Clean Harbors Environmental Services
cis-1,2-DCE	cis 1,2 dichloroethene
COC	chemicals of concern
CMR	Code of Massachusetts Regulation
CSIA	Compound Specific Isotope Analyses
CVOC	chlorinated volatile organic compound
δ13C	C13/C12 ratio
1,4-D	1,4-dioxane
1,1 DCE	1,1 dichloroethene
DHC	dehalococcoides
DNAPL	dense non aqueous phase liquid
EPH	extractable petroleum hydrocarbon
EPL	Eastern Parking Lot
ft	feet
IDW	investigation derived waste
LNAPL	light non aqueous phase liquid
LOE	line of evidence
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
µg/L	micrograms per liter
MI	Microbial Insights

MNA	monitored natural attenuation
MTBE	methyl tertiary butyl ether
NA	natural attenuation
NSZD	natural source zone depletion
OMM	operation, maintenance, and/or monitoring
PAH	polynuclear aromatic hydrocarbon
PIP	Public Involvement Plan
PCE	tetrachloroethene
PWS	public water supply
qPCR	quantitative polymerase chain reaction
TCE	trichloroethene
trans 1,2 DCE	trans 1,2 dichloroethene
UCL	upper concentration limit
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbon
WRT	Wilmington Realty Trust
YRC	YRC Freight

SECTION 1
INTRODUCTION

AECOM Technical Services, Inc. has prepared this Post-temporary Solution Status Report Number 12 on behalf of Lockheed Martin Corporation in fulfillment of the requirements of Post-temporary Solution Operation, Maintenance, and/or Monitoring, under the Massachusetts Contingency Plan, 310 Code of Massachusetts Regulations 40.0897. This report also was prepared in accordance with the Temporary Solution Statement (AECOM Technical Services, Inc., 2017a) submitted in May 2017 for Release Tracking Number 3-0518, which is located at the former General Electric Company Facility, 50 Fordham Road, Wilmington, Massachusetts (site). The site location is depicted on Figure 1-1.

This report is being submitted electronically via eDEP, the electronic filing site for the Massachusetts Department of Environmental Protection, along with the Comprehensive Response Action Transmittal and Phase 1 Completion Statement (Bureau of Waste Site Cleanup BWSC-108) and the Remedial Monitoring Report form, which provide additional responsible party and Licensed Site Professional certifications.

1.1 BACKGROUND

Contamination of the Stickney Well, a currently inactive public supply well for the Town of North Reading, was discovered in the late 1970s. Subsequent investigations of multiple surrounding properties, including the former General Electric property, began in the early 1980s. On October 9, 1987, prior to the adoption of the Massachusetts Contingency Plan in 1988, the Massachusetts Department of Environmental Quality Engineering (subsequently Massachusetts Department of Environmental Protection) classified the former General Electric facility as a Priority Disposal Site. Under the Massachusetts Contingency Plan (Massachusetts Department of Environmental Protection, 2014), the site is a Tier 1 Classified site, under Release Tracking Number 3-0518, with four original operable units, as listed below and further defined in previous reports submitted to the Massachusetts Department of Environmental Protection.

- Operable Unit-1—Former Tank Farm source area (includes Pump House/Vault and Oil House) and adjacent Eastern Parking Lot
- Operable Unit-2—Former Tank Farm source area and downgradient groundwater plume both on- and off-property
- Operable Unit-3—Storm water/Wastewater Outfalls 001 and 002
- Operable Unit-4—Former Tank K Source Area and immediately downgradient groundwater plume

Areas relating to sediment at storm water/wastewater Outfalls 001 and 002 within Operable Unit-3 have been resolved and closed via a partial Response Action Outcome (Class A-2) submitted in December 2004 (TRC Companies, Inc., 2004). The former Tank K area that comprised Operable Unit-4 has been resolved and closed via a partial Response Action Outcome (Class A-2) dated November 9, 2010 (TRC Companies, Inc., 2010). The remaining two areas, Operable Unit-1 (petroleum contamination in former Tank Farm and Eastern Parking Lot areas) and Operable Unit-2 (chlorinated volatile organic compounds in former Tank Farm and downgradient groundwater plume), make up Release Tracking Number 3-0518. Figure 1-2 depicts an overview of the disposal site, including relevant site features, and Figure 1-3 depicts all monitoring wells located within the site boundary and in the general vicinity of the site.

A Tier 1A Permit was in place from 1999 until a Remedy Operation Status Opinion was filed on April 20, 2006 (TRC Companies, Inc., 2006). Lockheed Martin Corporation and AECOM Technical Services, Inc., determined on February 28, 2013, that the requirements to maintain Remedy Operation Status were no longer being met, and therefore submitted the required Remedy Operation Status Termination Notice and a Tier 1 Permit Extension Application on March 27, 2013, returning the site to Phase II/Phase III status under the Massachusetts Contingency Plan (AECOM Technical Services, Inc., 2013). On October 10, 2014, Lockheed Martin Corporation submitted a Tier Classification Extension (AECOM Technical Services, Inc., 2014) that was approved by the Massachusetts Department of Environmental Protection, extending the Tier Classification deadline to May 3, 2017. On May 2, 2017, Lockheed Martin Corporation electronically submitted to the Massachusetts Department of Environmental Protection the required reports including a Phase II Comprehensive Site Assessment with a Method 3 Risk Characterization (AECOM Technical Services, Inc., 2017b), a Phase III Remedial Action Plan (AECOM Technical Services, Inc., 2017c), and a Temporary Solution Statement (AECOM Technical Services, Inc., 2017a). The Massachusetts

Department of Environmental Protection acknowledged receipt of the reports on May 2, 2017, via electronic stamp on the transmittal form. Currently, the site is in Temporary Solution status and, therefore, Post-temporary Solution Status and Remedial Monitoring Reports are required to be submitted to the Massachusetts Department of Environmental Protection every six months, by May 2 and November 2 of each year, with evaluations of the Temporary Solution conducted every five years.

Additional details related to Release Tracking Number 3-0518 (comprehensive release history, site assessment, and remedial activities completed) can be found in reports previously submitted to the Massachusetts Department of Environmental Protection, specifically the Phase II Comprehensive Site Assessment (AECOM Technical Services, Inc., 2017b), Phase III Remedial Action Plan (AECOM Technical Services, Inc., 2017c), and Temporary Solution Statement (AECOM Technical Services, Inc., 2017a).

1.2 OBJECTIVE

The objective of this Post-temporary Solution Status Report Number 12 is to document the monitoring activities conducted at the site during the six-month reporting period of November 2022 through May 2023, in accordance with the operations, maintenance, and/or monitoring plan detailed in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection in May 2017 and the updated post-temporary solution operation, maintenance, and/or monitoring groundwater monitoring plan in Post-temporary Solution Status Report Number 10 and Periodic Review of the Temporary Solution dated May 4, 2022.

1.3 LIST OF CONTACTS

This section identifies the potentially responsible party, the Licensed Site Professional-of-record, and the owner of the site.

Potentially Responsible Party:

Lockheed Martin Corporation
6801 Rockledge Drive
MP CCT246
Bethesda, MD 20817
Contact: Mr. Paul E. Calligan
Phone: (240) 687-1813

LSP-of-Record:

AECOM Technical Services, Inc.
250 Apollo Drive, Chelmsford, MA 01824
Contact: Mr. David Austin (licensed site professional license number 2062)
Phone: (978) 905-2114

Current Property Owner:

Hilco Redevelopment Partners (HRP)
99 Summer Street, Suite 1110
Boston, MA 02110
www.hilcoredev.com
Contacts: Ms. Julianna Connolly (617) 240-8695 and Mr. Eric Darci (617) 308-3659

1.4 REPORT ORGANIZATION

This Post-temporary Solution Status Report is organized as follows:

- **Section 2**—provides a description of the type and frequency of monitoring/field activities conducted during this reporting period, plus a statement of compliance with the conditions of the activity and use limitation in place at the site.
- **Section 3**—presents a description of the comprehensive monitoring well gauging program as well as the resulting measurements and updated groundwater contours based on these measurements.
- **Section 4**—presents the groundwater laboratory analytical results and data validation and includes an evaluation of the field and analytical data presented. An evaluation of the performance of the remedial monitoring program is also presented.
- **Section 5**—provides a description of the effective institutional controls in place at the site.
- **Section 6**—provides a description of conditions identified during the monitoring period, which may be affecting the performance of the remedial action.
- **Section 7**—provides a description of modifications made to the monitoring program.
- **Section 8**—provides a description of the schedule for future monitoring activities.
- **Section 9**—provides the conclusions and Licensed Site Professional Opinion regarding this report.
- **Section 10**—provides a discussion of the public notification requirements for the site and copies of any required notifications.
- **Section 11**—provides a list of references.

SECTION 2
MONITORING AND FIELD ACTIVITIES

The Post-temporary Solution Operations, Maintenance, and/or Monitoring (OMM) Program continued during this reporting period in accordance with the monitoring plan presented in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection (MassDEP) on May 2, 2017, and the updated Post-temporary Solution OMM annual groundwater monitoring plan as Table 10-2 in Post-Temporary Solution Status Report Number 10 and Periodic Review of the Temporary Solution dated May 4, 2022. The activities completed as part of the OMM Program during this reporting period of November 2022 to May 2023 are discussed below.

2.1 GROUNDWATER SAMPLING

The annual groundwater-gauging and subsequent groundwater sampling event concluded in September-October 2022 are summarized below. These activities are reported in this status report as opposed to the November 2022 status report based on receipt of the laboratory analytical results in October 2022 with data validation completed in November 2022.

2.1.1 Site-Wide Water Level Measurements – September 27, 2022

On September 27, 2022, prior to commencing the groundwater sampling event, AECOM Technical Services, Inc. (AECOM) measured depth to water in all on-site and off-site monitoring wells to be sampled, along with a number of additional monitoring wells to generate representative groundwater elevation contour maps. AECOM also obtained measurements of surface water at 9 well locations where standing water was present. In addition, AECOM obtained surface water elevations from the pond on Concord Street east of the site and northeast of the STM-3 wells, and from two stream gauges, SG-1 in the wetlands north of the Eastern Parking Lot (EPL) and SG-2 adjacent to the Ipswich River on the Wilmington Masonry property. Table 2-1 presents a summary of water levels measured along with the resulting groundwater and surface water elevations. AECOM purged the standard Water FLUTes™ on September 26, 2022 to equilibrate the water levels prior to the site-wide measurements on September 27, 2022. AECOM measured the water levels within the

Shallow Water FLUTes™ using the procedure provided by FLUTe™. The field records from the site-wide water level measurement event are included in Appendix A. An evaluation of the measurements collected is included in Section 3 of this report.

2.1.2 Groundwater-Sampling Event – September-October 2022

From September 28 to October 6, 2022, AECOM collected groundwater samples from a comprehensive list of the site-wide monitoring wells in accordance with the Post-temporary Solution OMM Plan. Table 2-2 details the September-October 2022 updated annual groundwater monitoring plan. This scope was executed without deviation. Figure 1-3 shows all monitoring well locations sampled in September-October 2022.

All conventional monitoring wells along with shallow Water FLUTes^{TM} (AE-26R, AE-28R, and AE-29R) and continuous multi-channel tubing (AE-101R and TRC-301R) intervals were purged and sampled with either a peristaltic pump or a bladder pump using low-flow techniques. All standard Water FLUTe^{TM} intervals were purged and sampled using compressed gas. Purging and sampling was conducted in accordance with United States Environmental Protection Agency (USEPA) Region 1 *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* (USEPA, January 2010, revised September 2017).

Groundwater quality parameters (temperature, pH, specific conductance, dissolved oxygen, and oxidation-reduction potential) were measured during purging at all wells using a YSI water quality meter with flow through cell and a separate Geotech turbidity meter. These September-October 2022 groundwater quality parameter data are summarized in Table 2-3. Field records (water level forms, calibration logs, groundwater-sampling forms, and field logbook notes) from the sampling event are provided in Appendix A.

All samples were collected into laboratory-supplied glassware and either picked up by the lab courier or shipped to each laboratory in accordance with standard chain-of-custody procedures. Samples were analyzed for volatile organic compounds with select samples analyzed by area for additional site chemical(s) of concern (COC), including 1,4-dioxane, total and dissolved arsenic, and extractable and volatile petroleum hydrocarbons. A focused group of samples was analyzed to evaluate monitored natural attenuation processes that may be affecting the COC at the site. These select samples were analyzed for some or all the following: chloride, the terminal electron acceptor

processes (e.g., dissolved iron, manganese, nitrate, nitrite, sulfate, sulfide), total organic carbon, and dissolved gases including hydrogen, ethane, ethene, methane, propane, and acetylene, as well as compound-specific isotope analyses, and microbial analyses. Groundwater samples were submitted to Phoenix Environmental Laboratories, Pace Analytical Gulf Coast, and Microbial Insights. Groundwater analyses are detailed in Table 2-2. The analytical results are discussed in Section 5 of this report.

2.2 MONITORING WELL REPAIRS

During water level measurements on September 27, 2022, AECOM identified damage to the flush mount roadbox at monitoring well AE-111R on the YRC Freight property. AECOM barricaded the immediate area around AE-111R to prevent further damage to the roadbox, and to reduce potential hazard for trucks at the YRC property. AECOM is working to hire a subcontractor to replace the flush mount roadbox and concrete pad at AE-111R. This activity will be summarized in a future status report once the work has been completed.

2.3 INVESTIGATION-DERIVED WASTE MANAGEMENT

During the groundwater-sampling event completed in October 2022, four 55-gallon drums of purge water and decontamination rinse water were generated. This investigation-derived waste (IDW) was properly containerized and stored at a central staging area on-site, pending characterization and off-site disposal in accordance with Lockheed Martin Corporation procedures. Similar to past years, this IDW was characterized as hazardous waste based on the elevated trichloroethene and tetrachloroethene concentrations. Clean Harbors Environmental Services (CHES) removed the drums under a uniform hazardous waste manifest on March 27, 2023. A copy of the manifest documenting receipt at the CHES Braintree, MA facility on March 27, 2023, is included in Appendix B.

SECTION 3
GROUNDWATER FLOW EVALUATION

AECOM Technical Services, Inc. (AECOM) conducted a site-wide round of water level measurements on September 27, 2022, prior to commencing the groundwater-sampling event. Table 2-1 presents a summary of all water levels measured along with the resulting groundwater and surface water elevations.

Groundwater contours were developed for the overburden (approximately 0 to 60 feet (ft) below ground surface (bgs)), and bedrock (approximately 61 to 250 ft bgs) intervals. Although the 0 to 60 ft bgs interval includes both overburden and shallow bedrock groundwater elevations, this is consistent with the conceptual site model of bedrock groundwater in the Eastern Parking Lot (EPL) discharging to the deep overburden beneath the wetlands. The bedrock interval contour consists of only bedrock groundwater elevations (except for well AE-105D, which is screened in deep overburden from 73 to 78 ft bgs). Groundwater piezometric contours generated from the groundwater elevations summarized in Table 2-1 are depicted on Figures 3-1 and 3-2.

The groundwater contours are consistent with previous depictions that show shallow (0 to 60 ft bgs) groundwater generally flowing to the east-northeast on the subject property, then trending more eastward beneath the wetlands, and finally southeast at Concord Street towards the Ipswich River. The deep (61 to 250 ft bgs) interval shows groundwater flowing generally to the east-northeast from the EPL and to the east-southeast beneath the wetlands.

The groundwater contour maps (Figures 3-1 and 3-2) include elevations from 15 wells (AE-106-S-M-D, AE-106-R1-R5, and AE-111-R1-R7) on the YRC Freight (YRC) property measured on September 27, 2022. The contours generated during the September 2022 event are based on a smaller data set compared to the groundwater contours from 2018 and 2019, when YRC had concurrently conducted water level measurements of wells on its property in addition to the 15 measured in 2022.

Because the YRC property is located on a bedrock knob that is higher in elevation than surrounding areas, natural radial groundwater flow from the YRC property is typically observed. The groundwater contours derived from the September 27, 2022 site-wide measurements are similar to previous years and indicate radial flow from the YRC property. As shown in Figures 3-1 and 3-2, this radial flow from YRC causes diversion of flow from the eastern portion of the Hilco Redevelopment Partners property around the YRC property. A review of the January 2023 *Remedy Operation Status/Remedial Monitoring Report* for the YRC site (Release Tracking Number 3-2363) indicates that the groundwater recirculation system was not operational at YRC during the September 27, 2022 gauging event. Groundwater recirculation was re-started in November 2022 at the YRC property. The current remedial activities involve groundwater recirculation and groundwater monitoring (CCC Environmental Services, 2023). A groundwater contour map provided in the January 2023 *YRC Remedy Operation Status/Remedial Monitoring and RAM Status Report* indicates bedrock groundwater flow on October 1, 2022, within the YRC treatment area, was to the southeast consistent with previous observations during non-pumping conditions (CCC Environmental Services, 2023).

SECTION 4
EVALUATION OF GROUNDWATER QUALITY CONCENTRATION TRENDS

This section provides an evaluation of the concentration trends and distribution of the chemicals of concern (COC) in site groundwater: arsenic, 1,4-dioxane (1,4-D), petroleum hydrocarbons, and chlorinated volatile organic compounds (CVOCs).

The Massachusetts Department of Environmental Protection (MassDEP) has established three categories for groundwater within the Massachusetts Contingency Plan (MCP, 310 Code of Massachusetts Regulations 40.0932) that relate to the following types of groundwater exposures:

- GW-1 applies to groundwater assumed to be a current or potential source of drinking water.
- GW-2 applies to groundwater considered to be a potential source of vapors that could migrate into building air.
- GW-3 applies to all groundwaters in the Commonwealth since it is assumed that all groundwaters eventually discharge to surface water.

The site is located within an Interim Wellhead Protection Area for the inactive North Reading Stickney public water supply (PWS) well and a Zone II for nine emergency backup PWS wells in Reading (Revay Well #1, Well #2, Well #3, B Line Well, Town Forest, Well #82-20, Well #66-8, Well #13, and Well #15). Therefore, site groundwater is categorized as GW-1.

A portion of site groundwater, which has an average depth less than 15 feet (ft) below ground surface (bgs) and is within 30 ft of Building 1/1A at 50 Fordham Road, is categorized as GW-2. Additionally, site groundwater within 30 ft of occupied buildings along Concord Street, where the average depth to groundwater is less than 15 ft bgs, is categorized as GW-2.

All site groundwater is categorized as GW-3.

4.1 QUALITY ASSURANCE AND QUALITY CONTROL

In September 2022, AECOM Technical Services, Inc. collected groundwater samples from 106 monitoring wells/screens. Of the 106 locations, 95 were analyzed for volatile organic compounds (VOCs) with select samples analyzed for additional parameters, as detailed in Table 2-2. Upon receipt of the laboratory analytical reports, the data contained in each report was validated and reviewed for compliance with the MassDEP Compendium of Analytical Methods (CAM) performance standards, as detailed in Policy WSC-02-3209 (MassDEP, 2010). Results of the validation are discussed in detail in the data validation memoranda prepared with each laboratory data package included in Appendix C.

The results of the validation of the chemical data indicate that the data are valid as reported and may be used for decision-making purposes. All of the data were accepted, with qualifiers added where required. Most of the VOC data were qualified as estimated (J or UJ) due to laboratory quality control acceptance criteria for initial/continuing calibrations, response factors, percent differences, matrix spike/matrix spike duplicates, and/or duplicate samples being out of range.

The analytical results met the requirements for "presumptive certainty" status for all compounds for which there is a CAM protocol under the MCP. See Appendix C for further details.

4.2 ANALYTICAL RESULTS – ARSENIC

A summary of the 2016-2022 arsenic analytical results is presented in Table 4-1. The arsenic concentrations are consistent from 2016 through 2022. The total and dissolved arsenic results are similar in all wells analyzed indicating that the arsenic present is predominantly dissolved arsenic. One exception is the total arsenic concentration of 522 micrograms per liter (µg/L) versus dissolved concentration of 172 µg/L in well AE103S. The dissolved concentration is similar to past results while the total concentration is more than double the historical results suggesting the result may be anomalous. This will be monitored in future sampling events. Seven of the 22 wells sampled had dissolved and total arsenic concentrations above the GW-1 standard of 10 (µg/L) in 2022. The 2017-2022 dissolved arsenic plumes in groundwater in overburden are presented in Figure 4-1. The extent of the 2022 plume is the same with concentrations on the same order of magnitude as from 2017 to 2021, with insignificant differences. The 2022 arsenic plume in overburden extends to well MW-4A where the arsenic concentration has reached the GW-1 standard but is similar to historical

concentrations in this well (increase of 1 µg/L from 2021). The arsenic plume in bedrock is not presented as the arsenic concentrations in bedrock have been mostly non-detect or below the GW-1 standard of 10 µg/L. Two wells in bedrock (TRC-301R-4 and STM-8R-1) have concentrations above GW-1 standard. The 2022 concentrations in these wells are similar to historical results as shown in Table 4-1.

Concentration trend graphs of the dissolved arsenic results from all 22 wells sampled in September-October 2022 are presented in Appendix D. The graphs include all available historical dissolved arsenic results for these wells. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 4-2. Thirteen monitoring wells have enough data from which to generate statistical trends. A downward trend (at 80% and 90% confidence levels) is noted in five monitoring wells. These include three overburden wells: AE-03 and GZA-10 at the Eastern Parking Lot (EPL), and AE-105S in the wetland, plus two bedrock wells: TRC-301R-4 in the wetland, and STM-8R-1 at Transect C. An upward trend (at 80% and 90% confidence levels) is noted in three monitoring wells: AE-26R-1 and GZA-101R in the Building 1 Tank F area, and MW-4A in the wetland. In each of these wells the concentrations remain at the same order of magnitude and below the GW-1 standard in each well except MW-4A where the concentration is equal to the GW-1 standard. The remaining five monitoring wells (AE-102M, AE-103S, GZA-6, GZA-105S, and TRC-102) show no trend or non-significant trends.

Based on these results, dissolved arsenic concentrations are similar to past results. No significant upward trends are evident. The 2022 plume geometry is like the 2016-2021 plumes and is stable in the overburden and bedrock intervals.

4.3 ANALYTICAL RESULTS – 1,4-DIOXANE

A summary of the 2016-2022 1,4-D analytical results is presented in Table 4-3. The 1,4-D concentrations are of the same order of magnitude from 2016 to 2022 in all wells sampled in 2022. A total of 26 of the 35 wells show 1,4-D concentrations above the GW-1 standard of 0.3 µg/L in 2022. The 2017-2022 1,4-D plumes in overburden groundwater are presented in Figure 4-2. The extent of the overburden plume is the same with concentrations fluctuating within the same order of magnitude from 2017 to 2022. The 2022 1,4-D plume in bedrock groundwater (upper, middle, and lower bedrock combined) is presented in Figure 4-3. For reference, the 2016-2021 1,4-D plumes in

upper, middle, and lower bedrock are included in Appendix E. The extent of the bedrock plume is the same with concentrations fluctuating within the same order of magnitude from 2016-2022.

Concentration trend graphs of the 1,4-D results from all wells sampled in September-October 2022 are included on the CVOC trend graphs presented in Appendix D. The graphs include all available historical 1,4-D results for the wells that were analyzed via United States Environmental Protection Agency SW-846 Method 8270 or 8270 selective ion monitoring. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 4-7. Thirty-two monitoring wells sampled have enough data from which to generate statistical trends. Nine wells, mostly in overburden in the EPL, Transect A, wetland/Transect B, and Transect C, show a downward trend (at 80% or at both 80% and 90% confidence levels). Six wells, mostly in Transect A with one well at Building 1, show an upward trend (at 80% or at both 80% and 90% confidence levels). In each of the six wells with upward trends, the concentrations remain at the same order of magnitude. The remaining 17 of 32 wells show no trend or non-significant trends.

Based on these results, 1,4-D concentrations are of the same order of magnitude as past results. The 2022 plume geometry is like the 2016-2021 plumes and is stable in the overburden and bedrock intervals.

4.4 ANALYTICAL RESULTS – PETROLEUM HYDROCARBONS

A summary of the 2016-2022 extractable petroleum hydrocarbon (EPH) and volatile petroleum hydrocarbon (VPH) analytical results is presented in Table 4-4. The EPH and VPH concentrations are similar from 2016 to 2022 in all wells with changes discussed herein. Petroleum light non-aqueous phase liquid (LNAPL) has been identified near the former Tank Farm and EPL. Since 2010, the periodic presence of LNAPL has been limited to wells CW-1 and CW-2 where the bedrock dips to the east beneath the EPL. Sampling for EPH and VPH is being conducted to monitor the levels of petroleum hydrocarbons present in a focused group of 10 wells (AE-03, AE-04, GZA-105S, GZA-105D, TRC-102, AE-100R-1, GZA-102S, PZ-2S, TRC-101, and TRC-103) immediately surrounding CW-1 and CW-2. Historically, several EPH and VPH compounds including various polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, xylenes (BTEX), naphthalene, and hydrocarbons have been detected at concentrations below the GW-1 standard. Detected concentrations above GW-1 standards from 2016 to 2021 include various PAHs and hydrocarbon ranges, and toluene in select wells. In 2022, the only exceedance of a GW-1

standard was C5-C8 hydrocarbons (700 µg/L) in well AE-100R-1. This concentration is double the highest historical concentration at AE-100R-1; however, isolated spikes such as these have been detected in wells AE-100R-1, GZA-105D, and TRC-101 in past years. In each instance, the hydrocarbon concentrations reduced below the GW-1 standard or were non-detect during the next sampling event. As such, it is anticipated that the elevated detection in AE-100R-1 in 2022 will also be lower in future sampling rounds.

In 2022, the detected concentration of C9-C10 hydrocarbons were equal to or below the GW-1 standard for the first time since 2016 at wells AE-03 (200 µg/L) and TRC-101 (190 µg/L).

There were no exceedances of GW-2 or GW-3 standards for EPH/VPH compounds in 2022.

Concentration trend graphs of the petroleum results from the 10 wells sampled in September-October 2022 are presented in Appendix D. The graphs depict BTEX, methyl-tertiary-butyl ether (MTBE), naphthalene, and calculated VPH fractions of all available historical results for these wells. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 4-5. The BTEX, MTBE, and naphthalene, where detected, are observed at low concentrations below GW-1, GW-2, and GW-3 standards and have been for the past decade 2012 through 2022. Therefore, this text summarizes only the trend graph results for the calculated VPH fraction data. For the nine wells with enough VPH fraction data to run statistics, an upward trend at both 80% and 90% confidence levels is noted in two wells, PZ-2S and TRC-101. In both of these wells, the 2016-2022 hydrocarbon concentrations are of the same order of magnitude and are less than the GW-1 standard. Downward trends (at 80% or at both 80% and 90% confidence levels) are noted in five wells (AE-03, AE-04, GZA-105D, GZA-105S, and TRC-102) in the EPL area. The remaining two wells show non-significant trends for calculated VPH fractions.

Given that the area being monitored for EPH/VPH is limited to a small number of wells in the western edge of the EPL, plume figures are no longer included in these reports.

Based on these results, petroleum concentrations are like past results with fluctuations in concentrations of select compounds and some downward trends at this time.

4.5 ANALYTICAL RESULTS – VOLATILE ORGANIC COMPOUNDS

A summary of the annual 2016 through 2022 VOC analytical results is presented in Table 4-6. The detected VOC concentrations are consistent from 2016 to 2022. Nine different CVOCs were detected in groundwater in 2022 at concentrations above MCP groundwater standards. These compounds include: 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), tetrachloroethene (PCE), trichloroethene (TCE), toluene, and vinyl chloride (VC). One or more of these nine constituents were detected above GW-1 standards at 78 different well screen/port locations. One or more of these CVOCs (1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and VC) were detected at concentrations greater than MCP GW-2 standards (within 30 feet of a building with depth to groundwater less than 15 ft) in the following 13 wells sampled within 30 ft of or beneath Building 1 in 2022: AE-23R, AE-23S, AE-24, AE-26R1, AE26R4, AE-26R5, AE-26S, AE-27R, AE-28R1, AE-28R2, AE-28R3, AE-28R4, and GZA-101R. Only PCE and TCE were detected at concentrations greater than GW-3 standards – TCE at nine well screen/port locations under Building 1, in the EPL, and Transect A, and PCE at one well screen/port location (AE-23R) beneath Building 1.

Consistent with observations from 2016-2021, the highest total CVOC concentration (184,960 µg/L) observed at the site in 2022 is in upper bedrock well AE-23R located beneath Building 1. The concentration of TCE (140,000 µg/L) detected in 2022 exceeds the upper concentration limit (UCL) of 50,000 µg/L. Concentrations of TCE have historically exceeded the UCL in this well. This was the only UCL exceedance for any constituent at any monitoring well location in 2022. In 2022, the highest PCE concentration (39,000 µg/L) was also detected in AE-23R, which is above the GW-3 standard but below the UCL for PCE. The current and historical PCE and TCE concentrations at AE-23R suggest the potential for dense non-aqueous phase liquid (DNAPL), however, DNAPL has never been detected in AE-23R when gauged.

Figures 4-4 and 4-6 present the 2017-2022 PCE and TCE plumes in overburden groundwater. The 2022 PCE and TCE overburden groundwater plumes are similar in size to the plumes from 2017 to 2021 with the following order of magnitude differences in overburden concentrations detected from 2021 to 2022:

- One order of magnitude decrease of PCE in:
  - AE23S from 260 to 94 µg/L,
  - MW-7 from 10 µg/L to non-detect, and
  - EMW-10 from 130 to 99 µg/L
- One order of magnitude decrease of TCE in:
  - MW-7 from 49 to 9.3 µg/L
- One order of magnitude increase in TCE in:
  - PS-1D from 6.3 to 16 µg/L, and
  - AE-105D from non-detect to 21 µg/L

Figures 4-5 and 4-7 present the 2022 PCE and TCE plumes in bedrock groundwater. For reference, the 2016-2021 PCE and TCE plumes in upper, middle, and lower bedrock are included in Appendix E. The 2022 PCE and TCE bedrock groundwater plumes are similar in size to the plumes from 2016 to 2021 with the following order of magnitude differences in bedrock concentrations detected from 2021 to 2022:

- One order of magnitude decrease of PCE in:
  - AE-100R-2 from 1300 to 590 µg/L, and
  - AE-100R-5 from 1100 to 980 µg/L.
- One order of magnitude increase of PCE in:
  - AE-27R from non-detect to 130 µg/L, and
  - AE-26R-3 from 3.4 to 4400 µg/L.
- One order of magnitude decrease of TCE in:
  - AE-29R-6 from 120 to 70 µg/L.
- One order of magnitude increase in TCE in:
  - STM-8R from 8.9 to 12 µg/L,
  - AE28R from 6600 to 18000 µg/L, and

– AE-101R-6 from 920 to 3200 µg/L.

Each of the above-mentioned wells with significant concentration increases in overburden and bedrock are located in Building 1 and Transect A where fluctuations in concentrations are not unexpected.

Concentration trend graphs of the CVOC results from all wells sampled in 2022 are presented in Appendix D. The graphs depict all available historical PCE, TCE, cis-1,2-DCE, toluene, VC, and 1,4-D results for wells sampled in September 2022. A summary of Mann Kendall statistical analyses based on these trend graphs is presented in Table 4-7.

In September-October 2022, 95 monitoring well screen/port locations were sampled for VOCs. Of those 95, 86 have enough data from which to generate statistical trends at this time. Twenty-nine percent of the 2022 CVOC (PCE, TCE, cis-1,2-DCE, toluene and VC) data (87 of 300 records) show no trend or non-significant trends. Downward trends at (80% or at both 80% and 90% confidence levels) for parent compounds (i.e., PCE and TCE) are noted in 61 of the 145 well screens sampled across the site in 2022 in the overburden and bedrock at Building 1 Tank F area, Transects A, B, and C, and in the overburden in the EPL. Upward trends (80% or at both 80% and 90% confidence levels) of daughter products (e.g., cis-1,2-DCE, and VC) are noted in 57 of the 110 well screens sampled in 2022 mainly in bedrock in the former Tank Farm, Building 1, EPL, and Transects A and B, and to a lesser extent in overburden in Transects A, B, C, and the wetlands.

The Mann Kendall results indicate that 31 well screen/port locations have upward trends (80% or at both 80% and 90% confidence levels) for parent compounds (i.e., PCE and/or TCE). These include 21 wells in areas of elevated CVOC concentrations in the Building 1 and former Tank Farm source areas, the EPL, and Transect A, where fluctuations in concentrations are not unexpected. The remaining 10 wells are upgradient, or in the wetland and Transect B and the observed concentration increases are minor.

The STM-8 well cluster is a key monitoring point because it is located at the furthest extent of the plume. The results from this well cluster are indicative of ongoing attenuation of parent compounds to daughter products at the tail end of the plume. In STM-8D, the concentration of cis-1,2-DCE over the last eight sampling rounds in 2014-2022 has consistently been one order of magnitude higher than PCE and TCE. The maximum PCE and TCE concentrations were 2 µg/L from 2015 through

2019, and non-detect in 2020 to 2022, whereas cis-1,2-DCE concentrations have ranged from 17.9 µg/L in 2016 to 6.9 µg/L in 2022. The concentration ratio of parent compounds to cis-1,2-DCE is consistently low, indicative of degradation.

4.6 MONITORED NATURAL ATTENUATION

This Post-temporary Solution monitoring period consists of active performance of a comprehensive monitored natural attenuation (MNA) groundwater sampling program for site management. Details for each COC are provided below.

4.6.1 Arsenic Monitored Natural Attenuation Performance

This section presents an evaluation of arsenic MNA performance.

4.6.1.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for Arsenic

The presence of dissolved arsenic is considered to be a temporary deviation from the state of naturally-occurring conditions typical in this region. The presence of organic COC such as petroleum hydrocarbons and VOCs in site groundwater has temporarily altered the natural redox conditions from aerobic to anaerobic, causing dissolution of naturally-occurring insoluble forms of arsenic in site soils/weathered rock to the dissolved state. Plume figures suggest that dissolved arsenic concentrations are related to localized conditions immediately downgradient from the former Tank Farm and former Tank K source areas and are not expansive in nature. It is anticipated that as the concentrations of organic COC decrease over time and the aquifer returns to its normal aerobic redox conditions, dissolved arsenic levels will decrease naturally. This appears to be the case based on the depictions of the limited arsenic plume, particularly downgradient where contaminant concentrations are lowest.

4.6.1.2 Changed Conditions Affecting Arsenic Monitored Natural Attenuation

There are no new data during this monitoring period that would indicate new environmental conditions or new releases of contaminants have occurred, which could reduce MNA efficiency for arsenic in groundwater.

4.6.1.3 Absence of Toxic Transformation Products of Arsenic

There are no toxic transformation products from natural attenuation of arsenic.

4.6.1.4 Verification that Arsenic Plume is not Expanding

As shown in Figure 4-1, the extent of the arsenic plume in overburden is the same with concentrations on the same order of magnitude 2017 to 2022. Minor concentration increases and decreases are noted year-to-year but do not affect the plume geometry. The dissolved arsenic concentration in GZA-10 continues to decrease since 2019.

4.6.1.5 Demonstration of Effective Institutional Controls

The institutional controls under the activity and use limitation (AUL) at the site remain effective in limiting potential exposure to arsenic in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the municipal wells near the site remain inactive and no drinking water wells exist within 0.5 miles of the site.

4.6.1.6 Verification of Attainment of Remedial Objective for Arsenic

The remedial objective for arsenic is reduction of arsenic concentrations in overburden and bedrock groundwater over time through MNA. Given the elevated concentrations of organic COC (petroleum hydrocarbons and VOCs) contributing to dissolved arsenic concentrations, the time frame for a general decrease in arsenic concentrations or a decrease to below applicable standards is on the order of decades. Based on groundwater data collected during this reporting period, the existing groundwater plume for dissolved arsenic is stable and not expanding. Therefore, the remedial objective for arsenic in groundwater is being met.

4.6.2 1,4-Dioxane Monitored Natural Attenuation Performance

This section presents an evaluation of 1,4-D MNA performance.

4.6.2.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for 1,4-Dioxane

It is understood that the presence of 1,4-D is related to the CVOC contamination as it was most likely a co-contaminant. The 1,4-D distribution appears consistent with the trends observed for the CVOCs during this sampling event (see Section 4.6.4). While the literature has identified the possibility of both metabolic (energy source) and co-metabolic (co-oxidation) degradation pathways of 1,4-D under certain conditions, these biological processes are unlikely to significantly affect the levels on-site in reaching the low-level regulatory criteria in the near term. A combination of these and physical attenuation processes would contribute to the long-term natural attenuation of 1,4-D.

4.6.2.2 Changed Conditions Affecting 1,4-Dioxane Monitored Natural Attenuation

There are no new data during this monitoring period that would indicate that new environmental conditions or new releases of contaminants have occurred which could reduce MNA efficiency for 1,4-D in groundwater.

4.6.2.3 Absence of Toxic Transformation Products of 1,4-Dioxane

Although not considered a significant attenuation mechanism for 1,4-D at the site, current literature indicates that 1,4-D may biodegrade to various compounds such as ethylene glycol, glycolic acid, or oxalic acid (Rodriguez, 2016). These compounds are non-toxic and expected to biodegrade rapidly in the environment, and therefore, are not included in this monitoring program.

4.6.2.4 Verification that 1,4-Dioxane Plume is not Expanding

As shown in Figures 4-2 and 4-3, and the figures included in Appendix E, the extent of the 1,4-D plume in overburden and bedrock are the same with concentrations on the same order of magnitude from 2017 to 2022. Slight increases and decreases in concentrations are noted in some wells. Slight concentration increases are primarily detected in wells within source areas and Transect A where elevated CVOCs are present. Therefore, the 1,4-D plumes are considered stable and not expanding.

4.6.2.5 Demonstration of Effective Institutional Controls

The institutional controls under the AUL at the site remain effective in limiting potential exposure to 1,4-D in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the municipal wells near the site remain inactive and no drinking water wells exist within 0.5 miles of the site.

4.6.2.6 Verification of Attainment of Remedial Objective for 1,4-Dioxane

Evaluation of 1,4-D is being addressed with continued sampling and analysis under the Post-temporary Solution operation, maintenance, and/or monitoring program. Recent monitoring data indicate minor increases and decreases in concentrations in overburden and bedrock. This is likely related to fluctuations in CVOC concentrations, which along with 1,4-D concentrations are expected to fluctuate over time given the anticipated timeframe (decades or more) for MNA to reduce overall concentrations of CVOCs and 1,4-D. The groundwater remedial objective for 1,4-D will be attained through MNA as shown by long-term trend analysis. Based on groundwater data

collected during this reporting period, there is evidence that the existing groundwater plume for 1,4-D is not expanding. Therefore, the remedial objective for 1,4-D in groundwater is being met.

4.6.3 Petroleum Hydrocarbons Monitored Natural Attenuation Performance

This section presents an evaluation of petroleum hydrocarbon MNA performance.

4.6.3.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for Petroleum Hydrocarbons

The area impacted with petroleum hydrocarbons is limited to the former Tank Farm area and the western portion of the EPL. Relative to the LNAPL presence and distribution described in Section 4.4 above, the petroleum hydrocarbon plume has not changed significantly. While the LNAPL thickness has varied over the past decade and is only observed as a sheen in wells CW-1 and CW-2, certain wells in the former Tank Farm/EPL area (AE-03, AE-04, GZA-105D, PZ-2S, and TRC-101) have shown fluctuations, mainly in VPH fraction concentrations. This observation may be due to fluctuations in groundwater elevations flushing the smear zone and the continued dissolution of LNAPL constituents into the aqueous phase, which would further decrease the residual LNAPL and make the dissolved constituents more available to natural attenuation processes over time, as documented by the 2020-2021 natural source zone depletion (NSZD) assessment summarized in Post-temporary Solution Status Report Number 10 and Periodic Review of the Temporary Solution dated May 4, 2022.

4.6.3.2 Changed Conditions Affecting Petroleum Hydrocarbons

There are no new data during this monitoring period that would indicate that new environmental conditions or new releases of contaminants have occurred, which could reduce MNA efficiency for petroleum hydrocarbons in groundwater.

4.6.3.3 Absence of Toxic Transformation Products of Petroleum Hydrocarbons

Petroleum hydrocarbons typically degrade to less toxic forms as they undergo biological degradation in the environment. The most toxic petroleum hydrocarbons include PAHs and smaller aromatic compounds such as BTEX. Based on the 2016-2022 analytical results, there have been some noted fluctuations in petroleum hydrocarbon concentrations but no significant increases in the amounts of PAHs or BTEX compounds.

4.6.3.4 Verification that Petroleum Hydrocarbons Plume is not Expanding

The extent of the dissolved-phase petroleum hydrocarbons in overburden and shallow bedrock is limited to a small area in the former Tank Farm and western portion of the EPL. Detected concentrations in this area from 2016 to 2022 are stable and/or decreasing as shown in Table 4-4. The dissolved petroleum hydrocarbon plume is therefore considered stable and not expanding.

4.6.3.5 Demonstration of Effective Institutional Controls

The institutional controls under the AUL at the site remain effective in limiting potential exposure to petroleum hydrocarbons in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the nearby municipal wells remain inactive, and no drinking water wells exist within 0.5 miles of the site.

4.6.3.6 Verification of Attainment of Remedial Objective for Petroleum Hydrocarbons

The remedial objective for petroleum hydrocarbons is reduction of the concentrations in overburden and bedrock groundwater over time through MNA. Based on groundwater data collected during this reporting period, there is evidence of some biodegradation of petroleum hydrocarbons and the existing groundwater plume for petroleum hydrocarbons is stable and not expanding. Additionally, the results of the 2020-2021 NSZD assessment confirm LNAPL reduction through natural processes, which in turn will reduce dissolved-phase petroleum hydrocarbon concentrations over time. Therefore, the remedial objective for petroleum hydrocarbons in groundwater is being met.

4.6.4 Chlorinated Volatile Organic Compounds Monitored Natural Attenuation Performance

This section presents an evaluation of CVOC MNA performance. Site CVOCs have been monitored in the same fashion from 2016 through 2022. The data have been relatively consistent, with natural fluctuations observed due to seasonal variability, changes in water levels year-to-year, and fluctuations in concentrations where CVOCs are elevated in the former onsite source areas. This section focuses on discussion of the most recent 2022 data.

4.6.4.1 Demonstration that Monitored Natural Attenuation is Occurring as Expected for Chlorinated Volatile Organic Compounds

This section documents the review of the 2022 CVOC and associated MNA data which indicate that the subsurface conditions at the site are complex and continue to yield differing interpretations of

where natural attenuation (NA) is observed and other areas where NA appears limited. Based on statistical trends used to evaluate the effectiveness of the remedial components in achieving cleanup levels (i.e., migration of site COC, and changes in COC concentrations in both time and distance from source area) some monitoring well locations show clear indications of ongoing NA (both biological and abiotic), while other monitoring wells have limited indications of NA (i.e., some, but not all monitored parameters suggest ongoing NA). However, taking the entire set of data and site considerations into account, the main conclusion from the ongoing MNA evaluation is that the observed COC plume configuration and size has not increased or exhibited further migration, thus demonstrating the natural attenuation mechanisms remain functional at the site. A summary of the MNA parameters analyzed in groundwater 2016 – 2022 is provided in Table 4-8.

The majority of the monitoring wells located underneath Building 1 and within Transects A, B, and C indicate reducing conditions in the groundwater (dissolved oxygen [DO] levels less than 1 milligram per liter and oxidation-reduction potential as low as -193 millivolts). The presence of reducing conditions is conducive to the ongoing NA of CVOCs via reductive dechlorination (biotic process) and/or other abiotic processes if other factors are also favorable. A summary of the 2022 geochemical parameters is provided in Table 2-3.

Based on data collected to date, evidence of reductive dechlorination of CVOCs is observed at the site (at varying degrees), in both the overburden and bedrock. Complete mineralization of CVOCs is also observed in a few wells, based on the presence of ethene and ethane (e.g., AE-103R-5). The detection of these biodegradation end products is attributable to biotic, abiotic, or a combination thereof, ongoing attenuation processes. Methane is also present at increased levels in a few wells (e.g., AE-105R-2), indicating that redox conditions have progressed sufficiently to support ongoing reductive dechlorination. Elevated sulfide levels were present in select wells indicating evidence of some sulfate reduction observed from the 2022 analytical data. The presence of degradation daughter products such as cis-1,2-DCE or VC, relative to their parent PCE and TCE concentrations, further supports ongoing NA processes.

Similar to recent reporting events, there are a number of wells that contain concentrations of CVOCs below 100 µg/l. These not only include wells further downgradient in the plume, but also select wells in Transect A and the EPL. At these low concentrations, it is well known that reductive dechlorination processes may be inhibited, or exhibit cis-1,2-DCE “stall”, without added electron

donor (natural organic carbon, petroleum hydrocarbons, or remedial amendments) as the levels of the CVOCs are not significant enough to act as sufficient electron acceptors for the process. Based on the 2022 data, the relative stability of CVOC concentrations in overburden and bedrock continues to support the general stability and/or decrease of source concentration areas along with observed areal extents of the CVOC impacts in the respective zones.

For the 2022 sampling event, groundwater samples from select monitoring locations and intervals were submitted for microbial population and reductase gene analyses using quantitative polymerase chain reaction (qPCR) using the Microbial Insights QuantArray™ method. Previous microbial analyses were completed in 2016, 2017, and 2021. A summary of the QuantArray™ results is presented in Table 4-10. Samples were collected from locations in former source areas and extended downgradient through Transects A and B. Overall interpretation of the qPCR microbial data suggests that the overburden and bedrock portions of the aquifer have the necessary microbial communities to support microbial degradation. The microbe responsible for the complete reductive dechlorination of PCE/TCE to ethene, *Dehalococcoides* (DHC), has been detected in a number of monitoring well locations along the length of the observed plume, albeit at less than optimal populations (cells per milliliter [cells/mL]). The general rule of thumb is that DHC populationss should be $1x10^{+4}$ cells/mL or higher to support robust reductive dechlorination. Within the sampled monitoring well locations, the DHC populations generally range from $1x10^{+1}$ to greater than $1x10^{+4}$ cells/mL. Addditonally, specific functional reductase genes (tceA, bvcA, and VCR reductase) also need to be present to facilitate the complete reductive dechlorination from cis-1,2-DCE through VC to ethene. As with DHC, the functional reductase genes are also found to be present but again with varying population values. While some of the functional reductase gene populations are low, the fact that they are detectable indicates that microbial activity is likely ongoing. The observed microbial results are also supported by the detection of dissolved gases (methane, ethane, and ethene) which are the end products of reductive dechlorination. The low microbial populations are likely being impacted by lower values of total organic carbon and the presence of higher concentrations of nitrate and sulfate in portions of the site. That said, the presence of the specific microorganisms combined with other lines of evidence (i.e., parent-daughter transformation, dissolved gases, etc.) continues to suggest that biological attenuation is contributing to the ongoing NA of CVOCs at the site (at least in specific areas of the site).

For the 2022 sampling event, compound specific isotope analysis (CSIA) continuse to be utilized to provide an additional line of evidence (LOE) to support the demonstration of biological transformation and attenuation of CVOCs in groundwater. CSIA sampling was completed at a select number of monitoring well locations in 2016, 2017, 2021 and 2022 with a similar distribution to the qPCR microbial analysis outlined above. The cummulative CSIA data is presented in Table 4-9.

The enrichment of the C^{13}/C^{12} ($\delta^{13}C$) ratio (i.e., reported values become less negative) indicates the biological transformation of a contaminant as it moves along a given flowpath (e.g., plume centerline) as compared to observed source area δ13C values that have undergone little to no biological degradation. With regard to the 2022 sampling event, the overall CSIA results further support the results observed in the qPCR and other NA data. In general, the $\delta^{13}C$ values for the parent and degradation products show enrichment in monitoring wells located downgradient of the source area. This observation is consistent over both time (i.e., 2016 – 2022) and distance downgradient (i.e., source area to Transect C). It is noted that the enrichment is variable with respect to the overburden or bedrock and this is likely associated with the previously noted varying degrees of ongoing natural attenuation. If the $\delta^{13}C$ value of a contaminant increases by more than 2 ‰ over time or downgradient of the source, it is strong evidence that the compound has degraded. When the original $\delta^{13}C$ value of a contaminant is unknown, published literature values of manufactured, undegraded parent compound can be used as an approximation for the undegraded $\delta^{13}C$ value of a contaminant. Any time that a contaminants $\delta^{13}C$ value is greater than 2‰ above the manufactured range, it is conclusive evidence of degradation. The manufactured ranges for the $\delta^{13}C$ values are provided within the Microbial Insights (MI) CSIA Database. More information on the MI CSIA Database can be found at https://microbe.com/compound-specific-isotope-analysis-csia/.

As presented in Table 4-9, the enrichment of the $\delta^{13}C$ values is observed at several monitoring well locations within the existing network and this provides an LOE supporting the ongoing reductive dechlorination of the CVOCs in groundwater. The available data provides further evidence related to ongoing degradation processes (both abiotic and biotic) in the subsurface and continues to support that NA mechanisms are active in site groundwater. The continued use of CSIA analysis as part of future sampling events will provide additional data to continue to evaluate this LOE.

Abiotic degradation by reactive iron minerals may also play a role in the natural transformation of certain CVOCs. This is also supported by the CSIA data discussed above. Iron sulfides such as

pyrite have been documented to react with PCE, TCE, and cis-1,2-DCE to cause a complete dechlorination transformation to acetylene and ethene without daughter products. Groundwater hydrogen levels indicate that sulfate reducing conditions could occur, and sulfate is observed at 7-60 milligrams per liter in the aquifer. Although hydrogen sulfide is only present in elevated levels in a few wells, sulfide may be sequestered by iron minerals in the soil and rock during the reduction process, generating the reactive minerals needed for abiotic transformation of CVOCs.

Acetylene is a signature product from the abiotic transformation process. Although acetylene is not always observed in groundwater where abiotic degradation is occurring, its presence suggests that abiotic reductive dechlorination may play at least some role in transformation of CVOCs in specific areas of the site. There continue to be limited detections of propane, which is another of the dissolved gases that is indicative of the abiotic pathway. The detection of both acetylene and propane, although limited, indicates that abiotic transformation of CVOCs cannot be excluded and therefore can be contributing to the overall attenuation mechanisms in the subsurface.

Based on the collective evaluation of the data from 2016 through 2022, there continues to be evidence of ongoing NA to varying extents, in select areas of the site, to provide for the ongoing attenuation and control of the observed dissolved phase groundwater CVOC impacts. While the exact processes and their proportional contributions to the overall apparent ongoing attenuation are not specifically quantifiable, there are a number of lines of evidence that support the continued application of MNA at the site.

4.6.4.2 Changed Conditions Affecting Chlorinated Volatile Organic Compounds Monitored Natural Attenuation

There are no new data during this monitoring period that would indicate new environmental conditions or new releases of contaminants have occurred which could reduce MNA efficiency for CVOCs in groundwater.

4.6.4.3 Absence of Toxic Transformation Products of Chlorinated Volatile Organic Compounds

Although elevated VC concentrations are detectable in a few monitoring wells, the presence of VC is not unexpected and is likely attributable to ongoing microbial degradation and is considered an indicator of reductive dechlorination where it aligns with elevated parent concentrations. The groundwater at the site is not used for drinking water purposes.

Analytical data from many wells exhibit mixed behavior (upward and downward trends) and the fluctuations are likely the result of different influences, such as reductive dechlorination (transformation of cis-1,2-DCE to VC and VC to ethene at differing rates), changes in water levels, changes in subsurface geochemical conditions, and high concentrations near source areas. Elevated concentrations of VC were observed in wells located in Building 1-Tank F area and in Transect A for the 2022 sampling event. VC is the final CVOC to be degraded through reductive dechlorination because it is the least oxidized of these compounds. Therefore, the rate of reductive dechlorination decreases as the degree of chlorination decreases. The reductive dechlorination of VC to ethene is a slow reaction under anaerobic conditions, which favors the persistence of VC in PCE and TCE plumes that are undergoing reductive dechlorination. However, as the VC moves out of the anaerobic zone with ambient groundwater flow into more aerobic zones, the concentrations of VC are expected to continue to decrease because VC is known to quickly biodegrade under aerobic conditions.

4.6.4.4 Verification that Chlorinated Volatile Organic Compounds Plume is not Expanding

Groundwater contamination has been documented at the site since the 1980s. Although groundwater monitoring wells have been sampled at this site for over 30 years, the number of monitoring wells over the entire MCP site has increased significantly over time, particularly between 2012 and 2016. For this reason, the volume of data available for any point in time in the past is not consistent with the volume of data available currently, though the number of wells has not changed since 2016. This situation makes an analysis of changes over time difficult to interpret relative to historical data.

For the 2022 analytical data, observed PCE, TCE and cis-1,2-DCE concentrations have increased in a few wells. However, PCE and TCE have also generally decreased in a large number of wells. Localized increases in concentrations noted in 2022 are primarily in wells at the source area underneath Building 1, where potential residual DNAPL may be present, and in wells at Transect A. As detailed in Section 4.5 above, there are 61 cases in which wells (or well screens/ports) across the site in both overburden and bedrock show decreasing concentration trends of PCE and TCE. This is an indication of improving conditions from the source area to the downgradient edge of the plume. There are another 57 cases, largely in bedrock, in which cis-1,2-DCE and VC trends appear to be increasing, mostly at wells in the former Tank Farm, Building 1, EPL, and Transects A and B. It is believed that these well ports are exhibiting increased daughter product generation based on

downward trends and reduction of parent PCE and TCE concentrations. A number of additional well port cases evaluated also exhibited stable trends.

Most of the trend graphs presented in Appendix D show that the visual trend of the groundwater CVOC concentrations are either stable or decreasing over time. This is believed to be the result of ongoing natural attenuation of the plume described above.

Although increased PCE and TCE concentrations have been observed in suspected source areas, this could be due to seasonal and localized changes in groundwater levels. This phenomenon is not unexpected within source areas that have shown historical fluctuations over time. The primary evidence for demonstration of MNA occurring at the site includes a continuing shift of parent to daughter product contaminant concentrations over time (Mann Kendall statistics) in conjunction with a stable groundwater plume. The data presented in this report show that, over time, the extent of the CVOC plume emanating from the former GE facility is stable and the mass of the plume is slowly shrinking.

4.6.4.5 Demonstration of Effective Institutional Controls

The institutional controls under the AUL at the site remain effective in limiting potential exposure to CVOCs in groundwater. Although there are no institutional controls regarding the restriction of groundwater as a drinking water source at the site, the Stickney Well remains inactive and no drinking water wells exist within 0.5 miles of the site.

4.6.4.6 Verification of Attainment of Remedial Objective for Chlorinated Volatile Organic Compounds

The remedial objective for CVOCs at the site is the reduction of dissolved phase groundwater concentrations within the overburden and bedrock zones over time, and MNA has been implemented and is being demonstrated through the ongoing monitoring of MNA parameters. It is noted that given the elevated concentrations of CVOCs at the site, including mass within bedrock fractures and micro-fractures, the time frame for reduction in overall CVOC concentrations is estimated to be on the order of decades. Based on groundwater data collected during this reporting period, the existing groundwater plumes for dissolved CVOC are stable and not expanding. Therefore, the remedial objective for CVOCs in groundwater is being met.

SECTION 5
DEMONSTRATION OF EFFECTIVE INSTITUTIONAL CONTROLS

The Temporary Solution for the site includes the implementation of an activity and use limitation (AUL) to eliminate potential human health risks. A copy of the AUL is included in Appendix F.

On July 13, 2015, Wilmington Realty Trust (WRT) placed an AUL on the portion of the site owned by WRT, encompassing Buildings 1, 1A, and 2 and the Eastern Parking Lot. This AUL was established to prevent uses of the property that would be inconsistent with maintaining a condition of No Substantial Hazard under the Massachusetts Contingency Plan (MCP). These prohibited uses include the following:

- Residential, school, playground, park, or daycare use, and
- Any activities that would result in exposure to or the disturbance of potentially contaminated soils, bedrock, groundwater, and indoor air, unless appropriate precautions to prevent human exposure are taken, as described in the AUL

In addition, the AUL imposes certain obligations and conditions to maintain a condition of No Substantial Hazard, including maintenance of concrete floors, management of any excavated soil and/or bedrock under Soil Management Procedures set forth in 310 Code of Massachusetts Regulation (CMR) 40.0030, and appropriate management of any groundwater removed during dewatering activities. Lastly, any activities which could result in exposure to, or disturbance of soil, bedrock, or groundwater must be conducted in accordance with some or all of the following, as determined by a Licensed Site Professional:

- the performance standards for Release Abatement Measures set forth by the MCP at 310 CMR 40.0440 (Massachusetts Department of Environmental Protection [MassDEP], 2014)
- the soil management procedures pursuant to 310 CMR 40.0030, the Similar Soils Provisions Guidance (WSC# 13-500; MassDEP, 2014)
- Construction of Buildings in Contaminated Areas (Policy WSC# 00 425; MassDEP, 2000a)

- applicable health and safety procedures outlined in 310 CMR 40.0018

The AUL does not restrict the use of groundwater for drinking water purposes. However, the Stickney Well in North Reading and the Reading municipal wells south of the Ipswich River remain inactive, and no drinking water wells exist within 0.5 miles of the site. AECOM has checked the Massachusetts online drinking water well data portal (https://eeaonline.eea.state.ma.us/portal#!/search/drinking-water) annually to confirm that no new drinking water wells have been installed within 0.5 miles of the site in the towns of Wilmington, Reading, or North Reading between January 21, 2016 and March 1, 2023.

The current owner is aware of the AUL and the AUL conditions required for maintaining the property. The objectives of the AUL are being met and the institutional controls in place at the site are effectively maintaining a condition of No Substantial Hazard.

SECTION 6
CONDITIONS/PROBLEMS AFFECTING THE REMEDIAL ACTION

No conditions or problems were identified during this reporting period that may have the potential to affect the remedial action.

SECTION 7
MODIFICATIONS TO THE MONITORING PROGRAM

During this monitoring period, no modifications were made to the monitoring program as presented in the May 2017 Temporary Solution Statement, and the updated post-temporary solution operation, maintenance, and monitoring groundwater monitoring plan in Post-temporary Solution Status Report Number 10 and Periodic Review of the Temporary Solution dated May 4, 2022.

SECTION 8
FUTURE MONITORING

The Post-temporary Solution Operation, Maintenance, and/or Monitoring Plan will continue to be implemented according to the schedule presented in Table 8-1, which includes activities described below to be completed up to submittal of the second five-year review of the temporary solution due in May 2027.

- Annual light non-aqueous phase liquid (LNAPL) gauging of seven monitoring wells (i.e., AE-03, AE-04, CW-1, CW-2, GZA-102S, PZ-2S, and TRC-101) located in the western portion of the Eastern Parking Lot to monitor the presence/absence of LNAPL in this area. If LNAPL thickness of greater than 0.1 feet is detected in a well, an absorbent sock will be deployed to absorb the LNAPL for subsequent disposal. Gauging events will be conducted in the fall each year with a target date of September, with the results presented in November. The next annual LNAPL gauging event is scheduled to take place in September 2023. The remedial alternative selected for LNAPL is monitored natural attenuation (MNA). To monitor the progress of LNAPL behavior more specifically, the dissolved phase petroleum hydrocarbon "halo" surrounding the LNAPL area will be evaluated over time. This will provide a leading indicator of the potential dissolution of LNAPL and subsequent natural degradation of the associated dissolved phase plume.

- Biennial groundwater sampling of select monitoring wells for analysis of site chemicals of concern (i.e., chlorinated volatile organic compounds, 1,4-dioxane, petroleum hydrocarbons, and arsenic) and relevant MNA parameters in the overburden and bedrock groundwater. Each groundwater sampling event will include a site-wide water level measurement round. The next biennial groundwater sampling event will be conducted in September 2024.

- Submittal of semiannual Post-temporary Solution Status and Remedial Monitoring Reports. The next semiannual report is due to the Massachusetts Department of Environmental Protection (MassDEP) in November 2023.

- Submittal of a periodic review of site conditions every five years to evaluate new technologies and their potential to achieve a permanent solution. The next five-year review of the temporary solution is due to the MassDEP in May 2027.

- Per the requirements for Public Involvement Activities under 310 Code of Massachusetts Regulations 40.1403, Lockheed Martin Corporation will send written notices of availability of the May 2023 post-temporary solution status report to the Chief Municipal Officer and Board of Health for the towns of Wilmington and North Reading. In addition, per the November 2000 Public Involvement Plan (PIP) for the Wilmington site, written notices of availability of the May 2023 post-temporary solution status report will be sent to the PIP

mailing list. These written notices will be sent within seven days of the filing of the submittal to the MassDEP. A hard copy of the document will be placed in the repository located in the Town of North Reading Library and electronic copies will be uploaded to the Lockheed Martin and MassDEP web sites. Please see Section 10 for additional PIP details.

SECTION 9
LICENSED SITE PROFESSIONAL OPINION AND CONCLUSIONS

Comprehensive response actions at the site are limited to active remedial monitoring that includes monitored natural attenuation under post-temporary solution status. It is AECOM Technical Services Inc.'s opinion that the performance standards outlined in 310 Code of Massachusetts Regulations 40.0897, and as presented in the Temporary Solution Statement submitted to the Massachusetts Department of Environmental Protection by AECOM Technical Services, Inc. in May 2017, are being accomplished. Based upon groundwater monitoring data presented during this reporting period, the existing groundwater plumes for chlorinated volatile organic compounds, petroleum, and dissolved arsenic are stable and not expanding.

The seal and signature of the licensed site professional who prepared this Post-temporary Solution Status Report Number 12 are set forth on the applicable Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup transmittal forms (BWSC-108) submitted via eDEP.

SECTION 10
PUBLIC NOTIFICATION

The former General Electric facility is part of a joint Public Involvement Plan (PIP) with other Potentially Responsible Parties that was prepared in 2000 by the Massachusetts Department of Environmental Protection (MassDEP). As a PIP site, the former General Electric facility must meet additional regulatory requirements above the minimum requirements of the Massachusetts Contingency Plan.

During the Post-temporary Solution period, Post-temporary Solution Status Reports are required by the Massachusetts Contingency Plan (MCP) to be submitted every six months to the MassDEP. In accordance with the November 17, 2000 PIP (MassDEP, 2000b), these Status Reports are also required to be provided to the designated information repository at the Flint Memorial Library in the Town of North Reading. Members of the PIP mailing list, including the Chief Municipal Officer and Board of Health agents for the towns of Reading, North Reading, and Wilmington, have been notified of the availability of this report by mail. A copy of the letter sent to the PIP mailing list and listed municipal officers concerning the availability of documents in the repository including this status report, as required under the PIP (MassDEP, 2000b), is included in Appendix G.

Prior to groundwater sampling activities completed during this reporting period and after receipt of associated laboratory analytical results, AECOM Technical Services, Inc. (AECOM) submitted notifications using MassDEP Form BWSC-123 to the property owners listed below:

- Hilco Redevelopment Partners – 40-50 Fordham Road in Wilmington and North Reading
- Howland Development – 87 Concord Street in North Reading
- International Family Church – 99 Concord Street in Wilmington and North Reading
- Town of North Reading – 0 Furbish Pond Lane in North Reading
- North Reading Town Water – Wells along Concord Street in North Reading
- Wilmington Masonry – 62 Concord Street in North Reading

- YRC Freight – 95 Concord Street in North Reading

In addition, AECOM obtained verbal permission from the resident at 3 Furbish Pond Lane in North Reading to measure the depth to water in their private irrigation well, and subsequently provided the resident the groundwater elevation information.

Appendix G includes copies of the Bureau of Waste Site Cleanup forms and related notifications sent to property owners documenting the prior notification of the sampling event and the presentation of the analytical results resulting from that sampling event, as required by the MCP.

SECTION 11
REFERENCES

AECOM Technical Services, Inc. (AECOM) 2013. Remedy Operation Status Report, ROS Termination, and Tier 1A Permit Extension, Former General Electric Site, 50 Fordham Road, Wilmington, MA. March 2013.

_____, 2014. Tier Classification Extension Supporting Documentation, Former General Electric Site, 50 Fordham Road, Wilmington, MA, RTN 3-0518, October 10, 2014.

_____, 2017a. Draft Temporary Solution Statement, Former General Electric Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0518. May 2017.

_____, 2017b. Draft MCP Phase II Comprehensive Site Assessment, Former General Electric Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0518. May 2017.

_____, 2017c. Draft Phase III Remedial Action Plan, Former General Electric Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0518. May 2017.

_____, 2022. Post-temporary Solution Status Report 10 and Periodic Review of the Temporary Solution. Former General Electric Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0518. May 2022

CCC Environmental Services LLC, 2023. Remedy Operation Status/Remedial Monitoring Report, YRC Freight Terminal, 95 Concord Street, North Reading, MA, RTN 3-0002363, January 2023.

_____, 2023. Remedy Operation Status/Remedial Monitoring and RAM Status Report, YRC Freight Terminal, 95 Concord Street, North Reading, MA, RTN 3-0002363, January 2022.

Massachusetts Department of Environmental Protection (MassDEP), 2000a. Construction of Buildings in Contaminated Areas, Policy WSC# 00 425; MassDEP, 2000a.

_____, 2000b. Public Involvement Plan, MSM Industries, Former Sterling Supply Corporation Disposal Site, Roadway Express Disposal Site, Former General Electric Disposal Site, Wilmington and North Reading, Massachusetts. November 2000.

_____, 2010. The Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods Used in Support of Response Actions for the Massachusetts Contingency Plan (MCP), WSC-02-320. July 1, 2010.

_____, 2014. Massachusetts Contingency Plan, 310 CMR 40.0000, December 31, 2007, Amended April 25, 2014 and June 20, 2014.

Rodriguez, 2016. *Evaluation of 1,4-Dioxane Biodegradation Under Aerobic and Anaerobic Conditions*, Francisco J. Barajas Rodriguez, Clemson University Dissertation, December 2016.

TRC Companies, Inc. (TRC), 2004. Partial Response Action Outcome, Outfalls 001 and 002, Former GE Facility (RTN 3-0518), Wilmington, Massachusetts. December 2004.

_____, 2006. Remedy Operation Status Opinion, Former GE Facility, RTN 3-0518, Wilmington, Massachusetts. April 20, 2006.

_____, 2010. Partial Response Action Outcome, Tank K Area, Former GE Facility (RTN 3-0518), Wilmington, Massachusetts. November 2010.

United States Environmental Protection Agency Region 1, 2010. *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells.* January 2010, revised September 2017.

FIGURES

Figure 1-1 Site Location Map

Figure 1-2 Site Plan

Figure 1-3 Monitoring Well Locations

Figure 3-1 Groundwater Contour Map 0-60 Feet, September 27, 2022

Figure 3-2 Groundwater Contour Map 61-120 Feet, September 27, 2022

Figure 4-1 Dissolved Arsenic in Groundwater – Overburden (0-78 ft bgs)

Figure 4-2 1,4-Dioxane (SW8270D SIM) in Groundwater – Overburden (0-78 ft bgs)

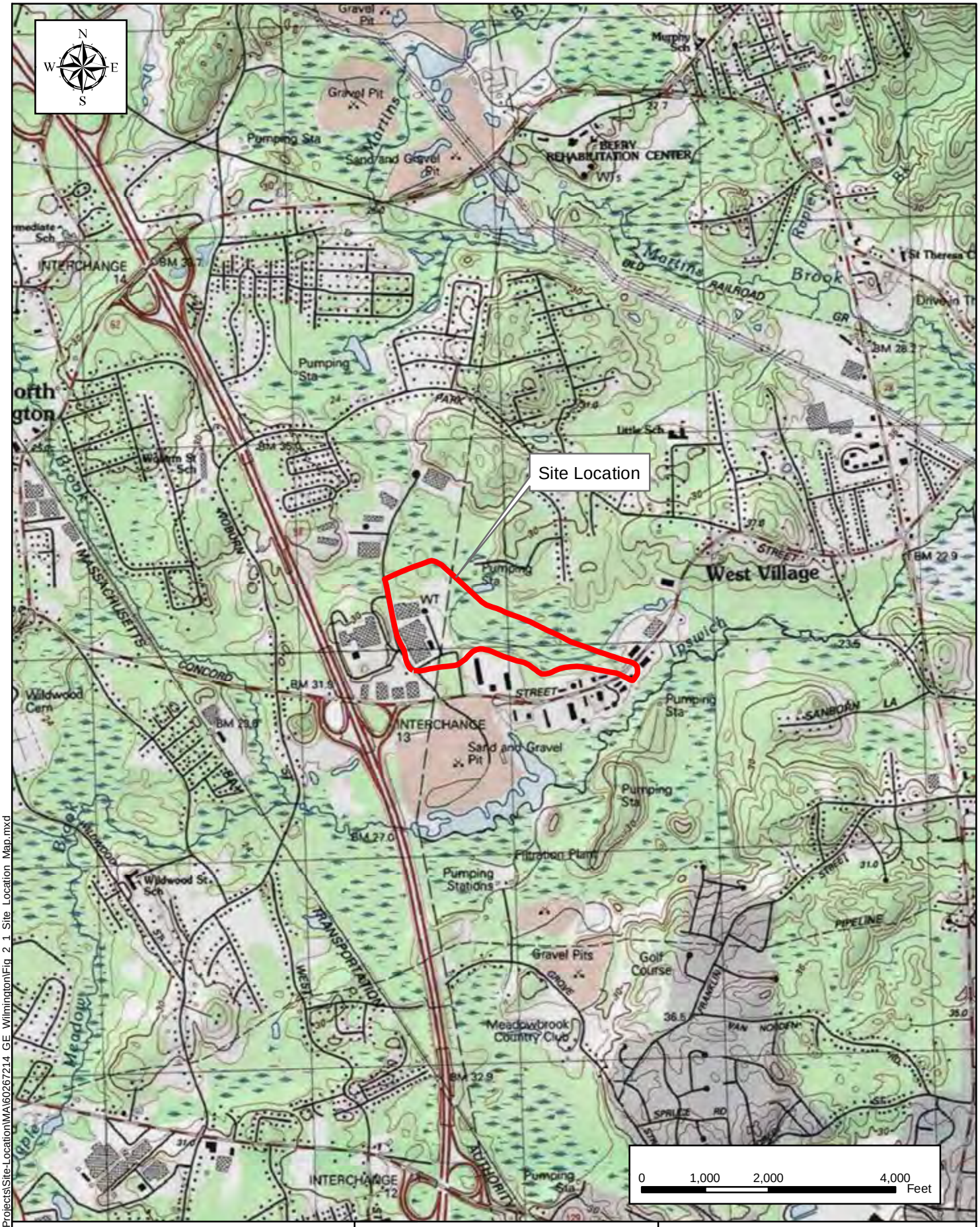
Figure 4-3 1,4-Dioxane (SW8270D SIM) in Groundwater – Bedrock (0-232 ft bgs)

Figure 4-4 PCE in Groundwater – Overburden (0-78 ft bgs)

Figure 4-5 PCE in Groundwater – Bedrock (0-232 ft bgs)

Figure 4-6 TCE in Groundwater – Overburden (0-78 ft bgs)

Figure 4-7 TCE in Groundwater – Bedrock (0-232 ft bgs)

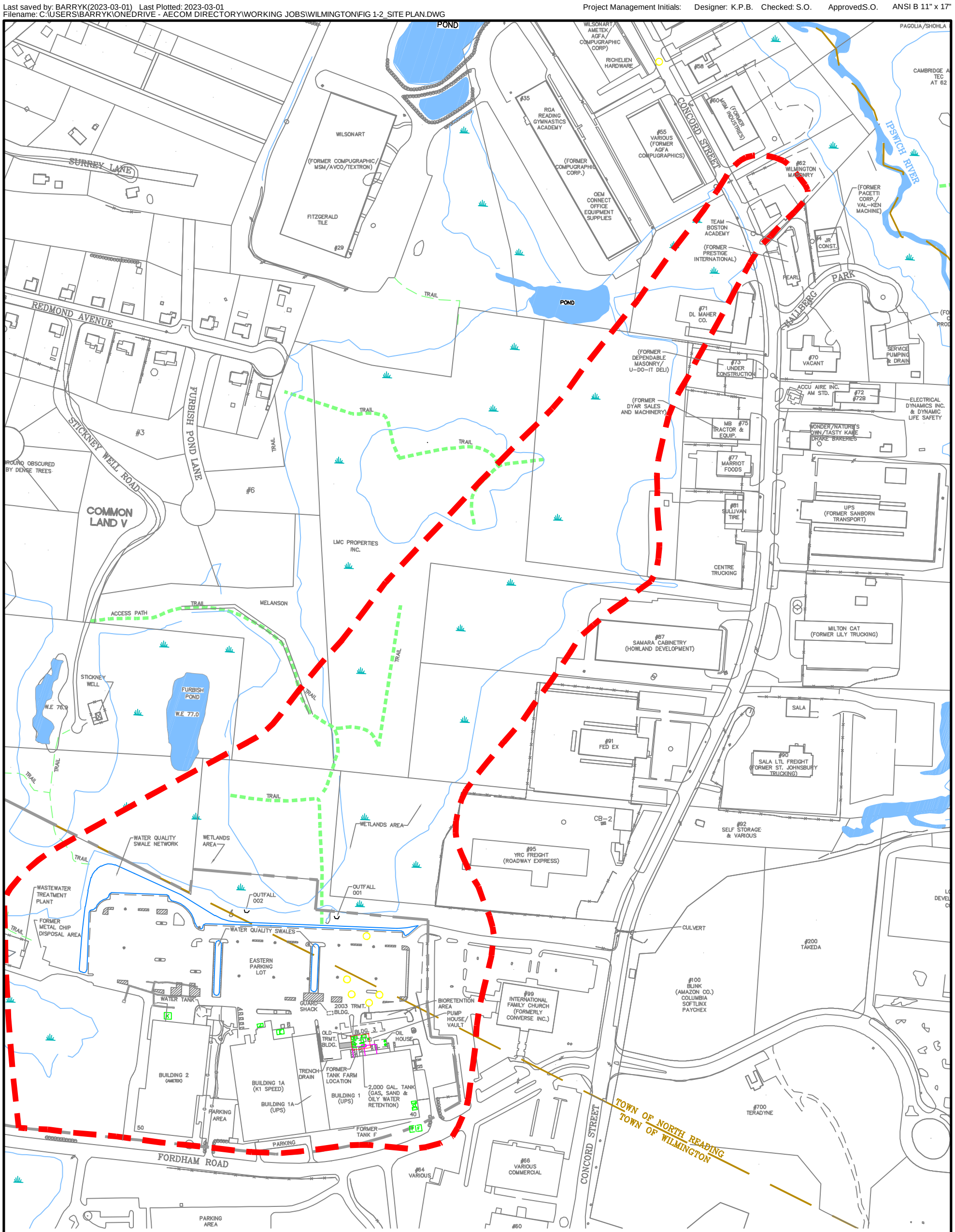


Path: L:\Gisprojects\Projects\Site-Location\MA\60267214 GE Wilmington\Fig 2 1 Site Location Map.mxd

AECOM	Former GE Facility 50 Fordham Road, Wilmington, MA	SITE LOCATION MAP
	DATE: 9/23/2022	PROJECT: 60688023 / FIGURE: 1-1

Last saved by: BARRYK(2023-03-01) Last Plotted: 2023-03-01
Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\FIG 1-2_SITE PLAN.DWG

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ANSI B 11" x 17"



Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

SITE PLAN

AECOM

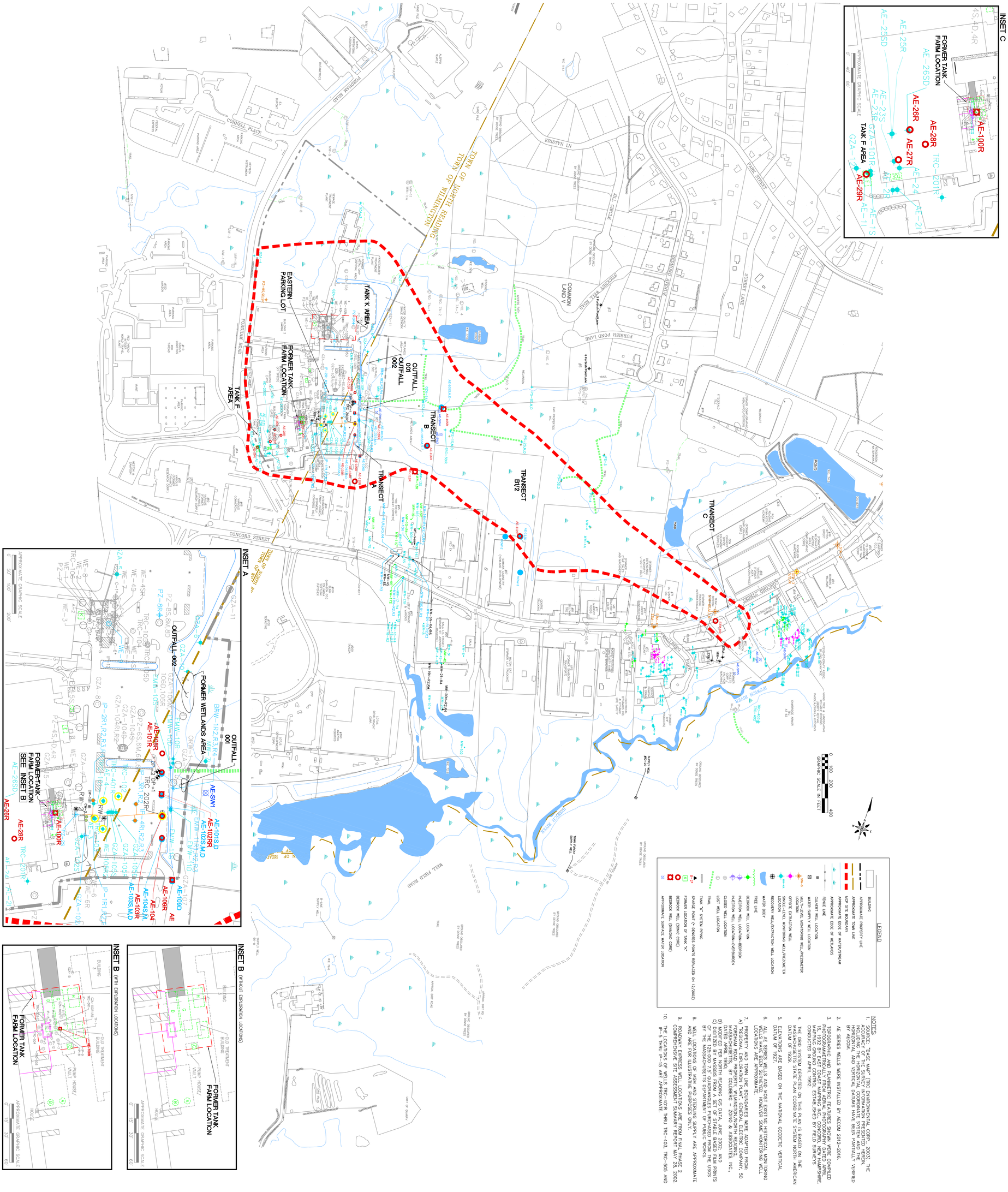
60688023 2023-03-01

FIGURE: 1-2

Filename: C:\USERS\BARRYK\ONEDRIVE - AECOM DIRECTORY\WORKING JOBS\WILMINGTON\FIG 1-2_SITE PLAN.DWG Last saved by: BARRYK Last Plotted: 2023-03-01

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: S.O. ARCH C 18" x 24"

K.P.B. S.O. S.O.



NOTES:

1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL COORDINATE SYSTEM AND THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. AE SERIES WELLS WERE INSTALLED BY AECOM 2012-2016.
3. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 16, 1992 BY EAST COAST MAPPING INC., CONCORD, NEW HAMPSHIRE. MAPPING GROUND CONTROL ESTABLISHED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
4. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1929.
5. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1927.
6. ALL AE SERIES WELLS AND MOST EXISTING HISTORICAL MONITORING WELLS HAVE BEEN SURVEYED. HOWEVER SOME MONITORING WELL LOCATIONS ARE APPROXIMATE.
7. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM:
   A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 FORDHAM ROAD PROPERTY, WILMINGTON/NORTH READING, MASSACHUSETTS, BY GOLDBERG - ZOINO & ASSOCIATES, INC., DATED APRIL 1990;
   B) MODIFIED PER NORTH READING GIS DATA, JUNE 2002; AND
   C) DIGITIZED BY MASSGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 125,000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.
8. WELL LOCATIONS OF MSW AND STERLING SUPPLY ARE APPROXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.
9. ROADWAY EXPRESS WELL LOCATIONS ARE FROM FINAL PHASE 2 COMPREHENSIVE SITE ASSESSMENT SUMMARY REPORT MAY 28, 2002.
10. THE LOCATIONS OF WELLS TRC-401R THRU TRC-403, TRC-505 AND IP-5 THRU IP-15 ARE APPROXIMATE.

Former GE Facility - 50 Fordham Rd, Wilmington, MA

Lockheed Martin Corporation

MONITORING WELL LOCATIONS

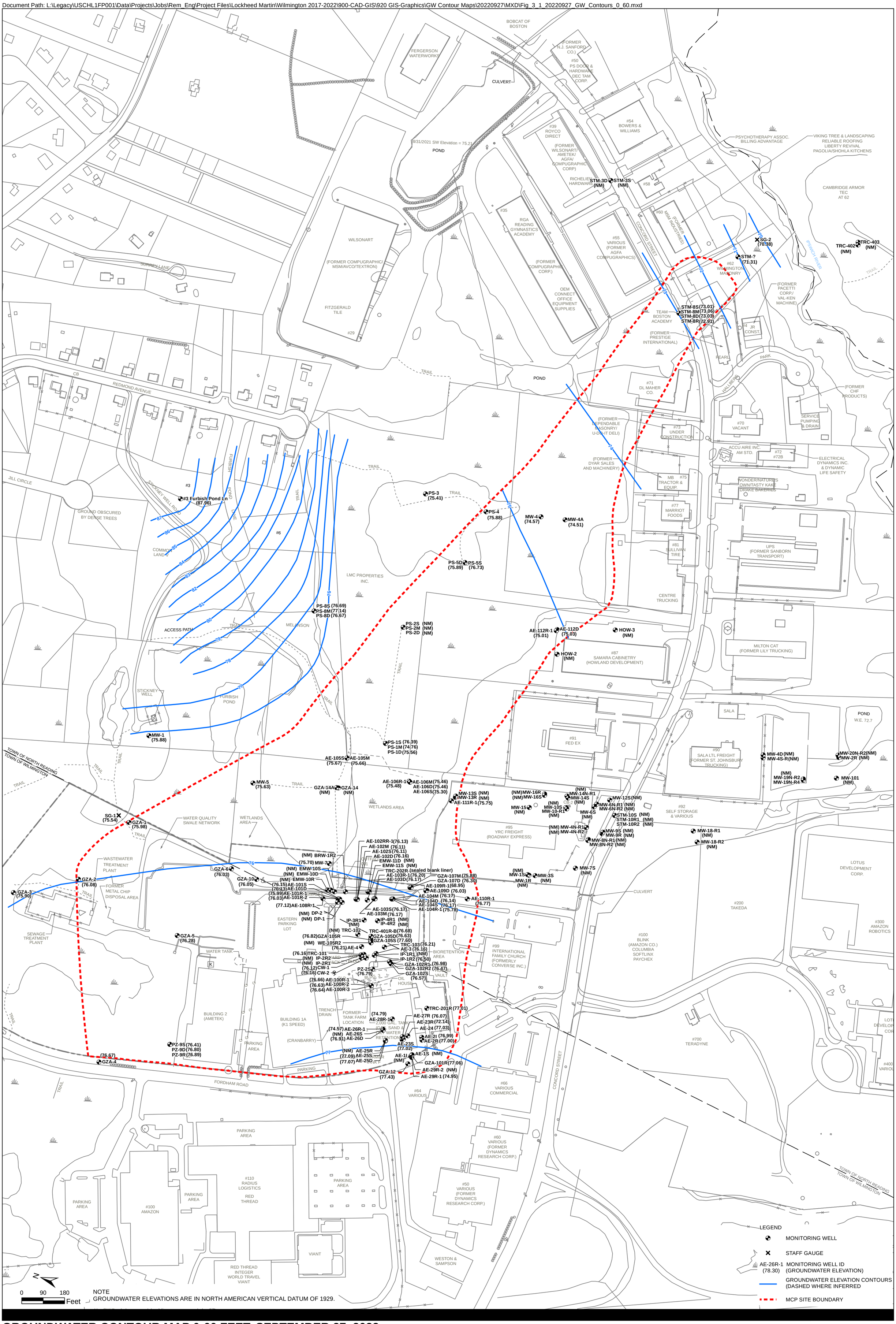
AECOM

60688023

Date: 2023-03-01

FIGURE: 1-3

Document Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\GW Contour Maps\20220927\MXD\Fig_3_1_20220927_GW_Contours_0_60.mxd



GROUNDWATER CONTOUR MAP 0-60 FEET, SEPTEMBER 27, 2022

FORMER GE FACILITY

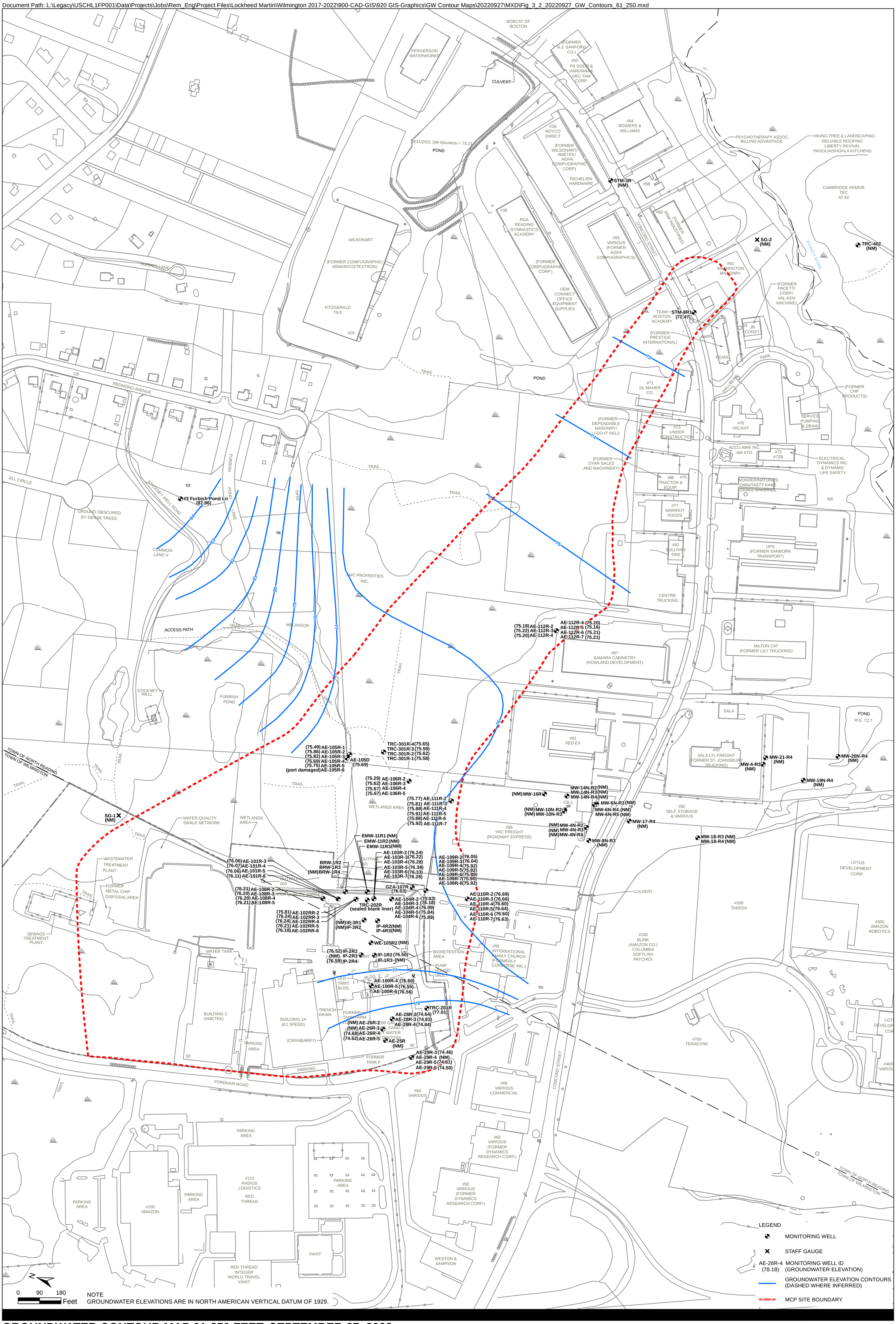
50 FORDHAM RD, WILMINGTON, MA

Project No.: 60688023.02.1

AECOM

FIGURE 3-1

Document Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\GW Contour Maps\20220927\MXD\Fig_3_2_20220927_GW_Contours_61_250.mxd



GROUNDWATER CONTOUR MAP 61-250 FEET, SEPTEMBER 27, 2022

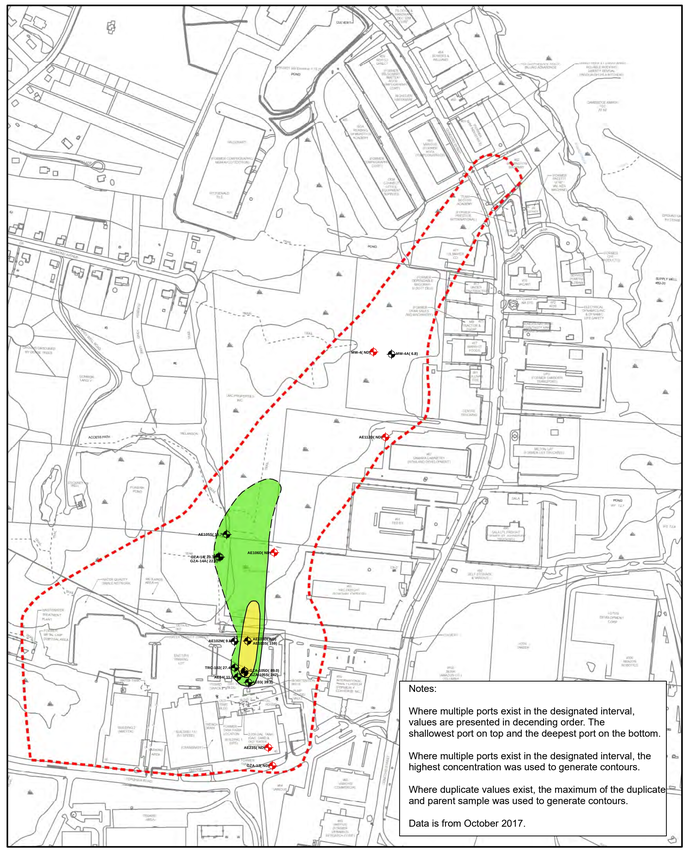
FORMER GE FACILITY

50 FORDHAM RD, WILMINGTON, MA

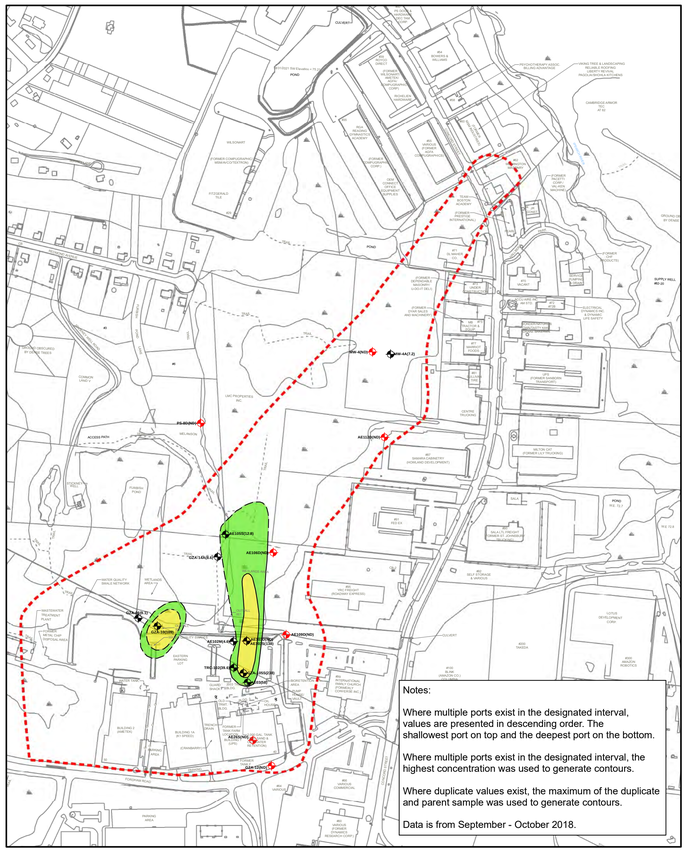
Project No.: 60688023.02.1

AECOM

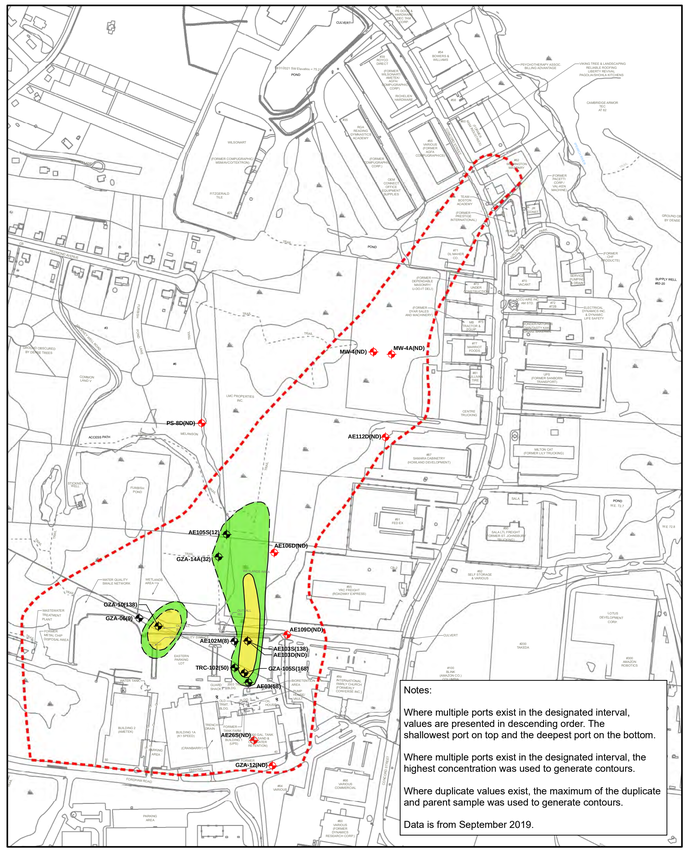
FIGURE 3-2



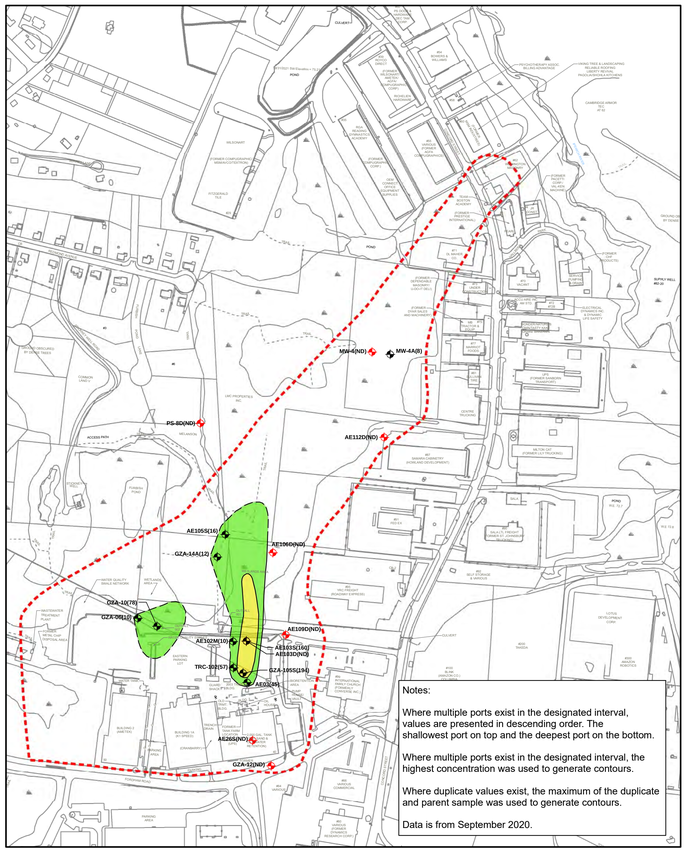
2017 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



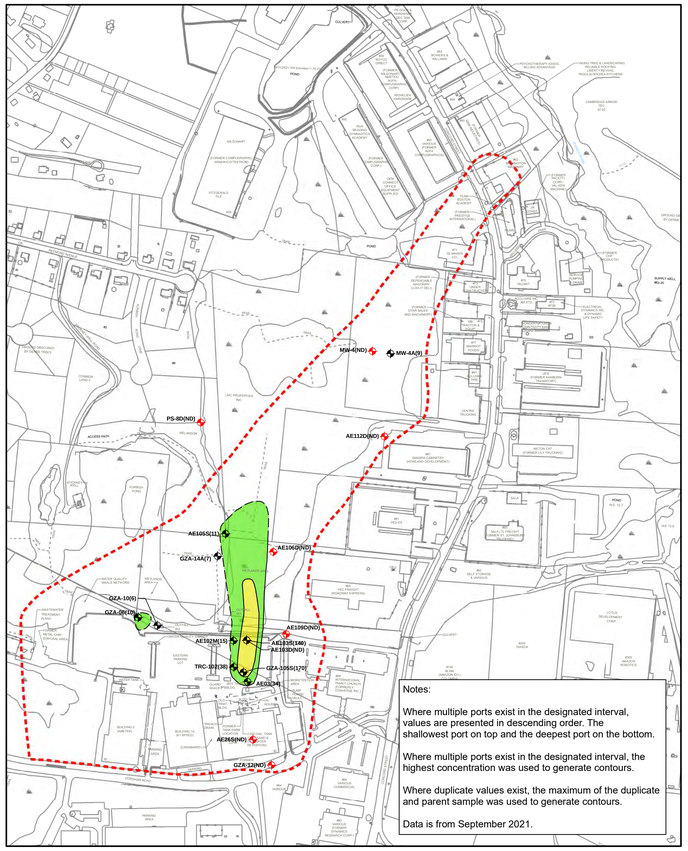
2018 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



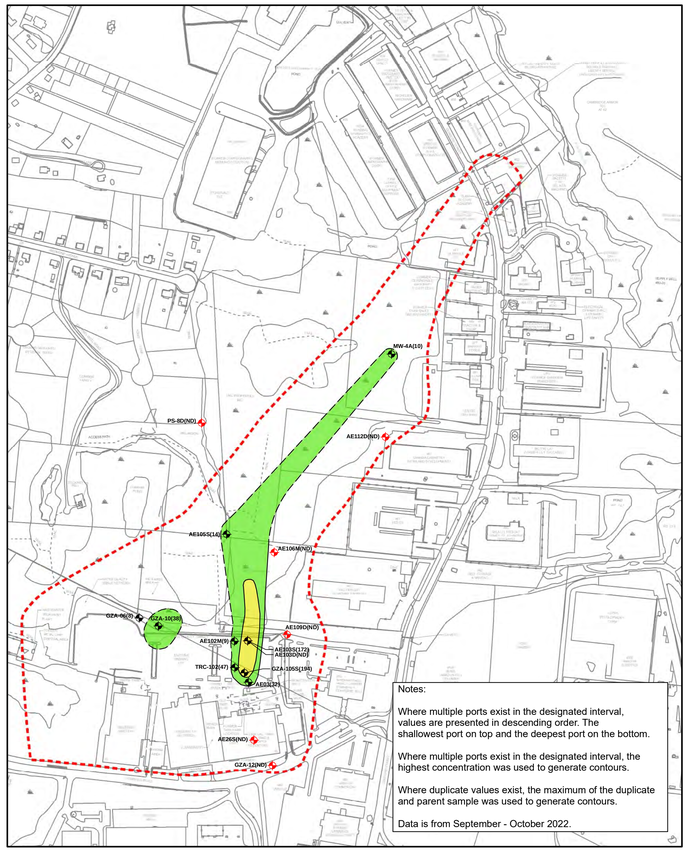
2019 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



2020 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



2021 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)



2022 Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)

AECOM

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 10 µg/l

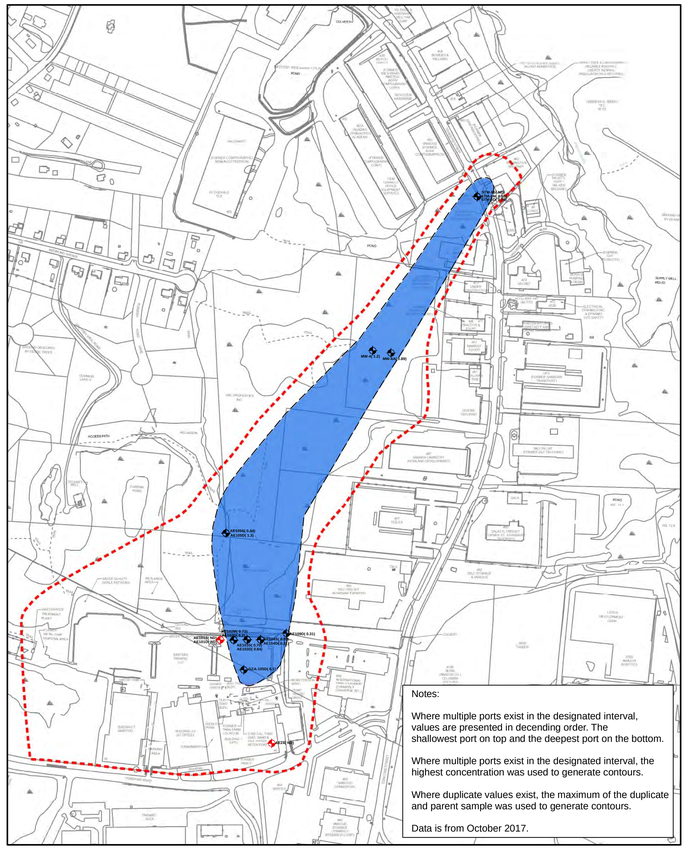
N

0 100 200 400 600 800 Feet

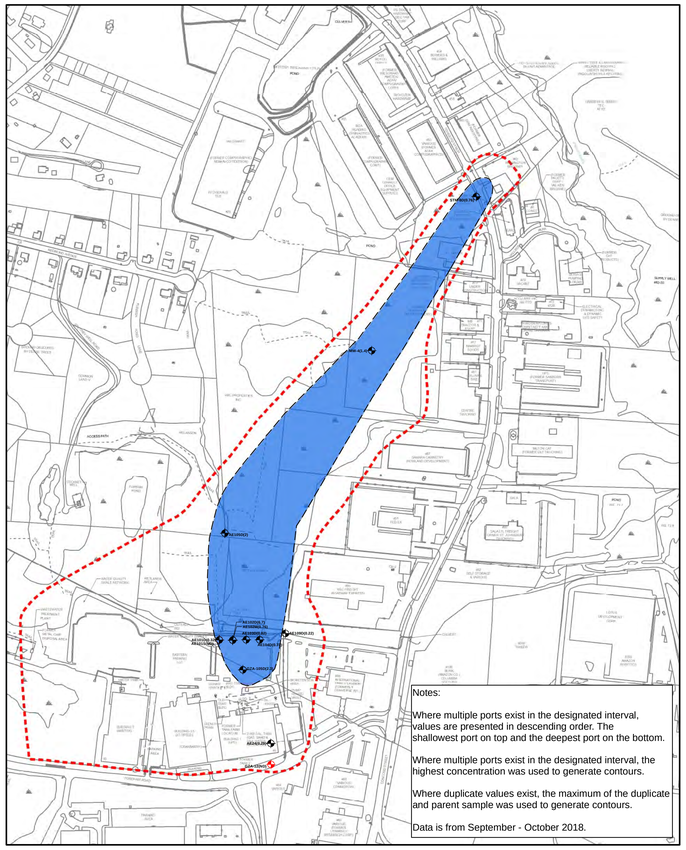
Dissolved Arsenic in Groundwater
Overburden (0 - 78 ft bgs)

Figure 4-1

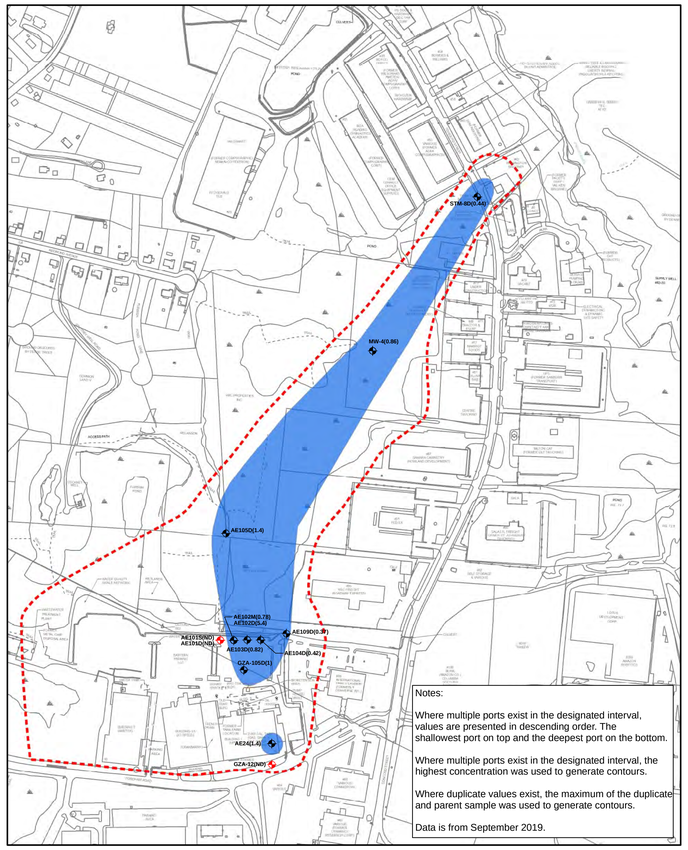
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Item_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2017_2022_Plume_Maps\MXD\Fig_4_1_As_OB_2017_2022.mxd



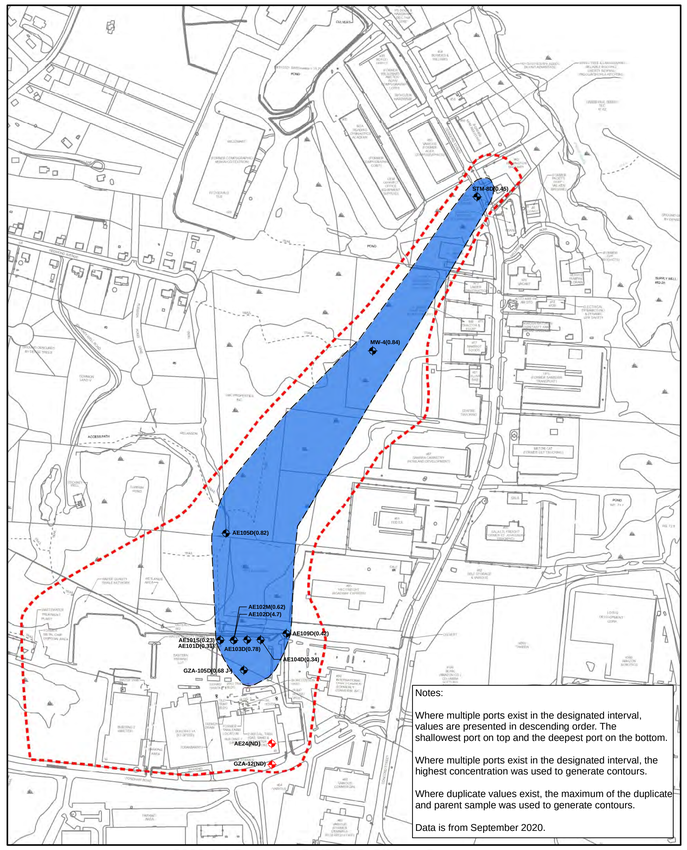
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Overburden (0 - 78 ft bgs)



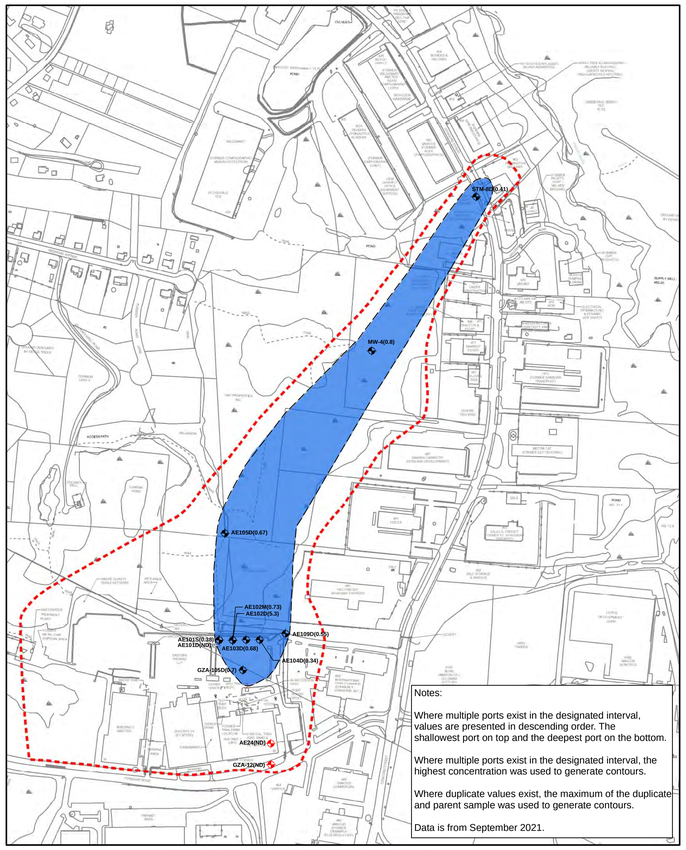
2018 1,4-Dioxane (SW8270D-SIM) in Groundwater
Overburden (0 - 78 ft bgs)



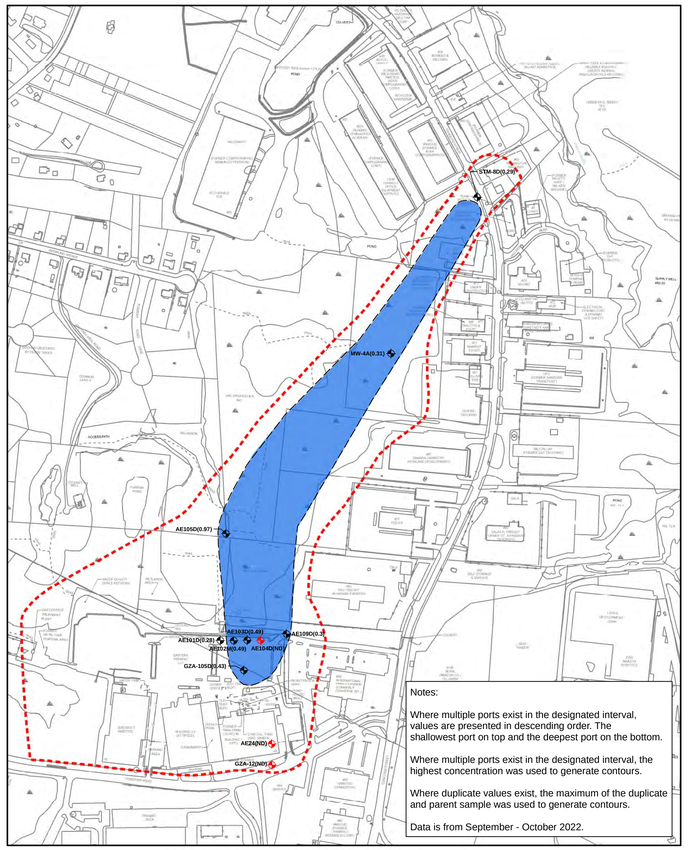
2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Overburden (0 - 78 ft bgs)



2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Overburden (0 - 78 ft bgs)



2021 1,4-Dioxane (SW8270D-SIM) in Groundwater
Overburden (0 - 78 ft bgs)



2022 1,4-Dioxane (SW8270D-SIM) in Groundwater
Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- Surface Water Sample
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 0.3 µg/l

Feet
0 100 200 400 600 800

1,4-Dioxane (SW8270D-SIM) in Groundwater
Overburden (0 - 78 ft bgs)

Figure 4-2

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Engr\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2017_2022_Plume_Maps\MXD\Fig_4_2_Diox_OB_2017_2022.mxd

STM-8R1(0.29)
STM-8R(0.64)
AE105R-2(4.2)
AE105R-4(4.1)
AE106R-5(ND)
AE104R-1(9.3)
AE104R-3(8.3)
AE104R-5(14)
AE103R-4(31)
AE103R-5(29)
AE102RR-2(5.4)
AE102RR-6(20)
AE109R-2(4.6)
AE109R-6(1.3)
AE110R-7(2)
AE101R-2(4.7)
AE101R-6(12)
AE100R-3(6.9)
AE100R-4(6.7)
AE28R-2(35)
AE26R-1(16)
AE26R-5(21)
AE23R(9.6)
AE29R-6(26)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 0.3 µg/l

Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September - October 2022.

N

0 100 200 400 600 800 Feet

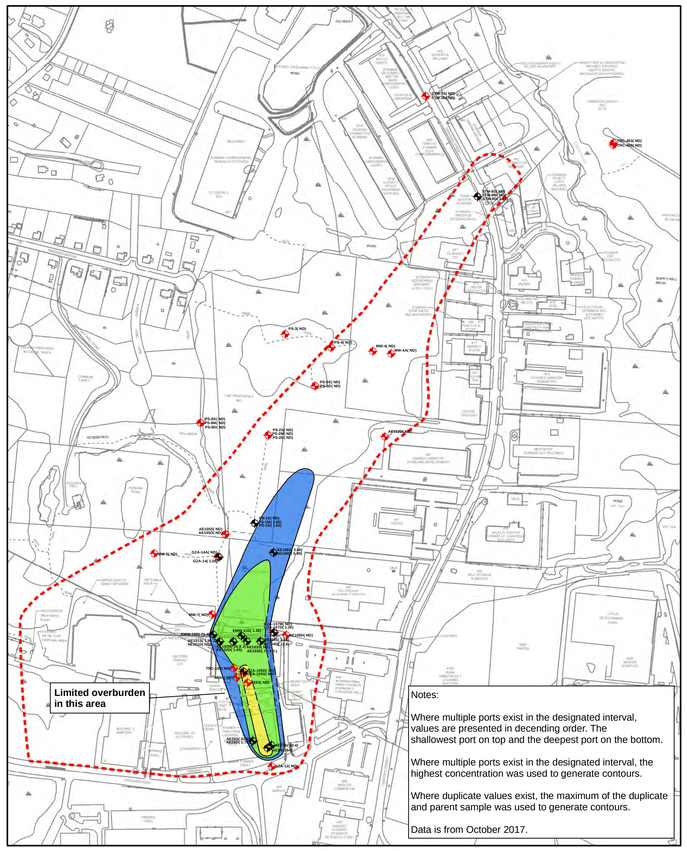
AECOM

Former GE Facility
50 Fordham Road, Wilmington, MA

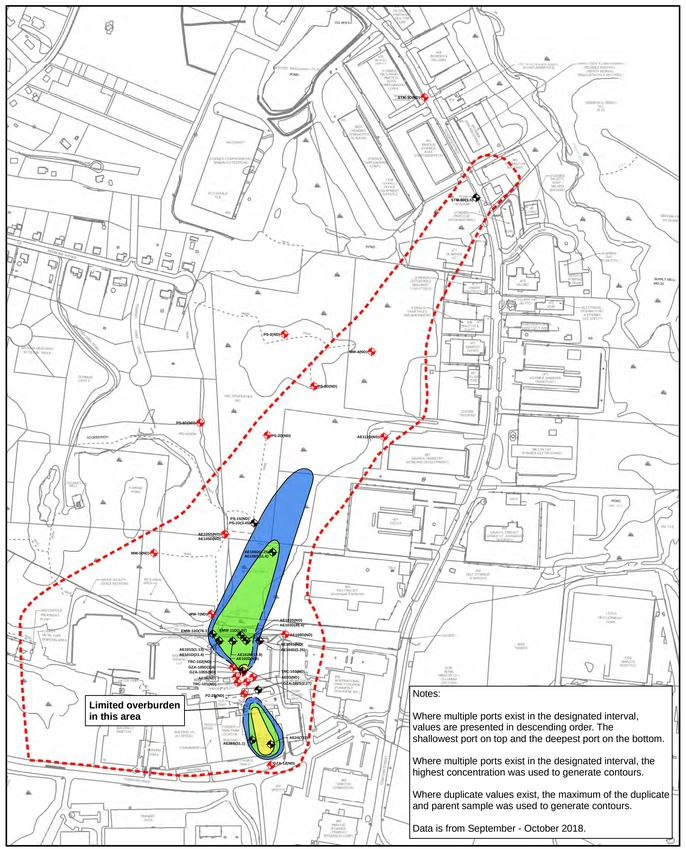
1,4-Dioxane (SW8270D-SIM) in Groundwater Bedrock (0 - 232 ft bgs)

Figure 4-3

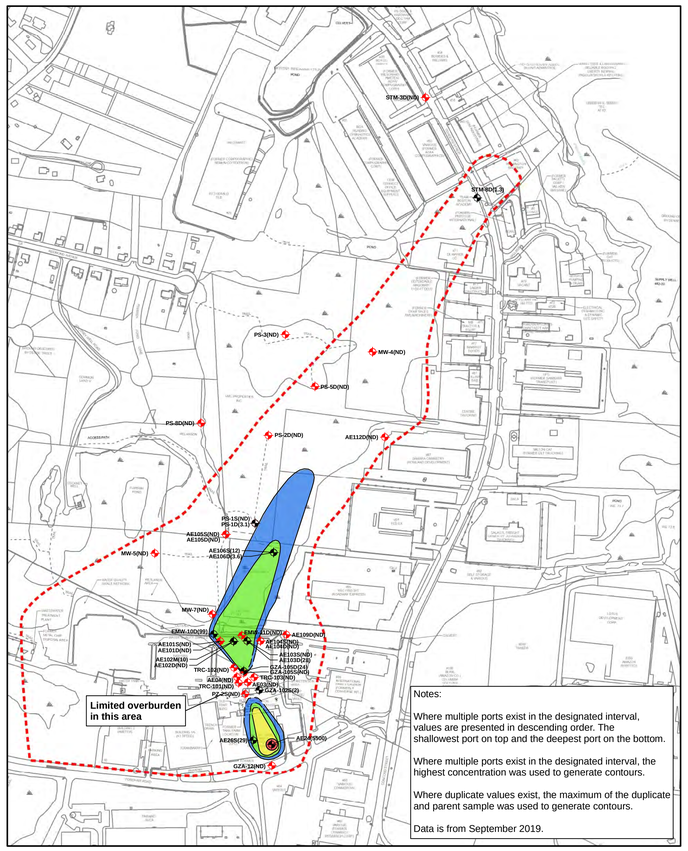
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2022_Plume_Maps\MXD\Fig_4_3_Diox_Bedrock_2022.mxd



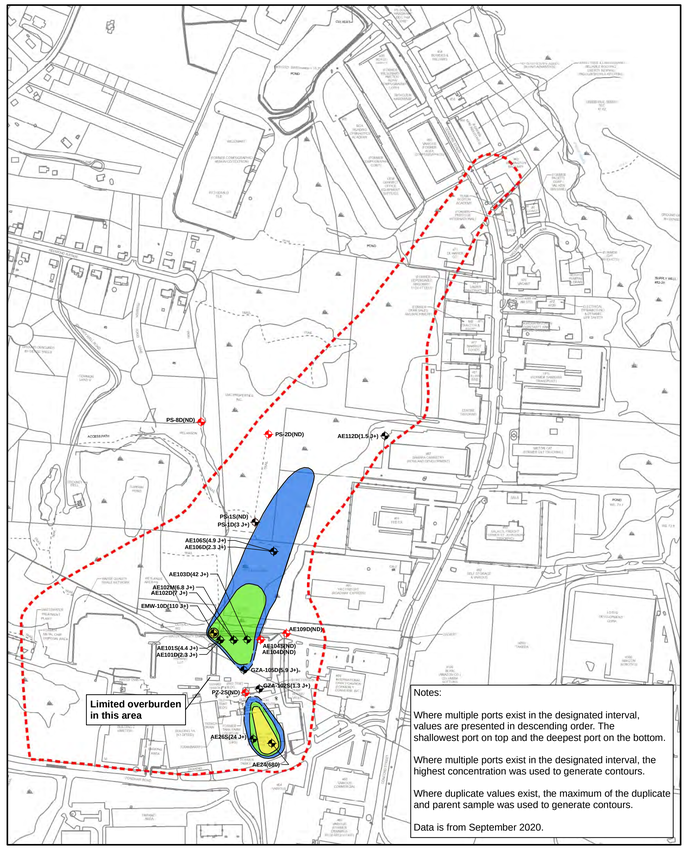
2017 PCE in Groundwater
Overburden (0 - 78 ft bgs)



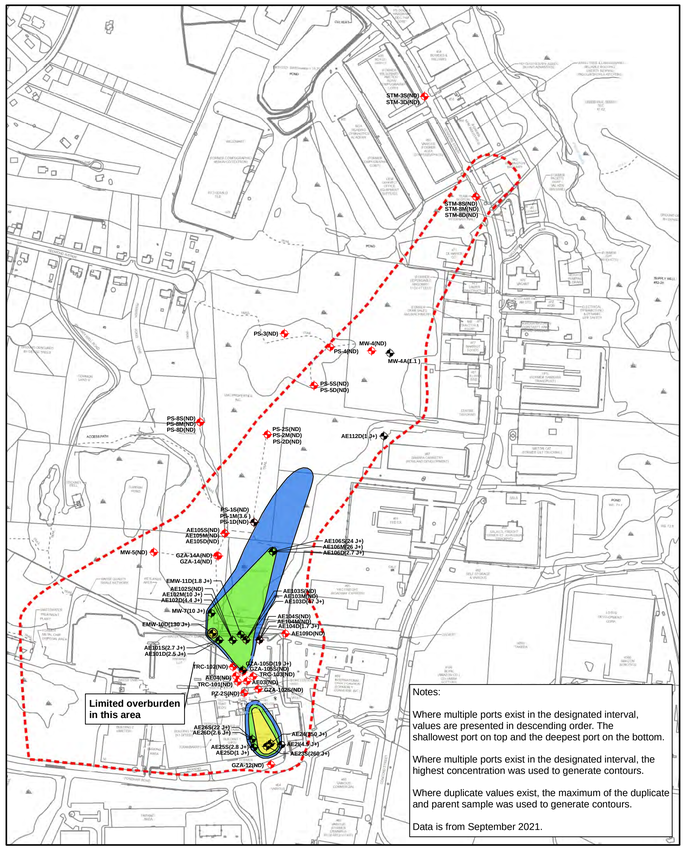
2018 PCE in Groundwater
Overburden (0 - 78 ft bgs)



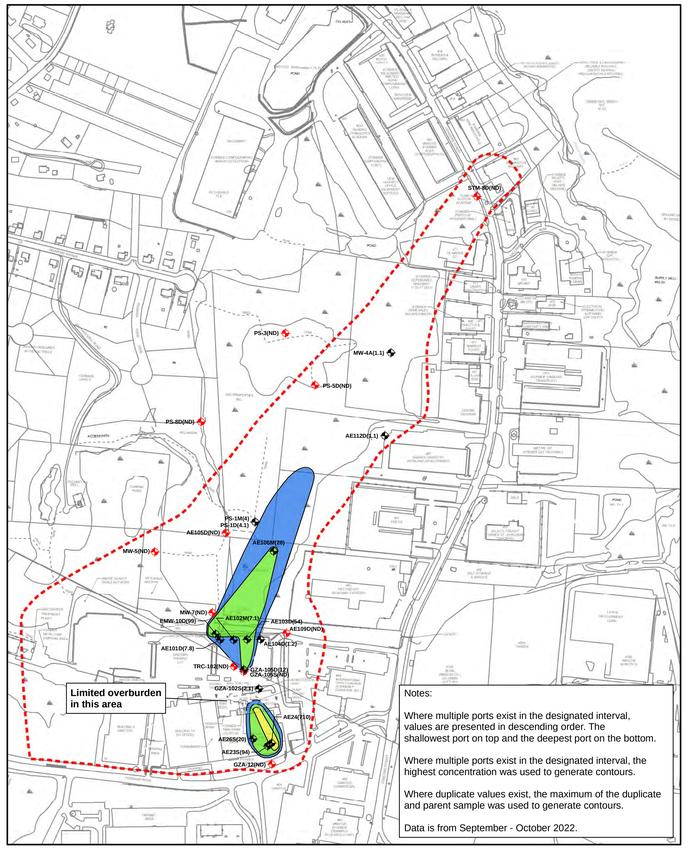
2019 PCE in Groundwater
Overburden (0 - 78 ft bgs)



2020 PCE in Groundwater
Overburden (0 - 78 ft bgs)



2021 PCE in Groundwater
Overburden (0 - 78 ft bgs)



2022 PCE in Groundwater
Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

0 100 200 400 600 800 Feet

AECOM

PCE in Groundwater
Overburden (0 - 78 ft bgs)

Figure 4-4

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rtem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2017_2022_Plume_Maps\MXD\Fig_4_4_PCE_OB_2017_2022.mxd

STM-8R(2.8)
STM-8R1(ND)
AE112R-1(ND)
AE112R-3(ND)
AE112R-5(ND)
TRC-301R-4(11)
TRC-301R-3(29)
TRC-301R-2(28)
TRC-301R-1(12)
AE105R-2(27)
AE105R-3(52)
AE105R-4(46)
AE105R-5(31)
AE106R-1(2.1)
AE106R-3(3.8)
AE106R-5(ND)
AE111R-1(ND)
AE111R-2(ND)
AE111R-6(ND)
AE103R-2(1500)
AE103R-3(1200)
AE103R-4(4600)
AE103R-5(5700)
AE103R-7(3300)
AE104R-1(320)
AE104R-5(1700)
AE104R-3(1300)
AE109R-1(ND)
AE109R-2(ND)
AE109R-4(2.9)
AE109R-6(7)
AE109R-8(ND)
AE102RR-1(6.6)
AE102RR-2(130)
AE102RR-4(300)
AE102RR-5(1500)
AE102RR-6(3900)
AE110R-1(ND)
AE110R-2(ND)
AE110R-5(ND)
AE110R-7(ND)
AE108R-1(ND)
AE108R-3(30)
AE108R-5(13)
AE101R-2(25)
AE101R-4(53)
AE101R-6(630)
GZA-105R(5200)
IP-01R2(2800)
TRC-201R(ND)
AE28R-1(8600)
AE28R-2(26000)
AE28R-4(6200)
AE100R-2(590)
AE100R-3(3900)
AE100R-4(2900)
AE100R-5(980)
AE2R(6)
AE26R-1(410)
AE26R-3(4400)
AE26R-4(360)
AE26R-5(1700)
AE27R(130)
AE23R(39000)
GZA-101R(220)
AE29R-1(ND)
AE29R-3(ND)
AE29R-5(ND)
AE29R-6(ND)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September - October 2022.

N

0 100 200 400 600 800 Feet

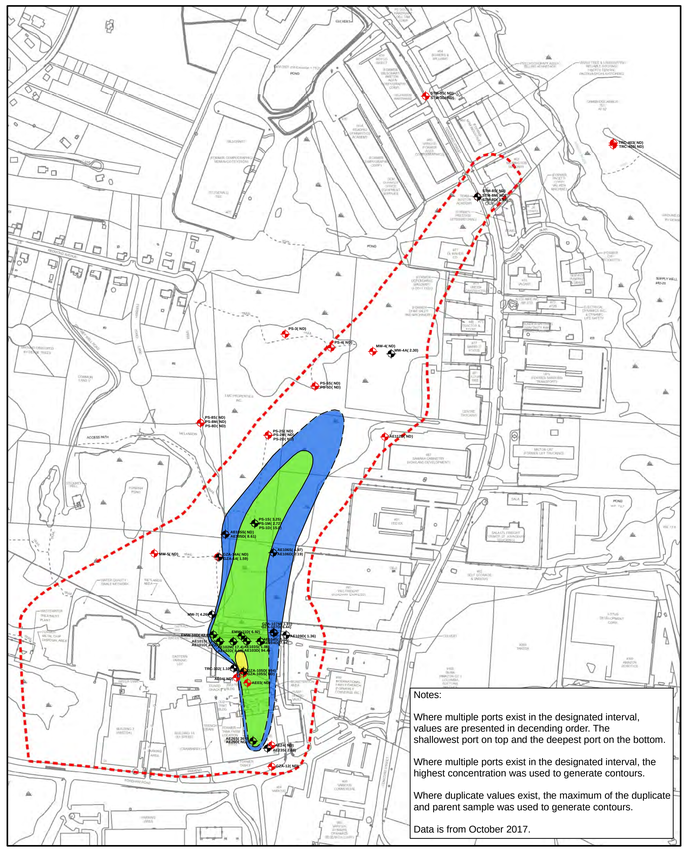
AECOM

Former GE Facility
50 Fordham Road, Wilmington, MA

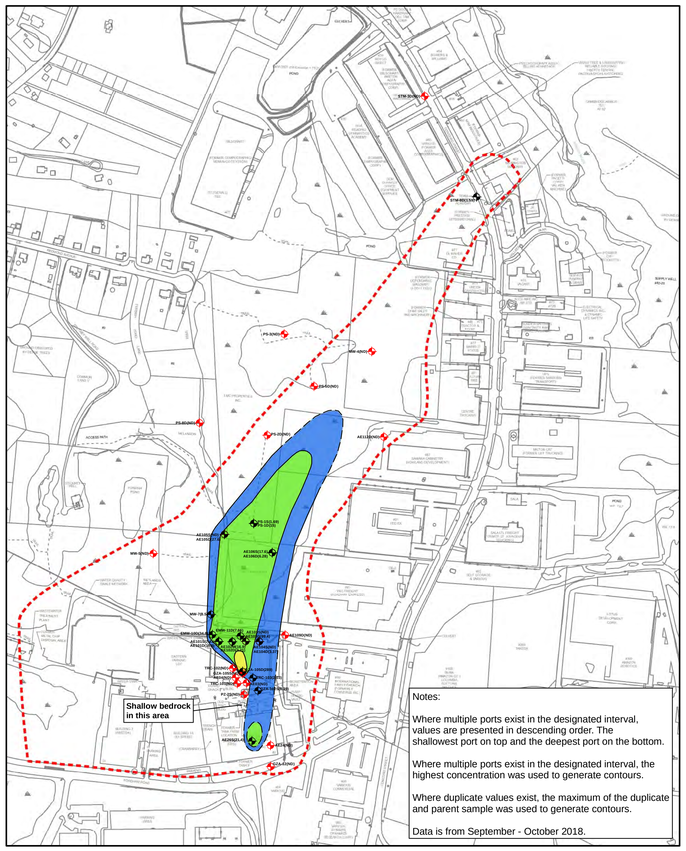
PCE in Groundwater
Bedrock (0 - 232 ft bgs)

Figure 4-5

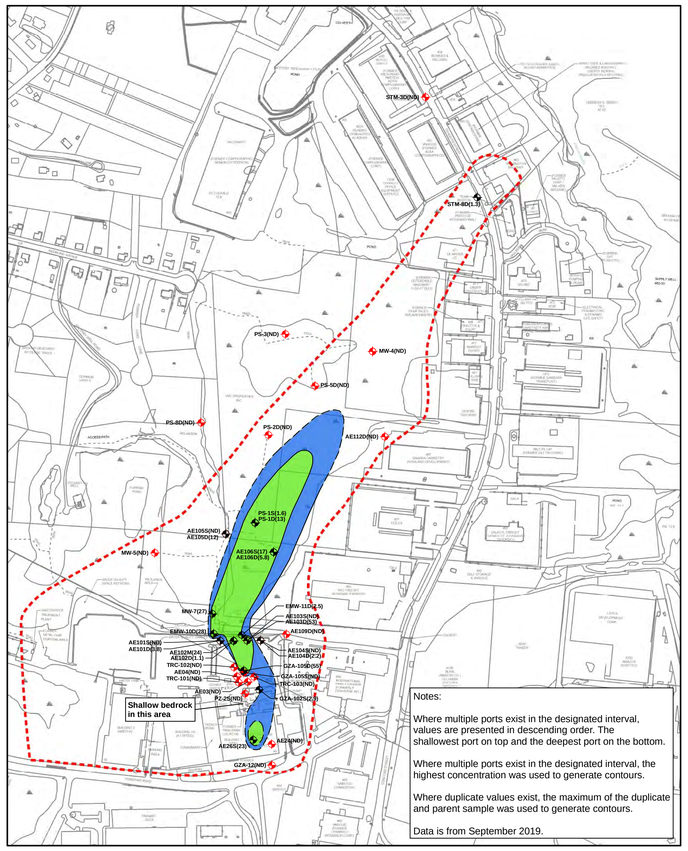
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2022_Plume_Maps\MXD\Fig_4_5_PCE_Bedrock_2022.mxd



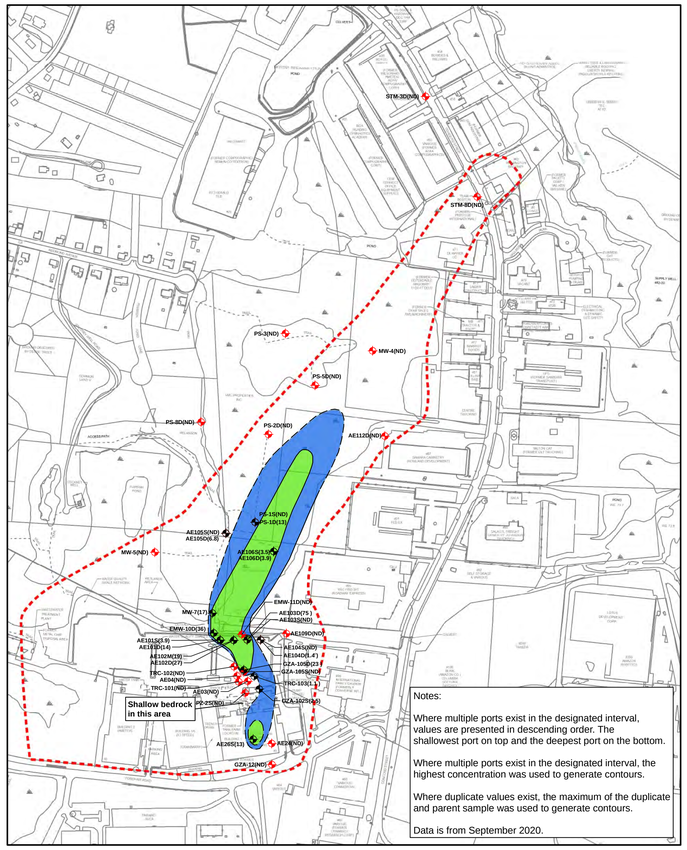
2017 TCE in Groundwater Overburden (0 - 78 ft bgs)



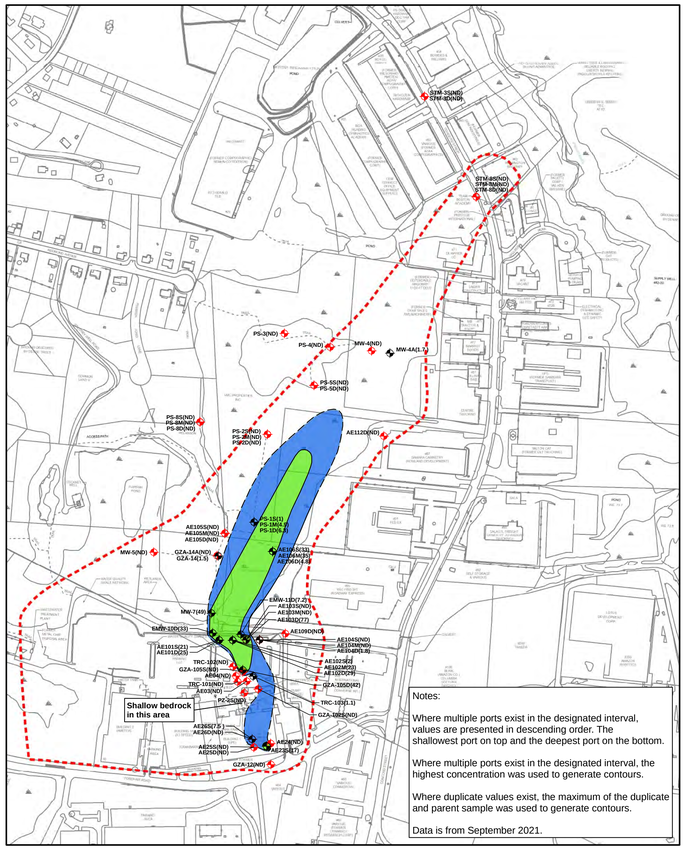
2018 TCE in Groundwater Overburden (0 - 78 ft bgs)



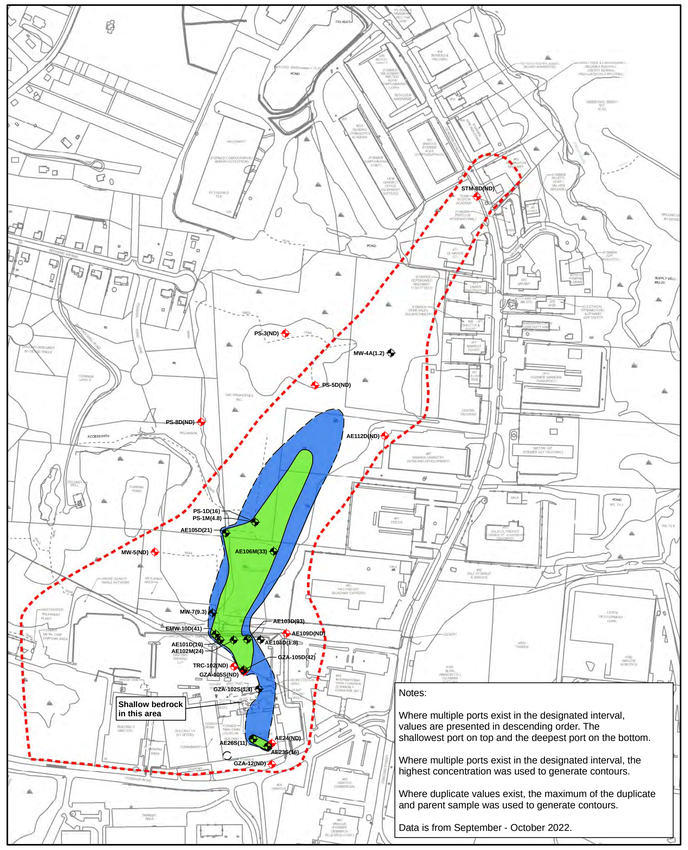
2019 TCE in Groundwater Overburden (0 - 78 ft bgs)



2020 TCE in Groundwater Overburden (0 - 78 ft bgs)



2021 TCE in Groundwater Overburden (0 - 78 ft bgs)



2022 TCE in Groundwater Overburden (0 - 78 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

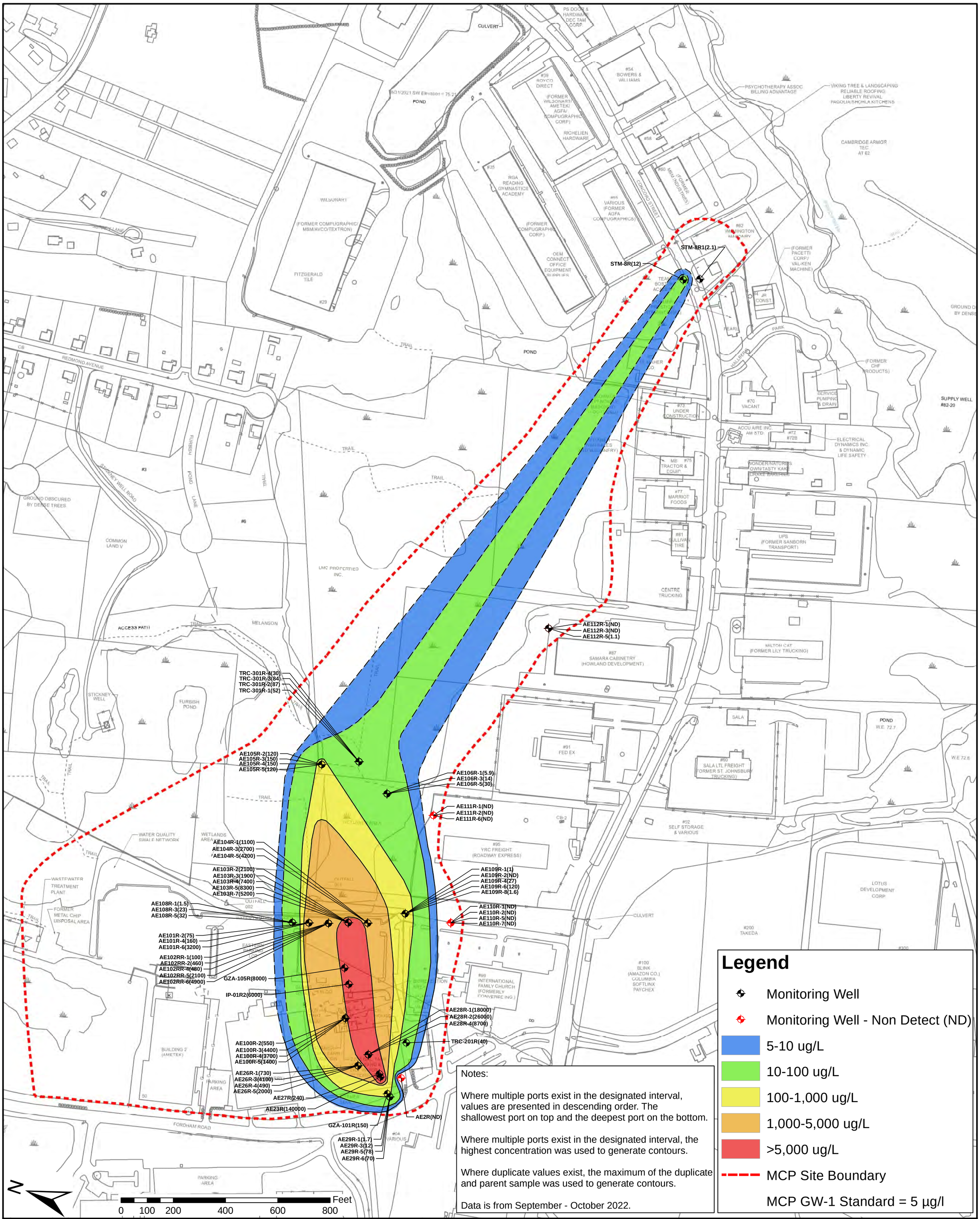
N

0 100 200 400 600 800 Feet

TCE in Groundwater Overburden (0 - 78 ft bgs)

Figure 4-6

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rtem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2017_2022_Plume_Maps\MXD\Fig_4_6_TCE_OB_2017_2022.mxd



Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

Notes:

Where multiple ports exist in the designated interval, values are presented in descending order. The shallowest port on top and the deepest port on the bottom.

Where multiple ports exist in the designated interval, the highest concentration was used to generate contours.

Where duplicate values exist, the maximum of the duplicate and parent sample was used to generate contours.

Data is from September - October 2022.

AECOM

Former GE Facility
50 Fordham Road, Wilmington, MA

TCE in Groundwater
Bedrock (0 - 232 ft bgs)

Figure 4-7

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2022_Plume_Maps\MXD\Fig_4_7_TCE_Bedrock_2022.mxd

TABLES

Table 2-1 Summary of September 2022 Groundwater Elevations

Table 2-2 Summary of September 2022 Groundwater Sampling

Table 2-3 Summary of September 2022 Groundwater Field Parameter Data

Table 4-1 Summary of 2016-2022 Groundwater Analytical Results for Arsenic

Table 4-2 Summary of Mann Kendall Results for Arsenic in Groundwater

Table 4-3 Summary of 2016-2022 Groundwater Analytical Results for 1,4-Dioxane

Table 4-4 Summary of 2016-2022 Groundwater Analytical Results for Petroleum Compounds

Table 4-5 Summary of Mann Kendall Results for Petroleum Compounds in Groundwater

Table 4-6 Summary of 2016-2022 Groundwater Analytical Results for Volatile Organic Compounds

Table 4-7 Summary of Mann Kendall Results for Chlorinated Volatile Organic Compounds in Groundwater

Table 4-8 Summary of 2016-2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Table 4-9 2016, 2017, 2021 and 2022 Microbial Insights Quantarray Chlor Analytical Results Summary

Table 4-10 2016, 2017, 2021 and 2022 Compound Specific Isotope Analytical Results Summary

Table 8-1 Post Temporary Solution Operations, Maintenance, and Monitoring Schedule 2022-2027

Table 2-1
Summary of September 2022 Groundwater Elevations

Weather: Sunny, 60s

Recorders: D. Potter, F. Burton, A. Grossman, S. Haggett, K. Jones, R. Kelley

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-100R-1 (18-24)	9/27/2022	16:36	6.93	83.59	76.66		0.2
AE-100R-2 (43-48)	9/27/2022	16:38	6.97	83.60	76.63		1.7
AE-100R-3 (50-56)	9/27/2022	16:40	6.91	83.55	76.64		1.3
AE-100R-4 (63-68)	9/27/2022	16:41	6.92	83.52	76.60		0.6
AE-100R-5 (88-93)	9/27/2022	16:42	6.96	83.51	76.55		0.8
AE-100R-6 (108.5-113.5)	9/27/2022	16:43	6.95	83.51	76.56		0.5
AE-101R-1 (30.5-35.5)	9/27/2022	9:29	3.08	79.07	75.99		0.1
AE-101R-2 (55-60)	9/27/2022	9:30	3.04	79.07	76.03		0.1
AE-101R-3 (80-85)	9/27/2022	9:31	3.01	79.07	76.06	R = 3.01	0.2
AE-101R-4 (153-158)	9/27/2022	9:33	3.00	79.07	76.07		0.1
AE-101R-5 (175-180)	9/27/2022	9:34	3.01	79.07	76.06		0.1
AE-101R-6 (227-232)	9/27/2022	9:35	2.96	79.07	76.11		0.1
AE-101S	9/27/2022	9:38	3.19	79.34	76.15		0.2
AE-101D	9/27/2022	9:37	3.24	79.37	76.13		1.4
AE-102RR-1 (43-48)	9/27/2022	9:43	3.70	79.83	76.13		0.1
AE-102RR-2 (75-80)	9/27/2022	9:44	4.03	79.84	75.81		0.4
AE-102RR-3 (111-116)	9/27/2022	9:45	3.65	79.89	76.24		0.3
AE-102RR-4 (125-130)	9/27/2022	9:46	3.60	79.84	76.24		0.1
AE-102RR-5 (141-146)	9/27/2022	9:47	3.61	79.82	76.21		0.2
AE-102RR-6 (153-158)	9/27/2022	9:48	3.65	79.83	76.18		0.3
AE-102S	9/27/2022	9:55	4.01	80.12	76.11		5.3
AE-102M	9/27/2022	9:53	4.06	80.17	76.11		0.4
AE-102D	9/27/2022	9:54	4.00	80.16	76.16		0.3
AE-103R-1 (48-53)	9/27/2022	10:00	2.79	78.99	76.20		0.6
AE-103R-2 (62-67)	9/27/2022	10:01	2.75	78.99	76.24	R = 2.75	0.8
AE-103R-3 (70-76)	9/27/2022	10:02	2.79	79.01	76.22		0.7
AE-103R-4 (98-105)	9/27/2022	10:03	2.72	79.00	76.28		0.7
AE-103R-5 (122-128)	9/27/2022	10:04	2.70	79.08	76.38		1.3
AE-103R-6 (138-144)	9/27/2022	10:05	2.67	79.00	76.33		0.4
AE-103R-7 (162.5-168)	9/27/2022	10:06	2.71	78.99	76.28		0.5
AE-103S	9/27/2022	10:09	3.26	79.43	76.17	R = 3.26	0.3
AE-103M	9/27/2022	10:10	3.25	79.42	76.17		0.2
AE-103D	9/27/2022	10:11	3.25	79.42	76.17		4.2
AE-104R-1 (48-54)	9/27/2022	10:17	3.12	78.90	75.78		0.4
AE-104R-2 (62-68)	9/27/2022	10:18	3.42	78.85	75.43		0.3
AE-104R-3 (97-102)	9/27/2022	10:19	2.68	78.86	76.18		1.4
AE-104R-4 (128-133)	9/27/2022	10:22	2.77	78.86	76.09		0.5
AE-104R-5 (156-162)	9/27/2022	10:23	3.02	78.86	75.84		0.4
AE-104R-6 (168-174)	9/27/2022	10:24	2.96	78.85	75.89		0.6

Notes:

R = replicate field measurement

NA = Not Applicable

NM = Not Measured

Table 2-1
Summary of September 2022 Groundwater Elevations

Weather: Sunny, 60s

Recorders: D. Potter, F. Burton, A. Grossman, S. Haggett, K. Jones, R. Kelley

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-104S	9/27/2022	14:45	3.13	79.30	76.17		0.1
AE-104M	9/27/2022	11:46	3.11	79.28	76.17		0.4
AE-104D	9/27/2022	11:47	3.16	79.30	76.14	R = 3.16	0.4
AE-108R-1 (36.5-43.5)	9/27/2022	9:18	1.69	78.81	77.12		0.3
AE-108R-2 (68-73)	9/27/2022	9:14	2.64	78.85	76.21		0.3
AE-108R-3 (84-89)	9/27/2022	9:21	2.62	78.82	76.20		0.1
AE-108R-4 (145-150)	9/27/2022	9:22	2.59	78.79	76.20		0.1
AE-108R-5 (163-168)	9/27/2022	9:24	2.59	78.80	76.21		0.0
AE-105R-1 (90.5-95.5)	9/27/2022	12:12	4.32	79.81	75.49		0.0
AE-105R-2 (98-103)	9/27/2022	12:12	4.03	79.89	75.86		0.0
AE-105R-3 (107.5-112.5)	9/27/2022	12:13	4.05	79.87	75.82		0.0
AE-105R-4 (125-130)	9/27/2022	12:13	4.14	79.83	75.69		0.0
AE-105R-5 (143-148)	9/27/2022	12:14	4.06	79.81	75.75		0.0
AE-105R-6 (156-161)	9/27/2022	12:14	3.54	79.87	-	Port not working	0.0
AE-105S	9/27/2022	12:20	3.72	79.39	75.67		1.2
AE-105M	9/27/2022	12:21	3.69	79.35	75.66		1.2
AE-105D	9/27/2022	12:21	3.73	79.42	75.69		1.3
AE-106R-1 (47-52)	9/27/2022	11:28	3.67	79.15	75.48	SW= 3.40	0
AE-106R-2 (69.5-74.5)	9/27/2022	11:29	3.83	79.12	75.29		0
AE-106R-3 (84-88)	9/27/2022	11:29	3.51	79.13	75.62		0
AE-106R-4 (144.5-150.5)	9/27/2022	11:30	3.48	79.15	75.67		0
AE-106R-5 (164-169)	9/27/2022	11:30	3.47	79.14	75.67		0
AE-106S	9/27/2022	11:34	3.12	78.42	75.30	SW= 3.15	2.6
AE-106M	9/27/2022	11:35	2.98	78.44	75.46		1
AE-106D	9/27/2022	11:36	2.95	78.41	75.46		0.2
TRC-301R-1 (96.5-100.5)	9/27/2022	11:45	2.99	78.57	75.58	SW= 3.01	0.0
TRC-301R- 2 (81.5-85.5)	9/27/2022	11:45	2.95	78.57	75.62		0.0
TRC-301R-3 (75.5-79.5)	9/27/2022	11:46	2.98	78.57	75.59		0.0
TRC-301R-4 (65.5-69.5)	9/27/2022	11:46	2.92	78.57	75.65		0.0
PZ-9S	9/27/2022	17:06	5.87	82.28	76.41		0.0
PZ-9D	9/27/2022	17:05	5.45	82.25	76.80		0.0
PZ-9R	9/27/2022	17:05	5.48	82.37	76.89		0.0
GZA-12	9/27/2022	11:01	10.19	87.62	77.43	R = 10.19	0.2
GZA-101R	9/27/2022	10:15	10.35	87.41	77.06		0.0
AE-1S	NA	NA	NM	86.26	--		NM
AE-1I	NA	NA	NM	86.68	--		NM
AE-2R	9/27/2022	11:19	8.23	85.23	77.00		1.1
AE-2I	9/27/2022	11:27	8.40	85.39	76.99		0.1

Notes:

R = replicate field measurement

SW = surface water

NA = Not Applicable

NM = Not Measured

Table 2-1
Summary of September 2022 Groundwater Elevations

Weather: Sunny, 60s Recorders: D. Potter, F. Burton, A. Grossman, S. Haggett, K. Jones, R. Kelley

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
TRC-101	9/27/2022	17:25	6.02	82.18	76.16		218.1
TRC-102	NA	NA	NM	81.21	--		NM
TRC-103	9/27/2022	17:00	5.81	82.02	76.21		0.1
TRC-201R	9/27/2022	17:27	8.01	85.02	77.01		NM
TRC-202R	NA	NA	NM	78.53	--		NM
GZA-102S	9/27/2022	17:00	6.25	82.82	76.57		0
GZA-102R1	9/27/2022	17:06	6.11	83.09	76.98		0.0
GZA-102R2	9/27/2022	17:05	6.61	83.08	76.47		0.0
PZ-2S	9/27/2022	17:20	6.02	82.81	76.79		370.6
TRC-401R	9/27/2022	17:40	5.32	82.00	76.68		NR
GZA-105S	9/27/2022	17:35	4.29	81.89	77.60		0.1
GZA-105D	9/27/2022	17:36	5.19	81.82	76.63		0
GZA-105R	9/27/2022	17:40	4.98	81.80	76.82		0.2
WE-105R2	NA	NA	NM	82.05	--		NM
BRW-1R2	NA	NA	NM	80.76	--		NM
BRW-1R3	NA	NA	NM	80.57	--		NM
BRW-1R4	NA	NA	NM	80.60	--		NM
EMW-10S	NA	NA	NM	80.88	--		NM
EMW-10D	9/27/2022	12:14	4.68	80.78	76.10		0.8
EMW-10R	NA	NA	NM	80.93	--		NM
EMW-11S	NA	NA	NM	80.32	--		NM
EMW-11D	NA	NA	NM	80.41	--		NM
EMW-11R1	NA	NA	NM	80.84	--		NM
EMW-11R2	NA	NA	NM	80.83	--		NM
EMW-11R3	NA	NA	NM	80.80	--		NM
IP-1R1	NA	NA	NM	82.12	--	Plow damage to edge of manhole ring	NM
IP-1R2	9/27/2022	17:00	5.57	82.07	76.50		34.9
IP-1R3	NA	NA	NM	82.04	--		NM
IP-2R1	NA	NA	NM	82.17	--		NM
IP-2R2	9/27/2022	17:15	5.62	82.14	76.52		15.6
IP-2R3	NA	NA	NM	82.12	--		NM
IP-2R4	9/27/2022	17:15	5.49	82.08	76.59		424.1
IP-3R1	NA	NA	NM	81.02	--		NM
IP-3R2	NA	NA	NM	80.98	--		NM
IP-4R1	NA	NA	NM	80.84	--		NM
IP-4R2	NA	NA	NM	80.79	--		NM
IP-4R3	NA	NA	NM	80.77	--		NM

Notes:
R = replicate field measurement
NA = Not Applicable
NM = Not Measured
*PID malfunctioning

Table 2-1
Summary of September 2022 Groundwater Elevations

Weather: Sunny, 60s Recorders: D. Potter, F. Burton, A. Grossman, S. Haggett, K. Jones, R. Kelley

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-23S	9/27/2022	15:00	8.60	85.62	77.02		5.3
AE-23R	9/27/2022	15:00	13.40	85.54	72.14		3,290
AE-24	9/27/2022	16:00	8.60	85.63	77.03		86.2
AE-25S	9/27/2022	15:30	8.40	85.49	77.09		0.9
AE-25D	9/27/2022	15:30	8.31	85.38	77.07		2.2
AE-25R	NA	NA	NM	85.35	--		NM
AE-26S	9/27/2022	15:45	8.60	85.49	76.89		1
AE-26D	9/27/2022	15:45	8.34	85.25	76.91		3.6
AE-27R	9/27/2022	12:39	9.41	85.48	76.07	measured = 9.49	1
AE-3	9/27/2022	17:03	6.07	82.23	76.16		135.1
AE-4	9/27/2022	17:08	5.82	82.03	76.21		1.1
DP-1	NA	NA	NM	80.01	--		NM
DP-2	NA	NA	NM	79.75	--		NM
CW-1	9/27/2022	17:11	4.82	80.94	76.12		779.9
CW-2	9/27/2022	17:13	4.57	80.73	76.16		1.7
GZA-5	9/27/2022	16:24	3.75	80.03	76.28		0.0
GZA-6	9/27/2022	16:40	4.43	80.46	76.03		0.0
GZA-10	9/27/2022	16:43	4.34	80.39	76.05		0.5
STM-3S	NA	NA	NM	82.97	--		NM
STM-3D	NA	NA	NM	82.93	--		NM
STM-3R	NA	NA	NM	82.94	--		NM
STM-8S	9/27/2022	15:12	5.90	78.91	73.01		0.2
STM-8M	9/27/2022	15:16	5.81	78.87	73.06		0.2
STM-8D	9/27/2022	15:14	5.83	78.86	73.03		0.2
STM-8R	9/27/2022	15:15	5.87	78.78	72.91		0.2
STM-8R1	9/27/2022	15:25	6.61	79.08	72.47	R = 6.61	0.3
STM-10S	NA	NA	NM	95.70	--		NM
STM-10R1	NA	NA	NM	95.79	--		NM
STM-10R2	NA	NA	NM	95.79	--		NM
TRC-402 (Reading)	NA	NA	NM	97.47	--		NM
TRC-403 (Reading)	NA	NA	NM	97.73	--		NM

Notes:
R = replicate field measurement
NA = Not Applicable
NM = Not Measured
NR = Not Recorded

Table 2-1
Summary of September 2022 Groundwater Elevations

Weather: Sunny, 60s Recorders: D. Potter, F. Burton, A. Grossman, S. Haggett, K. Jones, R. Kelley

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
MW-1	9/27/2022	12:41	2.93	78.81	75.88		0.0
MW-4	9/27/2022	9:50	2.66	77.23	74.57	SW= 2.52	0.1
MW-4A	9/27/2022	9:45	1.95	76.46	74.51	SW= 1.80	0.2
MW-5	9/27/2022	15:27	3.36	78.99	75.63	SW= 3.52	0
MW-7	9/27/2022	15:35	4.63	80.33	75.70	R = 4.65	0.1
GZA-14	NA	NA	NM	82.64	--		NM
GZA-14A	NA	NA	NM	82.31	--		NM
PS-1S	9/27/2022	11:56	2.82	79.21	76.39	SW= 4.07	0.0
PS-1M	9/27/2022	11:57	2.54	77.30	74.76	SW= 3.10	0.0
PS-1D	9/27/2022	11:58	0.95	76.51	75.56	SW= 1.25	0.0
PS-2S	NA	NA	NM	77.71	--	SW= NM	NM
PS-2M	NA	NA	NM	77.61	--	SW= NM	NM
PS-2D	NA	NA	NM	76.91	--	SW= NM	NM
PS-3	9/27/2022	10:39	1.23	76.64	75.41		0.0
PS-4	9/27/2022	10:05	2.78	78.66	75.88	R = 2.78	0.0
PS-5S	9/27/2022	10:15	3.76	80.49	76.73		0.0
PS-5D	9/27/2022	10:19	3.79	79.68	75.89		0.1
PS-8S	9/27/2022	12:30	6.68	83.37	76.69		0.0
PS-8M	9/27/2022	12:31	5.63	82.77	77.14		0.0
PS-8D	9/27/2022	12:32	5.86	82.53	76.67		0.0
GZA-1 (wwtp)	9/27/2022	16:30	3.07	79.05	75.98	SW= Dry	0.0
GZA-2 (wwtp)	9/27/2022	16:15	3.04	79.12	76.08	SW= 3.40	0.0
GZA-3 (wwtp)	9/27/2022	16:10	3.52	79.42	75.90	SW= NR	0.0
GZA-4 (wwtp)	9/27/2022	16:00	6.70	83.37	76.67		0.0
STM-? (Wilm. Masonry)	9/27/2022	14:35	4.26	75.57	71.31		0.0
AE-112R-1 (41-51)	9/27/2022	12:25	6.75	81.76	75.01		0.3
AE-112R-2 (62-72)	9/27/2022	12:26	6.60	81.78	75.18	6.60 QC	0.3
AE-112R-3 (91-101)	9/27/2022	12:27	6.56	81.78	75.22		0.3
AE-112R-4 (113-123)	9/27/2022	12:28	6.60	81.80	75.20		0.3
AE-112R-5 (136-146)	9/27/2022	12:29	6.59	81.75	75.16		0
AE-112R-6 (153-163)	9/27/2022	12:30	6.52	81.73	75.21		0.1
AE-112R-7 (168-175)	9/27/2022	12:31	6.53	81.74	75.21		0
AE-112D	9/27/2022	12:35	7.24	82.27	75.03		1.3
HOW-2 (MW-2)	NA	NA	NM	84.35	--		NM
HOW-3 (MW-3)	NA	NA	NM	81.83	--		NM
# 3 Furbish Pond Ln (Residential Irrigation)	9/28/2022	NR	15.25	103.21	87.96		0
GZA-107D	9/27/2022	12:03	4.78	81.08	76.30		0.3
GZA-107M	9/27/2022	12:01	4.99	80.87	75.88		0.4
GZA-107R	9/27/2022	12:00	4.55	80.58	76.03		0.3

Notes:
R = replicate field measurement
SW = surface water
NA = Not Applicable
NM = Not Measured

Table 2-1
Summary of September 2022 Groundwater Elevations

Weather: Sunny, 60s Recorders: D. Potter, F. Burton, A. Grossman, S. Haggett, K. Jones, R. Kelley

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments	PID Reading (ppmv)
AE-26R-1 (50-56)	9/27/2022	15:24	-12.94	84.83	74.57	GW elevations calculated from measurements taken with vacuum water level gauge at shallow water FLUTes (AE-26R, AE-28R, AE-29R) TOC reference elevation for these calculations is the roadbox rim elevation.	1.8
AE-26R-2 (72-78)	9/27/2022	NA	NM	84.83	--		NM
AE-26R-3 (81-88)	9/27/2022	NA	NM	84.83	--		NM
AE-26R-4 (104-114)	9/27/2022	15:36	-12.89	84.83	74.68		4.3
AE-26R-5 (123-132)	9/27/2022	15:40	-13.00	84.83	74.62		5
AE-28R-1 (45-51)	9/27/2022	12:26	-12.89	84.81	74.79		10.2
AE-28R-2 (75-85)	9/27/2022	12:39	-12.80	84.81	74.64		20.9
AE-28R-3 (98-108)	9/27/2022	12:51	-12.41	84.81	74.83		10.1
AE-28R-4 (132-142)	9/27/2022	15:03	-13.37	84.81	74.44		1.5
AE-29R-1 (37-44)	9/27/2022	10:36	-13.36	85.83	74.95		0.1
AE-29R-2 (47-54)	9/27/2022	NA	NM	85.83	--		NM
AE-29R-3 (70-76)	9/27/2022	9:40	-14.28	85.83	74.46		0.1
AE-29R-4 (90-96)	9/27/2022	NA	NM	85.83	--		NM
AE-29R-5 (113-119)	9/27/2022	9:55	-13.96	85.83	74.61		0.1
AE-29R-6 (140-146)	9/27/2022	10:29	-14.22	85.83	74.50		0.1
AE-109R-1 (38-43)	9/27/2022	10:32	11.25	80.20	68.95	Water pressure still	0.5
AE-109R-2 (66-76)	9/27/2022	10:33	4.12	80.17	76.05		0.1
AE-109R-3 (126-136)	9/27/2022	10:34	4.15	80.19	76.04		0.2
AE-109R-4 (174-180.5)	9/27/2022	10:36	4.25	80.17	75.92		0.1
AE-109R-5 (183-189)	9/27/2022	10:37	4.26	80.18	75.92	R = 4.26	0.1
AE-109R-6 (196-201)	9/27/2022	10:38	4.26	80.15	75.89		0.2
AE-109R-7 (204-214)	9/27/2022	10:39	4.27	80.17	75.90		0.1
AE-109R-8 (245-250)	9/27/2022	10:40	4.28	80.20	75.92		0.1
AE-109D	9/27/2022	10:44	4.33	80.36	76.03		3.2
AE-110R-1 (34-44)	9/27/2022	10:49	3.90	80.67	76.77		0.2
AE-110R-2 (70-80)	9/27/2022	10:50	3.99	80.68	76.69		0.3
AE-110R-3 (128-138)	9/27/2022	10:51	3.98	80.64	76.66		0.4
AE-110R-4 (158-168)	9/27/2022	10:52	4.02	80.62	76.60		0.4
AE-110R-5 (171-182)	9/27/2022	10:53	3.98	80.62	76.64		0.3
AE-110R-6 (190-200)	9/27/2022	10:54	4.02	80.62	76.60	R = 4.02	0.4
AE-110R-7 (224-234)	9/27/2022	10:55	4.01	80.64	76.63		0.3
AE-111R-1 (44-54)	9/27/2022	14:50	13.28	89.03	75.75		0.0
AE-111R-2 (66-74)	9/27/2022	14:52	13.24	89.01	75.77		0
AE-111R-3 (95-103)	9/27/2022	14:53	13.21	89.02	75.81		0.1
AE-111R-4 (140-150)	9/27/2022	14:55	13.14	89.02	75.88	R = 13.14	0.1
AE-111R-5 (155-165)	9/27/2022	14:57	13.14	89.05	75.91		0.3
AE-111R-6 (168-173)	9/27/2022	14:58	13.16	89.04	75.88		0.3
AE-111R-7 (181-191)	9/27/2022	15:00	13.14	89.06	75.92		0.2

Notes:
R = replicate field measurement
NA = Not Applicable
NM = Not Measured

Table 2-1
Summary of September 2022 Groundwater Elevations

Weather: Sunny, 60s Recorders: D. Potter, F. Burton, A. Grossman, S. Haggett, K. Jones, R. Kelley

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
Surface Water (measured outside MW Casings)						
AE-106S	9/27/2022	11:33	3.15	78.42	75.27	
AE-106R-1 (47-52)	9/27/2022	11:27	3.40	79.15	75.75	
TRC-301R-1 (96.5-100.5)	9/27/2022	11:44	3.01	78.57	75.56	
MW-4	9/27/2022	9:50	2.52	77.23	74.71	
MW-4A	9/27/2022	9:43	1.80	76.46	74.66	
MW-5	9/27/2022	15:00	3.52	78.99	-	
PS-1S	9/27/2022	14:00	4.07	79.21	75.14	
PS-1M	9/27/2022	14:01	3.10	77.30	74.20	
PS-1D	9/27/2022	14:02	1.25	76.51	75.26	
PS-2S	9/27/2022	NA	NM	77.71	--	
PS-2M	9/27/2022	NA	NM	77.61	--	
PS-2D	9/27/2022	NA	NM	76.91	--	
GZA-1 (wwtp)	9/27/2022	16:30	Dry	79.05	--	
GZA-2 (wwtp)	9/27/2022	16:15	3.40	79.22	75.82	
Surface Water (Staff gauges and Pond)						
SG-1	9/27/2022	15:40	0.24	75.78	76.02	Wetland Northeast of EPL
SG-2	9/27/2022	14:50	0.44	70.82	71.26	Adjacent to Ipswich River
Concord Street Pond	9/27/2022	11:00	0.93	75.91	74.98	Ref Elev is top of 2nd outfall pipe into Pond

Notes:
R = replicate field measurement
NA = Not Applicable
NM = Not Measured

Table 2-2
Post-Temporary Solution Operations, Maintennce and Monitoring Updated Groundwater Monitoring Summary 2022

Property Owner	Date Sampled	Location ID	FLUTe / CMT Port	Interval	Well Diameter (inch)	Screen Interval (Ft bgs)	Total Depth (ft bgs)	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) DL <0.3 ug/l	VPH (MassDEP VPH Method)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-Method)	Total As (SW846 - U SEPA Method 6010)	Dissolved As (field filtered) (SW846 - USEPA Method 6010)	Total Fe, Mn (SW846 - U SEPA Method 6010)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010)	Chloride (SM4500CLE-11)	Nitrite (USEPA 353.2)	Nitrate (USEPA 353.2)	Sulfate (USEPA 300.0)	Sulfide (SM4500S-D-11)	Total organic carbon (SM5310B-11)	Methane, Ethane, Ethene, Acetylene, Propane (Pace AM20Gax)	Dissolved hydrogen (Pace - Microseeps - Bubble Strip)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2-DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)	Comments 2022
HRP	10/5/2022	AE-26R	R1	Upper Bedrock	Shallow FLUTE	50 - 56	150	1	1			1	1	1	1	1	1	1	1	1	1	1				
HRP	10/5/2022	AE-26R	R4	Middle Bedrock	Shallow FLUTE	104 - 114	150	1																		
HRP	10/5/2022	AE-26R	R5	Lower Bedrock	Shallow FLUTE	123 - 132	150	1	1																	
HRP	10/5/2022	AE-26S	--	Overburden	2	25 - 30	32	1				1	1													
HRP	10/5/2022	AE27R	--	Upper Bedrock	2	50 - 60	60.5	1						1	1	1	1	1	1	1	1	1				
HRP	10/5/2022	AE-28R	R1	Upper Bedrock	Shallow FLUTE	45 - 51	150	1																		
HRP	10/5/2022	AE-28R	R2	Middle Bedrock	Shallow FLUTE	75 - 85	150	1	1					1	1	1	1	1	1	1	1	1	1	1	1	
HRP	10/5/2022	AE-28R	R3	Middle Bedrock	Shallow FLUTE	98 - 108	150	1																		matrix spike / matrix spike duplicate
HRP	10/5/2022	AE-28R	R4	Lower Bedrock	Shallow FLUTE	132 - 142	150	1																		
HRP	10/5/2022	AE-23R	--	Upper Bedrock	1.5	44.75 - 54.75	54.83	1	1																	
HRP	10/5/2022	AE-23S	--	Overburden	2	10 - 20	20.17	1																		
HRP	10/5/2022	AE-24	--	Overburden	2	7.25 - 17.25	17.25	1	1																	Duplicate
HRP	10/4/2022	AE-29R	R1	Upper Bedrock	Shallow FLUTE	37 - 44	150	1																		matrix spike / matrix spike duplicate
HRP	10/4/2022	AE-29R	R3	Middle Bedrock	Shallow FLUTE	70 -76	150	1																		
HRP	10/4/2022	AE-29R	R5	Middle Bedrock	Shallow FLUTE	113 - 119	150	1																		
HRP	10/4/2022	AE-29R	R6	Lower Bedrock	Shallow FLUTE	140 -146	150	1	1					1	1	1	1	1	1	1	1	1	1	1	1	
HRP	10/4/2022	GZA-101R	--	Upper Bedrock	PVC	36 - 38	38.44	1				1	1													
HRP	10/4/2022	AE-100R	R1	Upper Bedrock	FLUTE	18 - 24	117			1	1	1	1													
HRP	10/4/2022	AE-100R	R2	Upper Bedrock	FLUTE	43 - 48	117	1																		
HRP	10/4/2022	AE-100R	R3	Upper Bedrock	FLUTE	50 - 56	117	1	1																	
HRP	10/4/2022	AE-100R	R4	Middle Bedrock	FLUTE	63 - 68	117	1	1																	
HRP	10/4/2022	AE-100R	R5	Middle Bedrock	FLUTE	88 - 93	117	1						1	1	1	1	1	1	1	1	1	1	1	1	
HRP	10/6/2022	AE-101D	--	Overburden	2	20 - 25	25.50	1	1																	
HRP	10/3/2022	AE-101R	R2	Upper Bedrock	CMT	55-60	232	1	1																	
HRP	10/3/2022	AE-101R	R4	Lower Bedrock	CMT	153 - 158	232	1						1	1	1	1	1	1	1	1	1				
HRP	10/3/2022	AE-101R	R6	Lower Bedrock	CMT	227-232	232	1	1					1	1	1	1	1	1	1	1	1				
HRP	10/3/2022	AE-102M	--	Overburden	2	23 - 28	30	1	1			1	1	1	1	1	1	1	1	1	1	1				
HRP	9/28/2022	AE-102RR	R1	Upper Bedrock	FLUTE	43 - 48	175	1						1	1	1	1	1	1	1	1	1	1	1	1	
HRP	9/28/2022	AE-102RR	R2	Middle Bedrock	FLUTE	75 - 80	175	1	1																	
HRP	9/28/2022	AE-102RR	R4	Lower Bedrock	FLUTE	125 - 130	175	1																		
HRP	9/28/2022	AE-102RR	R5	Lower Bedrock	FLUTE	141 - 146	175	1																		Duplicate
HRP	9/29/2022	AE-102RR	R6	Lower Bedrock	FLUTE	153-158	175	1	1					1	1	1	1	1	1	1	1	1				
HRP	10/3/2022	AE-103D	--	Overburden	2	35 - 40	40.50	1	1			1	1	1	1	1	1	1	1	1	1	1				
HRP	9/28/2022	AE-103R	R1	Upper Bedrock	FLUTE	48 - 53	175					1	1													
HRP	9/28/2022	AE-103R	R2	Middle Bedrock	FLUTE	62 - 67	175	1						1	1	1	1	1	1	1	1	1				
HRP	9/28/2022	AE-103R	R3	Middle Bedrock	FLUTE	70 -76	175	1																		
HRP	9/28/2022	AE-103R	R4	Middle Bedrock	FLUTE	98 - 105	175	1	1																	matrix spike / matrix spike duplicate
HRP	9/28/2022	AE-103R	R5	Lower Bedrock	FLUTE	122 - 128	175	1	1					1	1	1	1	1	1	1	1	1	1	1	1	
HRP	9/28/2022	AE-103R	R7	Lower Bedrock	FLUTE	162.5-168	175	1																		
HRP	10/3/2022	AE-103S	--	Overburden	2	15 - 20	22					1	1													
HRP	10/3/2022	AE-104D	--	Overburden	2	35 - 40	41	1	1																	Duplicate
HRP	9/28/2022	AE-104R	R1	Upper Bedrock	FLUTE	48 - 54	175	1	1																	
HRP	9/28/2022	AE-104R	R3	Middle Bedrock	FLUTE	97-102	175	1	1																	
HRP	9/28/2022	AE-104R	R5	Lower Bedrock	FLUTE	156 - 162	175	1	1					1	1	1	1	1	1	1	1	1				
HRP	9/28/2022	AE-108R	R1	Upper Bedrock	FLUTE	36.5 - 43.5	175	1						1	1	1	1	1	1	1	1	1				
HRP	9/28/2022	AE-108R	R3	Middle Bedrock	FLUTE	84 - 89	175	1																		
HRP	9/28/2022	AE-108R	R5	Lower Bedrock	FLUTE	163 - 168	175	1																		
Int'l Family Church	10/4/2022	AE-109R	R1	Upper Bedrock	FLUTE	38 - 43	250	1																		
Int'l Family Church	10/4/2022	AE-109R	R2	Middle Bedrock	FLUTE	66 - 76	250	1	1																	
Int'l Family Church	10/4/2022	AE-109R	R4	Lower Bedrock	FLUTE	174 - 180.5	250	1																		
Int'l Family Church	10/4/2022	AE-109R	R6	Lower Bedrock	FLUTE	196-201	250	1	1					1	1	1	1	1	1	1	1	1				matrix spike / matrix spike duplicate
Int'l Family Church	10/4/2022	AE-109R	R8	Lower Bedrock	FLUTE	245 - 250	250	1																		
Int'l Family Church	10/6/2022	AE-109D	--	Overburden	2	18 - 23	23.50	1	1			1	1													
Int'l Family Church	10/5/2022	AE-110R	R1	Upper Bedrock	FLUTE	34 - 44	250	1																		
Int'l Family Church	10/5/2022	AE-110R	R2	Middle Bedrock	FLUTE	70 - 80	250	1																		
Int'l Family Church	10/5/2022	AE-110R	R5	Lower Bedrock	FLUTE	171 -182	250	1																		
Int'l Family Church	10/5/2022	AE-110R	R7	Lower Bedrock	FLUTE	224 - 234	250	1	1																	

Table 2-2
Post-Temporary Solution Operations, Maintennce and Monitoring Updated Groundwater Monitoring Summary 2022

Property Owner	Date Sampled	Location ID	FLUTe / CMT Port	Interval	Well Diameter (inch)	Screen Interval (Ft bgs)	Total Depth (ft bgs)	VOCs (SW846 -USEPA Method 8260C)	1,4-dioxane (SW846/USEPA Method 8270D SIM) DL <0.3 ug/l	VPH (MassDEP VPH Method)	EPH and polycyclic aromatic hydrocarbons (PAH) (MassDEP- EPH-Method)	Total As (SW846 - U SEPA Method 6010)	Dissolved As (field filtered) (SW846 - USEPA Method 6010)	Total Fe, Mn (SW846 - U SEPA Method 6010)	Dissolved Fe, Mn (field filtered) (SW846 - USEPA Method 6010)	Chloride (SM4500CLE-11)	Nitrite (USEPA 353.2)	Nitrate (USEPA 353.2)	Sulfate (USEPA 300.0)	Sulfide (SM4500S-D-11)	Total organic carbon (SM5310B-11)	Methane, Ethane, Ethene, Acetylene, Propane (Pace AM20Gax)	Dissolved hydrogen (Pace - Microseeps - Bubble Strip)	CSIA: 13C/12C ratio for PCE, TCE, Cis-1,2-DCE, VC (Microbial Insights)	Microbial Analysis: Quantaray (Microbial Insights)	Comments 2022
Lockheed Martin	9/29/2022	AE-105D	--	Overburden	2	73 - 78	78.50	1	1					1	1	1	1	1	1	1	1	1			
Lockheed Martin	9/29/2022	AE-105R	R2	Middle Bedrock	FLUTE	98 - 103	175	1	1					1	1	1	1	1	1	1	1	1	1	1	
Lockheed Martin	9/29/2022	AE-105R	R3	Middle Bedrock	FLUTE	107.50 - 112.50	175	1																	
Lockheed Martin	9/29/2022	AE-105R	R4	Lower Bedrock	FLUTE	125 - 130	175	1	1																
Lockheed Martin	9/29/2022	AE-105R	R5	Lower Bedrock	FLUTE	143 - 148	175	1																	
Lockheed Martin	9/29/2022	AE-105S	--	Overburden	2	35 - 40	42					1	1												
YRC Freight	9/29/2022	AE-106M	--	Overburden	2	22.5 - 27.5	29.50	1				1	1	1	1	1	1	1	1	1	1	1			Duplicate
YRC Freight	9/29/2022	AE-106R	R1	Upper Bedrock	FLUTE	47 - 52	175	1																	
YRC Freight	9/29/2022	AE-106R	R3	Middle Bedrock	FLUTE	84 - 88	175	1						1	1	1	1	1	1	1	1	1	1	1	
YRC Freight	9/29/2022	AE-106R	R5	Lower Bedrock	FLUTE	164 - 169	175	1	1																
Lockheed Martin	9/29/2022	TRC-301R	R4	Middle Bedrock	CMT	65.5 - 69.5	100.5	1				1	1	1	1	1	1	1	1	1	1	1	1	1	
Lockheed Martin	9/29/2022	TRC-301R	R3	Middle Bedrock	CMT	75.5 - 79.5	100.5	1																	
Lockheed Martin	9/29/2022	TRC-301R	R2	Middle Bedrock	CMT	81.5 - 85.5	100.5	1																	
Lockheed Martin	9/29/2022	TRC-301R	R1	Middle Bedrock	CMT	96.5 - 100.5	100.5	1																	
YRC Freight	10/6/2022	AE-111R	R1	Upper Bedrock	FLUTE	44 - 54	200	1																	
YRC Freight	10/6/2022	AE-111R	R2	Middle Bedrock	FLUTE	66 - 74	200	1																	matrix spike / matrix spike duplicate
YRC Freight	10/6/2022	AE-111R	R6	Lower Bedrock	FLUTE	168 -173	200	1																	
Howland	10/6/2022	AE-112R	R1	Upper Bedrock	FLUTE	41 - 50	175	1																	
Howland	10/6/2022	AE-112R	R3	Middle Bedrock	FLUTE	91 - 101	175	1																	
Howland	10/6/2022	AE-112R	R5	Lower Bedrock	FLUTE	136 - 146	175	1						1	1	1	1	1	1	1	1	1	1	1	
Howland	10/6/2022	AE-112D	--	Overburden	2	24.5 - 29.5	30	1				1	1												
Town N. Reading	10/6/2022	STM-8D	--	Overburden	0.75	34.7 - 39.7	40	1	1																
Town N. Reading	10/6/2022	STM-8R	--	Upper Bedrock	0.75	46.5 - 51.5	52	1	1					1	1	1	1	1	1	1	1	1			
Wilmington Masonry	10/6/2022	STM-8R1	--	Middle Bedrock	2	85 - 90	92	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	Duplicate
HRP	10/4/2022	GZA-12	--	Overburden	1.5	9.5 - 24.5	24.50	1	1			1	1	1	1	1	1	1	1	1	1	1			matrix spike / matrix spike duplicate
HRP	9/30/2022	AE-03	--	Overburden	2	3 - 13	15			1	1	1	1												matrix spike / matrix spike duplicate
HRP	9/30/2022	AE-04	--	Overburden	2	3 - 13	14			1	1														
HRP	10/3/2022	GZA-102S	--	Overburden	1.5	1.7 - 10.7	10.70	1		1	1			1	1	1	1	1	1	1	1	1			Duplicate
HRP	10/6/2022	GZA-105D	--	Overburden	1.5	16 - 26	26	1	1	1	1														
HRP	10/6/2022	GZA-105R	--	Upper Bedrock	0.5	34.5 - 36.5	36.50	1																	
HRP	10/6/2022	GZA-105S	--	Overburden	1.5	4 - 14	14	1		1	1	1	1												
HRP	10/3/2022	PZ-2S	--	Overburden	4	3.55 - 8.55	16.55			1	1														
HRP	10/3/2022	TRC-101	--	Overburden	1.25	1.5 - 10.5	10.50			1	1														
HRP	9/30/2022	TRC-102	--	Overburden	1.25	2.25 - 12.25	12.25	1		1	1	1	1												
HRP	9/30/2022	TRC-103	--	Overburden	1.25	1.25 - 11.25	11.25			1	1														
HRP	10/4/2022	EMW-10D	--	Overburden	2	19 - 29	29	1																	
HRP	10/6/2022	GZA-6	--	Overburden	2	8 - 18	20					1	1												
HRP	10/4/2022	GZA-10	--	Overburden	1.5	13 - 38	40					1	1												
Centrella Trust	9/30/2022	MW4A	--	Overburden	1.5	38 - 48	51	1	1			1	1												Duplicate
Int'l Family Church	10/3/2022	MW-5	--	Overburden	1.5	28 - 38	61.50	1																	
Int'l Family Church	10/3/2022	MW-7	--	Overburden	1.5	15 - 25	27	1																	
Lockheed Martin	9/29/2022	PS-1D	--	Overburden	0.62	49.25 - 54.25	55.25	1																	
Lockheed Martin	9/29/2022	PS-1M	--	Overburden	0.62	34.25 - 39.25	40.25	1																	
Lockheed Martin	9/30/2022	PS-3	--	Overburden	0.62	2.7 - 7.7	8.70	1																	
Lockheed Martin	9/30/2022	PS-5D	--	Overburden	0.62	24.1 - 29.1	30.20	1																	
Town N.Reading	9/29/2022	PS-8D	--	Overburden	0.62	51.8 - 56.8	57.80	1				1	1												
HRP	10/3/2022	AE2R	--	Upper Bedrock	5" open rock	22 - 36	36	1																	
HRP	10/6/2022	TRC-201R	--	Bedrock	6"	38 - 161.3	161.30	1																	
HRP	10/3/2022	IP-1R2	--	Middle Bedrock	2	54 - 74	74	1																	

Notes:

Published in Post-Temporary Solution Status Report No. 10 and first Periodic Review of the Temporary Solution dated May 4, 2022

(1) Water levels measured from all wells/ports sampled plus select additional wells to generate representative groundwater contours

(2) 1 per 20 for wells with non-dedicated sampling equipment

(3) Field parameters (temperature, pH, specific conductivity, dissolved oxygen, oxidation reduction potential, turbidity) measured at each well/port sampled.

EPL - Eastern Parking Lot

ft bgs - feet below ground surface

HRP - HILCO Redevelopment Partners

Totals

Total number of samples :	95	35	10	10	22	22	26	26	26	26	26	26	26	26	26	10	10	9
Duplicates (1 per 20):	6	3	1	1	2	2	2	2	2	2	2	2	2	2	2	0	0	0
Equipment blanks (1 per 20 [2]):	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Trip blanks (1 per shipment)	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total:	**117**	**39**	**12**	**12**	**25**	**25**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**29**	**10**	**10**	**9**

Table 2-3
Groundwater Field Parameter Data Summary September-October 2022
Former GE Facility, Wilmington, MA

Well ID	Date	Temperature (degrees C)	pH	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
On-Site									
AE-3	9/30/2022	22.3	6.57	1443	0.03	-55.8	0	Clear	None
AE-4	9/30/2022	21.9	6.57	2403	0.02	-87.2	3.4	Clear	None
AE-23R	10/5/2022	16	6.18	2195	1.16	153	24.1	Clear	Organic decay
AE-23S	10/5/2022	17	4.86	221.1	0.27	166.9	1.78	Clear	Organic decay
AE-24	10/5/2022	17	5.82	302.2	5.33	165.1	4.11	Clear	Organic decay
AE-26R-1	10/5/2022	16.1	10.56	611	0.04	-192.9	1.6	Clear	None
AE-26R-4	10/5/2022	16.2	7.86	1167	7.56	-193.2	0	Clear	None
AE-26R-5	10/5/2022	16.7	7.67	1368	0.05	-143.5	0	Clear	None
AE-26S	10/5/2022	16.4	5.43	519	0.19	165.5	0.02	Clear	Sulfur
AE-28R-1	10/5/2022	16.4	7.43	2113	0.06	-133.8	0.03	Clear	None
AE-28R-2	10/5/2022	16	7.65	1772	0.07	-123.5	0.09	Clear	None
AE-28R-3	10/5/2022	16.3	7.7	1669	0.08	-149.6	2.44	Clear	None
AE-28R-4	10/5/2022	16.6	7.64	1733	0.14	-175.4	5.04	Clear	None
AE-29R-1	10/4/2022	14.2	5.77	3839	0.37	182.2	2.31	Clear	None
AE-29R-3	10/4/2022	14.4	6.21	3448	0.34	124.4	3.76	Clear	None
AE-29R-5	10/4/2022	15	7.26	678	0.48	-63.9	1.02	Clear	None
AE-29R-6	10/4/2022	15.2	7.44	1638	0.17	-138.9	0.12	Clear	None
AE-100R-1	10/4/2022	15	6.7	2448	0.2	-53.1	0	Clear	None
AE-100R-2	10/4/2022	15.2	6.43	2584	0.05	60.5	0	Clear	None
AE-100R-3	10/4/2022	15.1	6.63	2061	0.05	69.5	0	Clear	None
AE-100R-4	10/4/2022	15.3	6.74	1850	0.07	54.1	0	Clear	None
AE-100R-5	10/4/2022	15.4	6.92	1532	0.09	47.3	0	Clear	None
GZA-12	10/4/2022	14.9	5.23	2588	0.96	142.8	1.72	Clear	None
GZA-101R	10/4/2022	13.7	6.87	2870	0.19	-86.6	1.66	Clear	None
GZA-102S	10/3/2022	18	6.61	920	0	-3	0.02	Clear	None
GZA-105D	10/6/2022	18.8	6.77	2676	0.03	61	11.2	Clear	None
GZA-105R	10/6/2022	16	7.89	1066	0.1	-55.1	0.28	Clear	None
GZA-105S	10/6/2022	20.9	7.2	2256	0.05	-91.2	3.1	Clear	None
IP-1R2	10/3/2022	16.5	8.06	1945	0.1	-112.5	1.14	Clear	None
PZ-2S	10/3/2022	18.3	6.71	790	0.84	-33	5.03	Clear	None
TRC-101	10/3/2022	21.7	6.52	2762	0.13	-55.2	2.2	Clear	None
TRC-102	9/30/2022	21.1	6.05	2491	0.03	-16.9	7.7	Clear	None
TRC-103	9/30/2022	22.4	6.44	2357	0	-68.8	12.8	Clear	None
TRC-201R	10/6/2022	18.3	7.62	989	0.21	-22.6	2.66	Clear	None
Transect A									
AE-101D	10/6/2022	17.5	5.82	2085	0.3	-8	7.44	Clear	None
AE-101R-2	10/3/2022	14.8	6.91	1687	0.3	-90.9	1	Clear	None
AE-101R-4	10/3/2022	15.3	6.82	3185	0.84	-63.1	1.3	Clear	None
AE-101R-6	10/3/2022	14.6	7.42	632	0.37	-147.1	1.6	Clear	None
AE-102M	10/3/2022	16.1	6.07	2734	0.26	65.9	0.3	Clear	None
AE-102RR-1	9/28/2022	14.7	8.22	464.4	0.42	-149.2	1.87	Clear	None
AE-102RR-2	9/28/2022	14.5	7.3	508	0.26	-85.7	0.02	Clear	None
AE-102RR-4	9/28/2022	14.6	7.21	365.6	0.54	-63.6	0.02	Clear	None
AE-102RR-5	9/28/2022	14.7	7.21	439.2	0.37	-72.5	0.02	Clear	None
AE-102RR-6	9/28/2022	15.1	7.34	813	0.32	-92.5	0.12	Clear	None
AE-103D	10/3/2022	14.6	5.67	3224	0.11	220.9	0.5	Clear	None
AE-103R-1	9/28/2022	14	6.68	2958	0	82.1	0.02	Clear	None
AE-103R-2	9/28/2022	14.1	6.15	2565	0	140.9	0.02	Clear	None
AE-103R-3	9/28/2022	13.9	6.21	2506	0	151	0.02	Clear	None
AE-103R-4	9/28/2022	13.8	6.86	1180	0	32.5	0.02	Clear	None
AE-103R-5	9/28/2022	13.7	7.01	1067	0	-18.7	0.02	Clear	None
AE-103R-7	9/28/2022	13.6	7.44	732	0	-90.1	0.02	Clear	None
AE-103S	10/3/2022	15.1	6.46	1194	0.2	-50.2	9.8	Clear	None
AE-104D	10/3/2022	15.1	5.48	3207	0.08	205.5	0.02	Clear	None
AE-104R-1	9/28/2022	13.7	7.7	1037	1.22	-119.6	0.02	Clear	None
AE-104R-3	9/28/2022	13.6	7.79	793	0.39	-93.4	0.02	Clear	None

Table 2-3
Groundwater Field Parameter Data Summary September-October 2022
Former GE Facility, Wilmington, MA

Well ID	Date	Temperature (degrees C)	pH	Specific Conductivity (uS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Turbidity (NTU)	Visual	Odor
Transect A (continued)									
AE-104R-5	9/28/2022	13.5	7.46	931	0.08	-98.8	0.02	Clear	None
AE-108R-1	9/28/2022	14.2	9.62	2294	0.28	145.2	2.83	Clear	None
AE-108R-3	9/28/2022	14.3	7.61	2157	0.48	94.1	1.72	Clear	None
AE-108R-5	9/28/2022	14.3	7.51	631	0.1	33.2	1.21	Clear	None
AE-109D	10/6/2022	16.6	6.3	1419	0.26	83.5	0.02	Clear	None
AE-109R-1	10/4/2022	13.3	8.07	1392	0.38	123.2	7.1	Clear	None
AE-109R-2	10/4/2022	13.3	7.84	1209	0.27	59.1	0.02	Clear	None
AE-109R-4	10/4/2022	13.3	8.09	319.9	0.18	4.7	0.02	Clear	None
AE-109R-6	10/4/2022	13.3	7.96	251.8	0.15	-22.1	0.11	Clear	None
AE-109R-8	10/4/2022	13.3	7.95	159.7	0.15	-61.8	1010	White	None
AE-110R-1	10/5/2022	13.7	8.25	629	0.39	-32.8	89.9	Light brown	None
AE-110R-2	10/5/2022	13.7	7.97	590	0.23	-75.4	24.6	Clear	None
AE-110R-5	10/5/2022	13.7	7.84	719	0.2	-91.7	6.72	Clear	None
AE-110R-7	10/5/2022	13.7	7.63	1043	0.17	-91.8	1.55	Clear	None
EMW-10D	10/4/2022	14.7	5.48	2378	0.16	119.2	0.48	Clear	None
Transect B									
AE-105D	9/29/2022	12.2	7.15	1037	0.18	-179.6	0.02	Clear	None
AE-105R-2	9/29/2022	10.9	7.69	411.5	5.02	10.7	1.3	Clear	None
AE-105R-3	9/29/2022	10.8	7.5	361.7	0.2	-18.8	1	Clear	None
AE-105R-4	9/29/2022	10.9	7.48	334	0.04	-44	1	Clear	None
AE-105R-5	9/29/2022	10.9	7.49	302.9	0.05	-62.7	1	Clear	None
AE-105S	9/29/2022	12	6.12	1336	0.25	-25.5	0.02	Clear	None
AE-106M	9/29/2022	11.1	5.72	2389	0.17	218.1	0.02	Clear	None
AE-106R-1	9/29/2022	10.5	7.95	1134	0.28	108.1	2.5	Clear	None
AE-106R-3	9/29/2022	10.3	7.95	633	0.07	81.1	1.76	Clear	None
AE-106R-5	9/29/2022	10.3	8.04	181.2	2.71	69	2.11	Clear	None
AE-111R-1	10/6/2022	13.6	7.95	1642	0.22	96	0.02	Clear	None
AE-111R-2	10/6/2022	13.4	7.79	1717	0.18	73.3	0.02	Clear	None
AE-111R-6	10/6/2022	13.6	8.07	468	0.14	-73.7	0.02	Clear	None
TRC-301R-1	9/29/2022	11.2	7.64	748	0.26	-114.9	0.02	Clear	None
TRC-301R-2	9/29/2022	11.2	7.67	645	0.38	-125.8	0.02	Clear	None
TRC-301R-3	9/29/2022	11.3	0.02	655	0.27	-160.8	0.02	Clear	None
TRC-301R-4	9/29/2022	11.6	7.04	848	0.23	-145.6	0.02	Clear	None
Transect B 1/2									
AE-112D	10/6/2022	14.6	5.15	2312	1.33	162.2	0.02	Clear	None
AE-112R-1	10/6/2022	13.3	7.73	960	0.4	-120.6	0	Clear	None
AE-112R-3	10/6/2022	13.5	7.44	952	0.09	-110.3	0	Clear	None
AE-112R-5	10/6/2022	14.3	7.43	889	0.01	-118.0	0	Clear	None
Transect C									
STM-8D	10/6/2022	13.4	6.08	952	0.22	51.4	2.91	Clear	None
STM-8R	10/6/2022	13.7	7.29	517	0.22	-45.1	1.66	Clear	None
STM-8R1	10/6/2022	15	7.42	494	2.51	80.3	9.76	Clear	None
Wetlands/Wooded Area									
GZA-10	10/4/2022	14.7	6.04	1188	0.13	42.2	0.02	Clear	None
GZA-6	10/6/2022	17.7	6.36	529	0	81	0.02	Clear	None
MW-4A	9/30/2022	9.9	6.42	1369	0.08	-50.7	0.02	Clear	None
MW-5	10/3/2022	10.7	6.38	858	0.22	-93.6	0.02	Clear	None
MW-7	10/3/2022	13.4	5.52	1930	0.2	72.7	26	Clear	None
PS-1D	9/29/2022	12	6.76	1246	0.15	-79.1	9.8	Clear	None
PS-1M	9/29/2022	11.2	6.22	1848	0.34	1.4	0.51	Clear	None
PS-3	9/30/2022	13.2	6.16	408.8	7.44	10.5	0.02	Clear	H2S smell
PS-5D	9/30/2022	13	7.12	305.6	1.19	-91.9	10.9	Clear	H2S smell
PS-8D	9/29/2022	10.6	6.04	337.9	0.67	52.1	0.02	Clear	None

Notes:
Summary presents the final stabilized reading at each well just prior to sampling.
C - Celsius
uS/cm - microsiemens per centimeter
mg/l - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
NM - not measured - well purged dry with only sufficient recharge to fill sample bottles.

Table 4-1
Summary of 2016 - 2022 Groundwater Analytical Results for Arsenic

Location Group	Location	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Upgradient	GZA-12	16A-GZA12-061416-1	N	6/14/2016	9.5 - 24.5 ft	4.0 U	4.0 U
		17A-GZA12-101017-1	N	10/10/2017		4.0 U	4.0 U
		18A-GZA12-100118-1	N	10/1/2018		4.0 U	4.00 U
		19A-GZA12-092619-1	N	9/26/2019		4 U	4 U
		20A-GZA12-092420-1	N	9/24/2020		4 U	4 U
		21A-GZA12-091421-1	N	9/14/2021		4 U	4 U
		22A-GZA12-100422-1	N	10/4/2022		4 U	**5**
Building 1 Tank F	AE23S	16A-AE23S-062716-1	N	6/27/2016	10 - 20 ft	4.0 U	4.0 U
		17A-AE23S-100517-1	N	10/5/2017		4.0 U	4.0 U
Building 1 Tank F	AE26R-1	16A-AE26R1-062316-1	N	6/23/2016	50 - 56 ft	4.0 U	4.0 U
		17A-AE26R1-100417-1	N	10/4/2017		4.0 U	4.0 U
		18A-AE26R1-091818-1	N	9/18/2018		4.0 U	4.00 U
		19A-AE26R1-092319-1	N	9/23/2019		4 U	4 U
		20A-AE26R1-091420-1	N	9/14/2020		**6**	**6**
		21A-AE26R1-090121-1	N	9/1/2021		**9**	**7**
		22A-AE26R1-100522-1	N	10/5/2022		**6**	**9**
Building 1 Tank F	AE26S	18A-AE26S-092518-1	N	9/25/2018	25 - 30 ft	4.0 U	4.00 U
		19A-AE26S-092319-1	N	9/23/2019		4 U	4 U
		20A-AE26S-091420-1	N	9/14/2020		4 U	4 U
		21A-AE26S-090321-1	N	9/3/2021		4 U	4 U
		22A-AE26S-100522-1	N	10/5/2022		4 U	4 U
Building 1 Tank F	AE28R-2	16B-AE28R2-062316-1	N	6/23/2016	75 - 85 ft	4.0 U	4.0 U
		17A-AE28R2-100417-1	N	10/4/2017		4.0 U	4.0 U
		18A-AE28R2-091818-1	N	9/18/2018		4.0 U	4.00 U
		19A-AE28R2-092319-1	N	9/23/2019		4 U	4 U
		20A-AE28R2-091420-1	N	9/14/2020		4 U	4 U
		21A-AE28R2-090121-1	N	9/1/2021		**5**	4 U
Building 1 Tank F	AE29R-6	16B-AE29R6-062816-1	N	6/28/2016	140 - 146 ft	4.0 U	4.0 U
		17A-AE29R6-101717-1	N	10/17/2017		4.0 U	4.0 U
		18A-AE29R6-091818-1	N	9/18/2018		4.0 U	4.00 U
		19A-AE29R6-092419-1	N	9/24/2019		**4**	4 U
		20A-AE29R6-092220-1	N	9/22/2020		**6**	4 U
		21A-AE29R6-091421-1	N	9/14/2021		4 U	4 U
Building 1 Tank F	GZA-101R	16A-GZA101R-061416-1	N	6/14/2016	36.5 - 38 ft	4.0 U	4.0 U
		17A-GZA101R-101017-1	N	10/10/2017		4.0 U	**10.6**
		18A-GZA101R-091818-1	N	9/18/2018		4.0 U	4.00 U
		19A-GZA101R-092619-1	N	9/26/2019		4 U	4 U
		20A-GZA101R-092420-1	N	9/24/2020		4 U	4 U
		21A-GZA101R-091421-1	N	9/14/2021		**4**	4 U
		22A-GZA101R-100422-1	N	10/4/2022		**5**	4 U
Downgradient Wetland	GZA-14	16A-GZA14-063016-1	N	6/30/2016	39 - 49 ft	**28.0**	**30.8**
		17A-GZA14-102017-1	N	10/20/2017		**20.3**	**20.1**
Downgradient Wetland	GZA-14A	16A-GZA14A-061716-1	N	6/17/2016	0 - 15 ft	**35.8**	**35.4**
		16A-GZA14A-061716-2	FD	6/17/2016		**35.8**	**34.7**
		17A-GZA14A-102017-1	N	10/20/2017		**22.8**	**24.8**
		18A-GZA14A-092818-1	N	9/28/2018		**8.6**	**12.30**
		19A-GZA14A-093019-1	N	9/30/2019		**32**	**43**
		20A-GZA14A-091720-1	N	9/17/2020		**12**	**14**
		21A-GZA14A-092121-1	N	9/21/2021		**7**	**8**
		21A-GZA14A-092121-2	FD	9/21/2021		**7**	**9**

Table 4-1
Summary of 2016 - 2022 Groundwater Analytical Results for Arsenic

Location Group	Location	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Downgradient Wetland	MW-4	16A-MW4-062416-1	N	6/24/2016	18 - 28 ft	4.0 U	**8.1**
		17A-MW4-101817-1	N	10/18/2017		4.0 U	4.0 U
		18A-MW4-100418-1	N	10/4/2018		4.0 U	4.00 U
		19A-MW4-091919-1	N	9/19/2019		4 U	4 U
		19A-MW4-091919-2	FD	9/19/2019		4 U	4 U
		20A-MW4-091820-1	N	9/18/2020		4 U	4 U
		20A-MW4-091820-2	FD	9/18/2020		4 U	4 U
		21A-MW4-092021-1	N	9/20/2021		4 U	4 U
Downgradient Wetland	MW-4A	16A-MW4A-062416-1	N	6/24/2016	38 - 48 ft	**7.0**	4.0 U
		17A-MW4A-101817-1	N	10/18/2017		**6.8**	**6.8**
		18A-MW4A-100418-1	N	10/4/2018		**7.2**	**7.95**
		19A-MW4A-091919-1	N	9/19/2019		4 U	**11**
		20A-MW4A-091820-1	N	9/18/2020		**8**	**9**
		21A-MW4A-092021-1	N	9/20/2021		**9**	**11**
		22A-MW4A-093022-1	N	9/30/2022		**7**	**9**
		22A-MW4A-093022-2	FD	9/30/2022		**10**	**9**
Downgradient Wetland	PS-8D	18A-PS8D-100218-1	N	10/2/2018	51.8 - 56.8 ft	4.0 U	4.00 U
		19A-PS8D-091719-1	N	9/17/2019		4 U	4 U
		20A-PS8D-091520-1	N	9/15/2020		4 U	4 U
		21A-PS8D-092121-1	N	9/21/2021		4 U	4 U
		22A-PS8D-092922-1	N	9/29/2022		4 U	4 U
EPL	AWE03	16A-AE03-062816-1	N	6/28/2016	3 - 13 ft	**39.5**	**40.4**
		17A-AE03-100917-1	N	10/9/2017		**39.3**	**38.8**
		18A-AE03-092418-1	N	9/24/2018		**58.0**	**57.15**
		18A-AE03-092418-2	FD	9/24/2018		**57.2**	**59.00**
		19A-AE03-091219-1	N	9/12/2019		**57**	**58**
		19A-AE03-091219-2	FD	9/12/2019		**58**	**56**
		20A-AE3-092320-1	N	9/23/2020		**44**	**43**
		20A-AE3-092320-2	FD	9/23/2020		**45**	**45**
		21A-AE3-091521-1	N	9/15/2021		**34**	**34**
		22A-AE03-093022-1	N	9/30/2022		**32**	**35**
EPL	AE04	16A-AE04-061316-1	N	6/13/2016	3 - 13 ft	**7.3**	**8.0**
		17A-AE04-100917-1	N	10/9/2017		**11.0**	**11.0**
EPL	GZA-06	18A-GZA6-100118-1	N	10/1/2018	8 - 18 ft	**9.1**	**9.10**
		19A-GZA6-092019-1	N	9/20/2019		**9**	**11**
		20A-GZA6-092120-1	N	9/21/2020		**10**	**9**
		21A-GZA6-090821-1	N	9/8/2021		**10**	**9**
		22A-GZA6-100622-1	N	10/6/2022		**8**	**8**
EPL	GZA-10	18A-GZA10-100118-1	N	10/1/2018	13 - 38 ft	**109**	**122.05**
		19A-GZA10-092619-1	N	9/26/2019		**138**	**130**
		20A-GZA10-092120-1	N	9/21/2020		**78**	**77**
		21A-GZA10-090821-1	N	9/8/2021		**6**	**15**
		22A-GZA10-100422-1	N	10/4/2022		**38**	**46**

Table 4-1
Summary of 2016 - 2022 Groundwater Analytical Results for Arsenic

Location Group	Location	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
EPL	GZA-105D	16A-GZA105D-061516-1	N	6/15/2016	16 - 26 ft	**99.4**	**102**
		17A-GZA-105D-101917-1	N	10/19/2017		**89.0**	**90.6**
EPL	GZA-105S	16A-GZA105S-061516-1	N	6/15/2016	4 - 14 ft	**169**	**152**
		17A-GZA105S-100917-1	N	10/9/2017		**242**	**242**
		17A-GZA105S-100917-2	FD	10/9/2017		**239**	**234**
		18A-GZA105S-092518-1	N	9/25/2018		**238**	**228.05**
		19A-GZA105S-091819-1	N	9/18/2019		**168**	**182**
		20A-GZA105S-092420-1	N	9/24/2020		**194**	**195**
		21A-GZA105S-091521-1	N	9/15/2021		**170**	**156**
		22A-GZA105S-100622-1	N	10/6/2022		**194**	**177**
EPL	TRC-102	16A-TRC102-062716-1	N	6/27/2016	2.25 - 12.25 ft	**30.4**	**33.8**
		17A-TRC102-100217-1	N	10/2/2017		**27.4**	**27.3**
		18A-TRC102-092418-1	N	9/24/2018		**39.6**	**41.75**
		19A-TRC102-092019-1	N	9/20/2019		**50**	**60**
		20A-TRC102-092320-1	N	9/23/2020		**57**	**56**
		21A-TRC102-090721-1	N	9/7/2021		**38**	**43**
		22A-TRC102-093022-1	N	9/30/2022		**47**	**52**
Former Tank Farm	AE100R-1	22A-AE100R1-100422-1	N	10/4/2022	18 - 24 ft	**59 J**	**27 J**
Former Tank Farm	AE100R-5	16A-AE100R5-061516-1	N	6/15/2016	88 - 93 ft	4.0 U	4.0 U
		17A-AE100R5-100417-1	N	10/4/2017		4.0 U	4.0 U
		18A-AE100R5-091918-1	N	9/19/2018		4.0 U	4.00 U
		19A-AE100R5-092319-1	N	9/23/2019		4 U	4 U
		20A-AE100R5-091020-1	N	9/10/2020		4 U	4 U
		21A-AE100R5-090921-1	N	9/9/2021		**5**	4 U
Transect A	AE102M	16A-AE102M-061316-1	N	6/13/2016	23 - 28 ft	**12.0**	**14.1**
		17A-AE102M-100217-1	N	10/2/2017		**9.8**	**9.8**
		18A-AE102M-100118-1	N	10/1/2018		**4.6**	**4.35**
		19A-AE102M-092519-1	N	9/25/2019		**8**	**9**
		20A-AE102M-090920-1	N	9/9/2020		**10**	**10**
		21A-AE102M-091521-1	N	9/15/2021		**15**	**13**
		22A-AE102M-100322-1	N	10/3/2022		**9**	**9**
Transect A	AE102RR-6	16A-AE102RR6-061416-1	N	6/14/2016	153 - 158 ft	**4.1**	**4.5**
		17A-AE102RR6-100317-1	N	10/3/2017		**5.2**	**5.3**
		18A-AE102RR6-091918-1	N	9/19/2018		4.0 U	4.00 U
		19A-AE102RR6-092419-1	N	9/24/2019		**5**	4 U
		20A-AE102RR6-090920-1	N	9/9/2020		**4**	**4**
		21A-AE102RR6-090721-1	N	9/7/2021		4 U	4 U
Transect A	AE103D	16A-AE103D-061316-1	N	6/13/2016	35 - 40 ft	4.0 U	4.0 U
		17A-AE103D-100317-1	N	10/3/2017		4.0 U	4.0 U
		18A-AE103D-092418-1	N	9/24/2018		4.0 U	4.00 U
		18A-AE103D-092418-2	FD	9/24/2018		4.0 U	4.00 U
		19A-AE103D-091919-1	N	9/19/2019		4 U	4 U
		20A-AE103D-091020-1	N	9/10/2020		4 U	4 U
		21A-AE103D-091421-1	N	9/14/2021		4 U	4 U
		22A-AE103D-100322-1	N	10/3/2022		4 U	4 U

Table 4-1
Summary of 2016 - 2022 Groundwater Analytical Results for Arsenic

Location Group	Location	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Transect A	AE103R-1	16A-AE103R1-061516-1	N	6/15/2016	48 - 53 ft	4.0 U	4.0 U
		17A-AE103R1-100217-1	N	10/2/2017		4.0 U	4.0 U
		18A-AE103R1-092518-1	N	9/25/2018		4.0 U	4.00 U
		19A-AE103R1-091819-1	N	9/18/2019		4 U	**5**
		20A-AE103R1-091020-1	N	9/10/2020		4 U	4 U
		21A-AE103R1-090921-1	N	9/9/2021		4 U	4 U
		22A-AE103R1-092822-1	N	9/28/2022		4 U	4 U
Transect A	AE103R-5	17A-AE103R5-100217-1	N	10/2/2017	122 - 128 ft	4.0 U	4.0 U
		18A-AE103R5-092518-1	N	9/25/2018		4.0 U	4.00 U
		19A-AE103R5-091819-1	N	9/18/2019		4 U	**5**
		20A-AE103R5-091020-1	N	9/10/2020		4 U	4 U
		21A-AE103R5-090921-1	N	9/9/2021		4 U	4 U
Transect A	AE103S	16A-AE103S-061516-1	N	6/15/2016	15 - 20 ft	**179**	**175**
		17A-AE103S-100317-1	N	10/3/2017		**159**	**143**
		18A-AE103S-092418-1	N	9/24/2018		**138**	**171.20**
		19A-AE103S-091919-1	N	9/19/2019		**138**	**162**
		20A-AE103S-091020-1	N	9/10/2020		**160**	**172**
		21A-AE103S-091621-1	N	9/16/2021		**140**	**175**
		22A-AE103S-100322-1	N	10/3/2022		**172**	**522**
Transect A	AE104R-4	16A-AE104R4-061416-1	N	6/14/2016	128 - 133 ft	4.0 U	4.0 U
Transect A	AE108R-1	16A-AE108R1-061616-1	N	6/16/2016	36.5 - 43.5 ft	4.0 U	4.0 U
		16A-AE108R1-061616-2	FD	6/16/2016		4.0 U	4.0 U
		17A-AE108R1-100917-1	N	10/9/2017		4.0 U	4.0 U
		18A-AE108R1-091918-1	N	9/19/2018		4.0 U	4.00 U
		19A-AE108R1-092419-1	N	9/24/2019		4 U	4 U
		20A-AE108R1-090920-1	N	9/9/2020		4 U	4 U
		21A-AE108R1-090921-1	N	9/9/2021		4 U	4 U
Transect A	AE109D	18A-AE109D-092618-1	N	9/26/2018	18 - 23 ft	4.0 U	4.00 U
		19A-AE109D-092019-1	N	9/20/2019		4 U	4 U
		20A-AE109D-091620-1	N	9/16/2020		4 U	4 U
		21A-AE109D-090721-1	N	9/7/2021		4 U	4 U
		22A-AE109D-100622-1	N	10/6/2022		4 U	4 U
Transect A	AE109R-5	16A-AE109R5-061616-1	N	6/16/2016	183 - 189 ft	4.0 U	4.0 U
		17A-AE109R5-101017-1	N	10/10/2017		4.0 U	4.0 U
		18A-AE109R5-100218-1	N	10/2/2018		4.0 U	4.00 U
		19A-AE109R5-091819-1	N	9/18/2019		4 U	4 U
		20A-AE109R5-091620-1	N	9/16/2020		4 U	4 U
		21A-AE109R5-090221-1	N	9/2/2021		4 U	4 U
Transect A	EMW-11R2	16A-EMW11R2-062116-1	N	6/21/2016	104 - 114 ft	4.0 U	4.0 U
		17A-EMW11R2-101017-1	N	10/10/2017		4.0 U	4.0 U
		18A-EMW11R2-092418-1	N	9/24/2018		4.0 U	**4.05**
		19A-EMW11R2-091719-1	N	9/17/2019		**4**	4 U
		20A-EMW11R2-092120-1	N	9/21/2020		**5**	**4**
		21A-EMW11R2-090821-1	N	9/8/2021		**5**	**6**

Table 4-1
Summary of 2016 - 2022 Groundwater Analytical Results for Arsenic

Location Group	Location	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Transect B	AE105R-2	16A-AE105R2-062016-1	N	6/20/2016	98 - 103 ft	4.0 U	4.0 U
		17A-AE105R2-101217-1	N	10/12/2017		4.0 U	4.0 U
		18A-AE105R2-100318-1	N	10/3/2018		4.0 U	4.00 U
		19A-AE105R2-091619-1	N	9/16/2019		4 U	4 U
		20A-AE105R2-091720-1	N	9/17/2020		4 U	4 U
		21A-AE105R2-091321-1	N	9/13/2021		4 U	4 U
Transect B	AE105S	16A-AE105S-062216-1	N	6/22/2016	35 - 40 ft	**16.8**	**17.8**
		17A-AE105S-101217-1	N	10/12/2017		**15.7**	**16.8**
		18A-AE105S-100318-1	N	10/3/2018		**12.8**	**14.70**
		19A-AE105S-091619-1	N	9/16/2019		**12**	**13**
		20A-AE105S-091720-1	N	9/17/2020		**16**	**17**
		21A-AE105S-091721-1	N	9/17/2021		**11**	**16**
		22A-AE105S-092922-1	N	9/29/2022		**14**	**18**
Transect B	AE106D	16A-AE106D-062016-1	N	6/20/2016	34 - 39 ft	4.0 U	4.0 U
		17A-AE106D-101217-1	N	10/12/2017		4.0 U	4.0 U
		18A-AE106D-100318-1	N	10/3/2018		4.0 U	4.00 U
		19A-AE106D-091719-1	N	9/17/2019		4 U	4 U
		20A-AE106D-091720-1	N	9/17/2020		4 U	4 U
		21A-AE106D-091321-1	N	9/13/2021		4 U	4 U
Transect B	AE106M	22A-AE106M-092922-1	N	9/29/2022	22.5 - 27.5 ft	4 U	4 U
		22A-AE106M-092922-2	FD	9/29/2022		4 U	4 U
Transect B	AE106R-3	16A-AE106R3-062016-1	N	6/20/2016	84 - 88 ft	4.0 U	4.0 U
		17A-AE106R3-101217-1	N	10/12/2017		4.0 U	4.0 U
		18A-AE106R3-100318-1	N	10/3/2018		4.0 U	4.00 U
		19A-AE106R3-091619-1	N	9/16/2019		4 U	4 U
		20A-AE106R3-091720-1	N	9/17/2020		4 U	4 U
		21A-AE106R3-091321-1	N	9/13/2021		4 U	4 U
Transect B	TRC-301R-2	18A-TRC301R2-092718-1	N	9/27/2018	81.5 - 85.5 ft	4.0 U	4.00 U
		19A-TRC301R2-091719-1	N	9/17/2019		4 U	4 U
		20A-TRC301R2-091520-1	N	9/15/2020		4 U	4 U
		21A-TRC301R2-091321-1	N	9/13/2021		4 U	4 U
Transect B	TRC-301R-3	17A-TRC301R3-102317	N	10/23/2017	75.5 - 79.5 ft	4.0 U	4.0 U
Transect B	TRC-301R-4	16A-TRC301R4-062216-1	N	6/22/2016	65.5 - 69.5 ft	**22.8**	**23.0**
		17A-TRC301R4-102317-1	N	10/23/2017		**22.4**	**21.6**
		18A-TRC301R4-092718-1	N	9/27/2018		**18.6**	**19.70**
		19A-TRC301R4-091719-1	N	9/17/2019		**21**	**19**
		20A-TRC301R4-091520-1	N	9/15/2020		**19**	**23**
		21A-TRC301R4-091321-1	N	9/13/2021		**18**	**20**
		22A-TRC301R4-092922-1	N	9/29/2022		**18**	**19**
Transect B 1/2	AE112D	17A-AE112D-101717-1	N	10/17/2017	24.5 - 29.5 ft	4.0 U	4.0 U
		18A-AE112D-092618-1	N	9/26/2018		4.0 U	4.00 U
		19A-AE112D-091319-1	N	9/13/2019		4 U	4 U
		20A-AE112D-091120-1	N	9/11/2020		4 U	4 U
		21A-AE112D-091021-1	N	9/10/2021		4 U	4 U
		22A-AE112D-100622-1	N	10/6/2022		4 U	4 U

Table 4-1
Summary of 2016 - 2022 Groundwater Analytical Results for Arsenic

Location Group	Location	Sample ID	Sample Type	Sample Date	Depth Interval	Dissolved Arsenic (ug/l)	Total Arsenic (ug/l)
					MCP Method 1 GW-1 Standard:	10	10
					MCP Method 1 GW-2 Standard:	NE	NE
					MCP Method 1 GW-3 Standard:	900	900
					MCP Upper Concentration Limit (UCL):	9000	9000
Transect B 1/2	AE112R-1	18A-AE112R1-092618-1	N	9/26/2018	41 - 51 ft	4.0 U	**4.15**
		19A-AE112R1-091319-1	N	9/13/2019		4 U	**5**
		20A-AE112R1-091120-1	N	9/11/2020		**5**	**5**
		21A-AE112R1-091621-1	N	9/16/2021		4 U	4 U
Transect B 1/2	AE112R-2	17A-AE112R2-101717-1	N	10/17/2017	62 - 72 ft	4.0 U	4.0 U
Transect B 1/2	AE112R-6	16B-AE112R6-062116-1	N	6/21/2016	153 - 163 ft	4.0 U	4.0 U
		17A-AE112R6-101717-1	N	10/17/2017		4.0 U	4.0 U
		18A-AE112R6-092618-1	N	9/26/2018		4.0 U	4.00 U
		18A-AE112R6-092618-2	FD	9/26/2018		4.0 U	4.00 U
		19A-AE112R6-091319-1	N	9/13/2019		4 U	4 U
		20A-AE112R6-091120-1	N	9/11/2020		4 U	4 U
		21A-AE112R6-091621-1	N	9/16/2021		4 U	4 U
Transect C	STM-8R1	16A-STM8R1-062816-1	N	6/28/2016	85 - 90 ft	**11.6**	**12.6**
		17A-STM8R1-101717-1	N	10/17/2017		**15.4 J**	**11.9 J**
		17A-STM8R1-101717-2	FD	10/17/2017		**15.2 J**	**10.3 J**
		18A-STM8R1-100218-1	N	10/2/2018		**14.8**	**14.45**
		19A-STM8R1-092619-1	N	9/26/2019		**14**	**17**
		20A-STM8R1-092320-1	N	9/23/2020		**11**	**18**
		21A-STM8R1-091621-1	N	9/16/2021		**7**	**11**
		21A-STM8R1-091621-2	FD	9/16/2021		**11**	**11**
		22A-STM8R1-100622-1	N	10/6/2022		**11**	**9**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 4-2
Groundwater Mann Kendall Trend Tests for Arsenic
Former GE Facility
Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE03	Arsenic (Diss)	10	10	-26	-26	11	Downward Trend	17	Downward Trend
AE102M	Arsenic (Diss)	8	8	-4	-4	8	Not Significant	12	Not Significant
AE103S	Arsenic (Diss)	8	8	5	5	8	Not Significant	12	Not Significant
AE105S	Arsenic (Diss)	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE26R-1	Arsenic (Diss)	7	3	12	12	7	Upward Trend	11	Upward Trend
GZA-06	Arsenic (Diss)	7	7	6	6	7	Not Significant	11	Not Significant
GZA-10	Arsenic (Diss)	8	8	-14	-14	8	Downward Trend	12	Downward Trend
GZA-101R	Arsenic (Diss)	11	5	21	2.003	0.8416	Upward Trend	1.282	Upward Trend
GZA-105S	Arsenic (Diss)	9	9	9	9	10	Not Significant	14	Not Significant
MW-4A	Arsenic (Diss)	8	7	18	18	8	Upward Trend	12	Upward Trend
STM-8R1	Arsenic (Diss)	7	7	-12	-12	7	Downward Trend	11	Downward Trend
TRC-102	Arsenic (Diss)	10	10	7	7	11	Not Significant	17	Not Significant
TRC-301R-4	Arsenic (Diss)	8	8	-18	-18	8	Downward Trend	12	Downward Trend

Notes:
Datasets presented for wells that were included in the sampling program in September 2022.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend is concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward trend.
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S.
When the normal approximation is used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made.
NA = The Mann-Kendall trend test was not performed because there were less than 4 samples.
ND = The Mann-Kendall trend test was not performed because there were less than 3 detected concentrations.
- Analyte results not available for location.

Table 4-3
Summary of 2016 - 2022 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	**0.3**
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Upgradient	GZA-12	18A-GZA12-100118-1	N	10/1/2018	9.5 - 24.5 ft	0.20 U
		19A-GZA12-092619-1	N	9/26/2019		0.20 U
	overburden	20A-GZA12-092420-1	N	9/24/2020		0.20 U
		21A-GZA12-091421-1	N	9/14/2021		0.20 U
		22A-GZA12-100422-1	N	10/4/2022		0.20 U
Building 1 Tank F	AE23R	16A-AE23R-012816-1	N	1/28/2016	44.75 - 54.75 ft	**6.6**
		16B-AE23R-062716-1	N	6/27/2016		**16**
	upper	17A-AE23R-101317-1	N	10/13/2017		**19**
	bedrock	18A-AE23R-091918-1	N	9/19/2018		**19**
		19A-AE23R-092319-1	N	9/23/2019		**15**
		20A-AE23R-091420-1	N	9/14/2020		0.20 U
		21A-AE23R-090321-1	N	9/3/2021		**12**
		22A-AE23R-100522-1	N	10/5/2022		**9.6 J**
Building 1 Tank F	AE24	17A-AE24-101917-1	N	10/19/2017	7.25 - 17.25 ft	0.20 U
		17A-AE24-101917-2	FD	10/19/2017		0.20 U
	overburden	18A-AE24-092518-1	N	9/25/2018		**0.29**
		19A-AE24-092319-1	N	9/23/2019		**1.4**
		20A-AE24-091420-1	N	9/14/2020		0.20 U
		21A-AE24-090321-1	N	9/3/2021		0.20 U
		22A-AE24-100522-1	N	10/5/2022		0.20 U
		22A-AE24-100522-2	FD	10/5/2022		0.20 U
Building 1 Tank F	AE26R-1	16A-AE26R1-012716-1	N	1/27/2016	50 - 56 ft	**18**
		16A-AE26R1-062316-1	N	6/23/2016		**9.2**
		17A-AE26R1-100417-1	N	10/4/2017		**32**
	bedrock	18A-AE26R1-091818-1	N	9/18/2018		**22**
		19A-AE26R1-092319-1	N	9/23/2019		**25**
		20A-AE26R1-091420-1	N	9/14/2020		**21**
		21A-AE26R1-090121-1	N	9/1/2021		**20**
		22A-AE26R1-100522-1	N	10/5/2022		**16**
Building 1 Tank F	AE26R-5	16A-AE26R5-012716-1	N	1/27/2016	123 - 132 ft	**20**
		16B-AE26R5-062316-1	N	6/23/2016		**13**
		17A-AE26R5-100417-1	N	10/4/2017		**43**
	bedrock	18A-AE26R5-091818-1	N	9/18/2018		**29**
		19A-AE26R5-092319-1	N	9/23/2019		**34**
		20A-AE26R5-091420-1	N	9/14/2020		**27**
		21A-AE26R5-090121-1	N	9/1/2021		**28**
		22A-AE26R5-100522-1	N	10/5/2022		**21**
Building 1 Tank F	AE28R-2	16A-AE28R2-012716-1	N	1/27/2016	75 - 85 ft	**34**
		16B-AE28R2-062316-1	N	6/23/2016		**34**
		17A-AE28R2-100417-1	N	10/4/2017		**66**
	bedrock	18A-AE28R2-091818-1	N	9/18/2018		**50**
		19A-AE28R2-092319-1	N	9/23/2019		**60**
		20A-AE28R2-091420-1	N	9/14/2020		**48**
		21A-AE28R2-090121-1	N	9/1/2021		**48**
		22A-AE28R2-100522-1	N	10/5/2022		**35**
Building 1 Tank F	AE29R-6	16A-AE29R6-012816-1	N	1/28/2016	140 - 146 ft	**23**
		16B-AE29R6-062816-1	N	6/28/2016		**2.5**
		17A-AE29R6-101717-1	N	10/17/2017		**42**
	bedrock	18A-AE29R6-091818-1	N	9/18/2018		**43**
		19A-AE29R6-092419-1	N	9/24/2019		**50**
		20A-AE29R6-092220-1	N	9/22/2020		**43**
		21A-AE29R6-091421-1	N	9/14/2021		**43**
		22A-AE29R6-100422-1	N	10/4/2022		**26**
Downgradient Wetland	MW-4A	16A-MW4A-062416-1	N	6/24/2016	38 - 48 ft	**0.69**
		17A-MW4A-101817-1	N	10/18/2017		**0.89**
	overburden	22A-MW4A-093022-1	N	9/30/2022		**0.31**
		22A-MW4A-093022-2	FD	9/30/2022		**0.26**

Table 4-3
Summary of 2016 - 2022 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	**0.3**
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
EPL	GZA-105D	16A-GZA105D-061516-1	N	6/15/2016	16 - 26 ft	**1.3**
		17A-GZA-105D-101917-1	N	10/19/2017		**6.1**
	overburden	17A-GZA-105D-101917-2	FD	10/19/2017		**5.8**
		18A-GZA105D-092518-1	N	9/25/2018		**2.3**
		19A-GZA105D-091819-1	N	9/18/2019		**1.0**
		20A-GZA105D-092420-1	N	9/24/2020		**0.68 J-**
		21A-GZA105D-091521-1	N	9/15/2021		**0.65**
		21A-GZA105D-091521-2	FD	9/15/2021		**0.70**
		22A-GZA105D-100622-1	N	10/6/2022		**0.43**
Former Tank Farm	AE100R-3	16A-AE100R3-061516-1	N	6/15/2016	50 - 56 ft	**4.0**
		17A-AE100R3-100417-1	N	10/4/2017		**9.8**
		18A-AE100R3-091918-1	N	9/19/2018		**9.4**
	bedrock	19A-AE100R3-092319-1	N	9/23/2019		**13**
		20A-AE100R3-091020-1	N	9/10/2020		**9.2**
		21A-AE100R3-090921-1	N	9/9/2021		**12**
		22A-AE100R3-100422-1	N	10/4/2022		**6.9**
Former Tank Farm	AE100R-4	16A-AE100R4-061516-1	N	6/15/2016	63 - 68 ft	**3.6**
		17A-AE100R4-100417-1	N	10/4/2017		**8.6**
		18A-AE100R4-091918-1	N	9/19/2018		**11**
	bedrock	19A-AE100R4-092319-1	N	9/23/2019		**13**
		20A-AE100R4-091020-1	N	9/10/2020		**10**
		21A-AE100R4-090921-1	N	9/9/2021		**9.5**
		22A-AE100R4-100422-1	N	10/4/2022		**6.7**
Transect A	AE101D	16A-AE101D-061516-1	N	6/15/2016	20 - 25 ft	0.20 U
		16A-AE101D-061516-2	FD	6/15/2016		0.20 U
	overburden	17A-AE101D-100217-1	N	10/2/2017		0.20 U
		18A-AE101D-092618-1	N	9/26/2018		**0.32**
		19A-AE101D-093019-1	N	9/30/2019		0.20 U
		20A-AE101D-091820-1	N	9/18/2020		**0.31**
		21A-AE101D-090721-1	N	9/7/2021		0.30 U
		22A-AE101D-100622-1	N	10/6/2022		**0.28**
Transect A	AE101R-2	16A-AE101R2-061616-1	N	6/16/2016	55 - 60 ft	**3.3**
		17A-AE101R2-101117-1	N	10/11/2017		**6.7**
		18A-AE101R2-092018-1	N	9/20/2018		**6.8**
	bedrock	19A-AE101R2-092519-1	N	9/25/2019		**5.2**
		20A-AE101R2-092320-1	N	9/23/2020		**5.8**
		21A-AE101R2-091021-1	N	9/10/2021		**6.5**
		22A-AE101R2-100322-1	N	10/3/2022		**4.7**
Transect A	AE101R-6	16A-AE101R6-061716-1	N	6/17/2016	227 - 232 ft	**2.8**
		17A-AE101R6-101917-1	N	10/19/2017		**6.8**
		18A-AE101R6-092618-1	N	9/26/2018		**8.5**
	bedrock	19A-AE101R6-093019-1	N	9/30/2019		**11**
		20A-AE101R6-092420-1	N	9/24/2020		**9.6**
		21A-AE101R6-091621-1	N	9/16/2021		**9.2**
		22A-AE101R6-100322-1	N	10/3/2022		**12**
Transect A	AE102M	16A-AE102M-061316-1	N	6/13/2016	23 - 28 ft	0.20 U
		17A-AE102M-100217-1	N	10/2/2017		**0.73**
	overburden	18A-AE102M-100118-1	N	10/1/2018		**0.76**
		19A-AE102M-092519-1	N	9/25/2019		**0.76**
		19A-AE102M-092519-2	FD	9/25/2019		**0.78**
		20A-AE102M-090920-1	N	9/9/2020		**0.62**
		20A-AE102M-090920-2	FD	9/9/2020		**0.58**
		21A-AE102M-091521-1	N	9/15/2021		**0.73**
		22A-AE102M-100322-1	N	10/3/2022		**0.49**
Transect A	AE102RR-2	16A-AE102RR2-061416-1	N	6/14/2016	75 - 80 ft	**2.8**
		17A-AE102RR2-100317-1	N	10/3/2017		**6.1**
		18A-AE102RR2-091918-1	N	9/19/2018		**6.4**
	bedrock	18A-AE102RR2-091918-2	FD	9/19/2018		**6.3**
		19A-AE102RR2-092419-1	N	9/24/2019		**6.0**
		20A-AE102RR2-090920-1	N	9/9/2020		**6.2**
		21A-AE102RR2-090721-1	N	9/7/2021		**5.9**
		22A-AE102RR2-092822-1	N	9/28/2022		**5.4**

Table 4-3
Summary of 2016 - 2022 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	**0.3**
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Transect A	AE102RR-6	16A-AE102RR6-061416-1	N	6/14/2016	153 - 158 ft	**10**
		17A-AE102RR6-100317-1	N	10/3/2017		**22**
	lower	18A-AE102RR6-091918-1	N	9/19/2018		**23**
	bedrock	19A-AE102RR6-092419-1	N	9/24/2019		**26**
		20A-AE102RR6-090920-1	N	9/9/2020		**25**
		21A-AE102RR6-090721-1	N	9/7/2021		**25**
		22A-AE102RR6-092822-1	N	9/28/2022		**20**
Transect A	AE103D	16A-AE103D-061316-1	N	6/13/2016	35 - 40 ft	0.20 U
		17A-AE103D-100317-1	N	10/3/2017		**0.84**
	overburden	18A-AE103D-092418-1	N	9/24/2018		**0.82**
		18A-AE103D-092418-2	FD	9/24/2018		**0.72**
		19A-AE103D-091919-1	N	9/19/2019		**0.82**
		20A-AE103D-091020-1	N	9/10/2020		**0.78**
		21A-AE103D-091421-1	N	9/14/2021		**0.68**
		22A-AE103D-100322-1	N	10/3/2022		**0.49**
Transect A	AE103R-4	16A-AE103R4-061516-1	N	6/15/2016	98 - 105 ft	**34**
		17A-AE103R4-100217-1	N	10/2/2017		**46**
		18A-AE103R4-092518-1	N	9/25/2018		**45**
	bedrock	19A-AE103R4-091819-1	N	9/18/2019		**43**
		20A-AE103R4-091020-1	N	9/10/2020		**38**
		21A-AE103R4-090921-1	N	9/9/2021		**41**
		22A-AE103R4-092822-1	N	9/28/2022		**31 J**
Transect A	AE103R-5	16A-AE103R5-061516-1	N	6/15/2016	122 - 128 ft	**34**
		17A-AE103R5-100217-1	N	10/2/2017		**47**
		18A-AE103R5-092518-1	N	9/25/2018		**48**
	bedrock	19A-AE103R5-091819-1	N	9/18/2019		**36**
		20A-AE103R5-091020-1	N	9/10/2020		**37**
		21A-AE103R5-090921-1	N	9/9/2021		**38**
		22A-AE103R5-092822-1	N	9/28/2022		**29**
Transect A	AE104D	16A-AE104D-061316-1	N	6/13/2016	35 - 40 ft	0.20 U
		17A-AE104D-101017-1	N	10/10/2017		**0.31**
	overburden	18A-AE104D-092618-1	N	9/26/2018		**0.37**
		19A-AE104D-092019-1	N	9/20/2019		**0.42**
		20A-AE104D-091620-1	N	9/16/2020		**0.34**
		21A-AE104D-092221-1	N	9/22/2021		**0.34**
		22A-AE104D-100322-1	N	10/3/2022		0.20 U
		22A-AE104D-100322-2	FD	10/3/2022		0.20 U
Transect A	AE104R-1	16A-AE104R1-061416-1	N	6/14/2016	48 - 54 ft	**7.2**
		17A-AE104R1-100317-1	N	10/3/2017		**13**
	upper	18A-AE104R1-092618-1	N	9/26/2018		**12**
	bedrock	19A-AE104R1-091819-1	N	9/18/2019		**9.0**
		20A-AE104R1-091120-1	N	9/11/2020		**10**
		21A-AE104R1-090221-1	N	9/2/2021		**14**
		22A-AE104R1-092822-1	N	9/28/2022		**9.3**
Transect A	AE104R-3	16A-AE104R3-061416-1	N	6/14/2016	97 - 102 ft	**17**
		17A-AE104R3-100317-1	N	10/3/2017		**17**
		18A-AE104R3-092618-1	N	9/26/2018		**16**
	bedrock	19A-AE104R3-091819-1	N	9/18/2019		**14**
		20A-AE104R3-091120-1	N	9/11/2020		**11**
		21A-AE104R3-090221-1	N	9/2/2021		**14**
		22A-AE104R3-092822-1	N	9/28/2022		**8.3**
Transect A	AE104R-5	16A-AE104R5-061416-1	N	6/14/2016	156 - 162 ft	**17**
		17A-AE104R5-100317-1	N	10/3/2017		**22**
	bedrock	22A-AE104R5-092822-1	N	9/28/2022		**14**

Table 4-3
Summary of 2016 - 2022 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	**0.3**
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Transect A	AE109D	16A-AE109D-062116-1	N	6/21/2016	18 - 23 ft	0.20 U
		16A-AE109D-062116-2	FD	6/21/2016		0.20 U
	overburden	17A-AE109D-101317-1	N	10/13/2017		**0.31**
		18A-AE109D-092618-1	N	9/26/2018		**0.22**
		19A-AE109D-092019-1	N	9/20/2019		**0.37**
		20A-AE109D-091620-1	N	9/16/2020		**0.42**
		21A-AE109D-090721-1	N	9/7/2021		**0.55**
		22A-AE109D-100622-1	N	10/6/2022		**0.30**
Transect A	AE109R-2	18A-AE109R2-100218-1	N	10/2/2018	66 - 76 ft	**4.0**
		19A-AE109R2-091819-1	N	9/18/2019		**3.6**
		20A-AE109R2-091620-1	N	9/16/2020		**5.6**
	bedrock	21A-AE109R2-090221-1	N	9/2/2021		**6.4**
		21A-AE109R2-090221-2	FD	9/2/2021		**6.8**
		22A-AE109R2-100422-1	N	10/4/2022		**4.6**
Transect A	AE109R-6	16A-AE109R6-061616-1	N	6/16/2016	196 - 201 ft	**0.82**
		17A-AE109R6-101017-1	N	10/10/2017		**1.4**
	bedrock	22A-AE109R6-100422-1	N	10/4/2022		**1.3**
Transect A	AE110R-7	16A-AE110R7-061716-1	N	6/17/2016	224 - 234 ft	**3.8 J**
		16A-AE110R7-061716-2	FD	6/17/2016		**12 J**
	bedrock	17A-AE110R7-101117-1	N	10/11/2017		**0.78**
		22A-AE110R7-100522-1	N	10/5/2022		**2.0**
Transect B	AE105D	16A-AE105D-062216-1	N	6/22/2016	73 - 78 ft	**1.4**
		17A-AE105D-101217-1	N	10/12/2017		**1.3**
	overburden	18A-AE105D-100318-1	N	10/3/2018		**2.0**
		19A-AE105D-091619-1	N	9/16/2019		**1.4**
		20A-AE105D-091720-1	N	9/17/2020		**0.82**
		21A-AE105D-091721-1	N	9/17/2021		**0.67**
		22A-AE105D-092922-1	N	9/29/2022		**0.97**
Transect B	AE105R-2	16A-AE105R2-062016-1	N	6/20/2016	98 - 103 ft	**3.6**
		17A-AE105R2-101217-1	N	10/12/2017		**6.1 J**
		18A-AE105R2-100318-1	N	10/3/2018		**5.8**
	bedrock	19A-AE105R2-091619-1	N	9/16/2019		**5.9**
		20A-AE105R2-091720-1	N	9/17/2020		**5.1**
		21A-AE105R2-091321-1	N	9/13/2021		**5.3**
		22A-AE105R2-092922-1	N	9/29/2022		**4.2**
Transect B	AE105R-4	17A-AE105R4-101217-1	N	10/12/2017	125 - 130 ft	**5.9**
		18A-AE105R4-100318-1	N	10/3/2018		**6.3**
		19A-AE105R4-091619-1	N	9/16/2019		**5.3**
	bedrock	20A-AE105R4-091720-1	N	9/17/2020		**5.3**
		21A-AE105R4-091321-1	N	9/13/2021		**5.5**
		22A-AE105R4-092922-1	N	9/29/2022		**4.1**
Transect B	AE106R-5	17A-AE106R5-101217-1	N	10/12/2017	164 - 169 ft	**0.40**
		18A-AE106R5-100318-1	N	10/3/2018		**0.37**
		19A-AE106R5-091619-1	N	9/16/2019		**0.27**
	bedrock	20A-AE106R5-091720-1	N	9/17/2020		**0.40**
		21A-AE106R5-091321-1	N	9/13/2021		**0.40**
		22A-AE106R5-092922-1	N	9/29/2022		0.20 U
Transect C	STM-8D	16A-STM8D-063016-1	N	6/30/2016	34.7 - 39.7 ft	**0.35**
		17A-STM8D-101117-1	N	10/11/2017		**0.78**
	overburden	18A-STM8D-092818-1	N	9/28/2018		**0.76**
		19A-STM8D-092619-1	N	9/26/2019		**0.44**
		20A-STM8D-092320-1	N	9/23/2020		**0.45**
		21A-STM8D-090821-1	N	9/8/2021		**0.41**
		22A-STM8D-100622-1	N	10/6/2022		**0.29**
Transect C	STM-8R	16A-STM8R-063016-1	N	6/30/2016	46.5 - 51.5 ft	**0.40**
		17A-STM8R-101117-1	N	10/11/2017		**0.82**
		18A-STM8R-092818-1	N	9/28/2018		**0.81**
	bedrock	19A-STM8R-092619-1	N	9/26/2019		0.20 U
		20A-STM8R-092320-1	N	9/23/2020		0.20 U
		21A-STM8R-090821-1	N	9/8/2021		**0.53**
		22A-STM8R-100622-1	N	10/6/2022		**0.64**

Table 4-3
Summary of 2016 - 2022 Groundwater Analytical Results for 1,4-Dioxane

Location Group	Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	1,4-Dioxane via 8270 (ug/l)
					MCP Method 1 GW-1 Standard:	**0.3**
					MCP Method 1 GW-2 Standard:	6000
					MCP Method 1 GW-3 Standard:	50000
					MCP Upper Concentration Limit (UCL):	100000
Transect C	STM-8R1	16A-STM8R1-062816-1	N	6/28/2016	85 - 90 ft	0.20 U
		17A-STM8R1-101717-1	N	10/17/2017		**0.29**
		17A-STM8R1-101717-2	FD	10/17/2017		**0.29**
	bedrock	18A-STM8R1-100218-1	N	10/2/2018		**0.40**
		19A-STM8R1-092619-1	N	9/26/2019		**0.28**
		20A-STM8R1-092320-1	N	9/23/2020		**0.32**
		21A-STM8R1-091621-1	N	9/16/2021		**0.36**
		21A-STM8R1-091621-2	FD	9/16/2021		**0.38**
		22A-STM8R1-100622-1	N	10/6/2022		**0.29**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 4-4
Summary of 2016 - 2022 Groundwater Analytical Results
for Petroleum Hydrocarbons

				Location Group	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL
				Location ID	AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE03	AE04	AE04	AE04	AE04	AE04	AE04
				Sample ID	16A-AE03-062816-1	16A-AE03-062816-2	17A-AE03-100917-1	18A-AE03-092418-1	18A-AE03-092418-2	19A-AE03-091219-1	19A-AE03-091219-2	20A-AE3-092320-1	20A-AE3-092320-2	21A-AE3-091521-1	22A-AE03-093022-1	16A-AE04-061316-1	17A-AE04-100917-1	18A-AE04-092518-1	18A-AE04-092518-2	19A-AE04-091219-1	19A-AE04-091219-2	20A-AE4-092320-1
				Sample Date	6/28/2016	6/28/2016	10/9/2017	9/24/2018	9/24/2018	9/12/2019	9/12/2019	9/23/2020	9/23/2020	9/15/2021	9/30/2022	6/13/2016	10/9/2017	9/25/2018	9/25/2018	9/12/2019	9/12/2019	9/23/2020
				Sample Type	N	FD	N	N	FD	N	FD	N	FD	N	N	N	N	N	FD	N	FD	N
				Depth Interval	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft	3 - 13 ft
Analyte	MCL Method 1	MCL Method 1	MCL Method 1	MCL Upper Concentration																		
EPH (ug/l)																						
2-Methylnaphthalene	10	2000	20000	100000	5.15 UJ	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	**3.3**	**3.2**	**3.5**	**3.2**	**3.5**	**3.0**	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.47 U	0.47 U
Acenaphthene	20	NE	10000	100000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	R	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	**0.12**	0.09 U
Anthracene	60	NE	30	600	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	5.15 U	5.10 U	4.85 UJ	**10.1 J-**	**11.0 J-**	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	5.10 U	4.90 U	4.81 U	4.85 U	0.19 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	5.15 U	5.10 U	4.85 UJ	**9.36 J-**	**11.3 J-**	0.02 U	0.02 U	0.02 U	0.02 U	**0.03 J-**	0.02 U	5.10 U	4.90 U	4.81 U	4.85 U	0.02 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	103 U	102 U	97.1 U	97.1 U	97.1 U	190 U	190 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U	190 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	103 U	102 U	97.1 U	97.1 U	97.1 U	190 U	190 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U	190 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	**105**	**173**	97.1 U	97.1 UJ	97.1 UJ	190 U	190 U	190 U	190 U	190 U	190 U	102 U	98.0 U	96.2 U	97.1 U	190 U	190 U	200 U
Chrysene	**2**	NE	70	700	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	5.10 U	4.90 U	4.81 U	4.85 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.02 U	0.02 U	0.02 U	0.02 U	**0.03**	0.02 U	5.10 U	4.90 U	4.81 U	4.85 U	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.47 U	0.47 U
Fluorene	30	NE	40	400	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	5.15 U	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.10 U	4.90 U	4.81 U	4.85 U	0.09 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	5.15 UJ	5.10 U	4.85 UJ	4.85 UJ	4.85 UJ	**5.1**	**5.0**	**5.8**	**5.4**	**4.3**	**3.5**	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.47 U	0.47 U
Phenanthrene	40	NE	10000	100000	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	5.10 U	4.90 U	4.81 U	4.85 U	0.47 U	0.47 U	0.47 U
Pyrene	60	NE	20	600	5.15 U	5.10 U	4.85 U	4.85 UJ	4.85 UJ	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	5.10 U	4.90 U	4.81 U	4.85 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)																						
Benzene	5	1000	10000	100000	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	75.0 U	75.0 U	75.0 UJ	**83.2 J**	**82.3 J**	100 U	100 U	100 U	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**212 J+**	**230**	**363 J+**	**398**	**379**	**240**	**240**	**280**	**260**	**250**	**200**	**89.6**	**55.3**	**137**	**141**	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**186**	**164**	**332 J-**	**195**	**172**	**340**	**300**	**540**	**630**	**620**	**450**	**61.7**	**45.8**	**56.5**	**52.6**	100 U	100 U	**130**
Ethylbenzene	700	20000	5000	100000	5.00 U	5.00 U	**1.53**	**1.19**	**1.01**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	**1.00**	1.0 U	**1.5**	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	5.00 U	5.00 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	10.0 U	10.0 U	**2.33**	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	**8.62**	**8.94**	**13.7**	**12.8**	**12.6**	**7.9**	**8.3**	**7.2**	**9.4**	**8.9**	**5.8**	5.00 U	1.00 U	**1.72**	1.00 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	5.00 U	5.00 U	**3.98**	1.00 U	1.00 U	**1.4**	**1.3**	**2.1**	**2.1**	**1.6**	**2.1**	5.00 U	**1.10**	1.00 U	1.00 U	1.0 U	**1.7**	1.0 U
Toluene	**1000**	50000	40000	100000	5.00 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	10 U	10 U	**6.31**	2.00 U	2.00 U	**1.4**	**1.3**	**2.1**	**2.1**	**1.6**	**2.1**	10 U	**1.10**	2.00 U	2.00 U	2.0 U	**1.7**	2.0 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 4-4
Summary of 2016 - 2022 Groundwater Analytical Results for Petroleum Hydrocarbons

Analyte	Method 1	Method 1	Method 1	Concentration													
Location Group					EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL
Location ID					AE04	AE04	AE04	GZA-102S	GZA-102S	GZA-102S	GZA-102S	GZA-102S	GZA-102S	GZA-105D	GZA-105D	GZA-105D	GZA-105D
Sample ID					20A-AE4-092320-2	21A-AE04-091521-1	22A-AE04-093022-1	18A-GZA102S-092418-1	19A-GZA102S-091319-1	20A-GZA102S-092320-1	21A-GZA102S-091621-1	22A-GZA102S-100322-1	22A-GZA102S-100322-2	16A-GZA105D-061516-1	17A-GZA-105D-101917-1	18A-GZA105D-092518-1	19A-GZA105D-091819-1	20A-GZA105D-092420-1	21A-GZA105D-091521-1
Sample Date					9/23/2020	9/15/2021	9/30/2022	9/24/2018	9/13/2019	9/23/2020	9/16/2021	10/3/2022	10/3/2022	6/15/2016	10/19/2017	9/25/2018	9/18/2019	9/24/2020	9/15/2021
Sample Type					FD	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
Depth Interval					3 - 13 ft	3 - 13 ft	3 - 13 ft	1.7 - 10.7 ft	1.7 - 10.7 ft	1.7 - 10.7 ft	2.5 - 11.5 ft	2.5 - 11.5 ft	2.5 - 11.5 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft
EPH (ug/l)																			
2-Methylnaphthalene	10	2000	20000	100000	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	0.47 U	0.48 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	0.48 U
Acenaphthene	20	NE	10000	100000	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	0.47 U	0.48 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	0.48 U
Acenaphthylene	30	10000	40	100000	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	0.09 U	0.10 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	R
Anthracene	60	NE	30	600	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	0.09 U	0.10 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	0.10 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.19 U	0.19 U	5.00 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	5.15 U	4.95 U	4.81 U	0.19 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	0.09 U	0.10 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	0.10 U
Benzo(g,h,i)Perylene	50	NE	20	500	0.02 U	0.02 U	0.02 U	5.00 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	5.15 U	4.95 U	4.81 U	0.02 U	0.02 U	**0.02 J-**
Benzo(k)Fluoranthene	1	NE	100	1000	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	0.09 U	0.10 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	0.10 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	200 U	200 U	190 U	100 U	190 U	190 U	200 U	190 U	190 U	103 U	**1060**	96.2 U	200 U	200 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	200 U	200 U	190 U	100 U	190 U	190 U	200 U	190 U	190 U	103 U	99.0 U	96.2 U	200 U	200 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	200 U	200 U	190 U	100 U	190 U	190 U	200 U	190 U	190 U	103 U	99.0 U	96.2 U	200 U	200 U	200 U
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	0.05 U	5.00 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	5.15 U	4.95 U	4.81 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	0.02 U	5.00 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	5.15 U	**86.3**	4.81 U	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	0.47 U	0.48 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	0.48 U
Fluorene	30	NE	40	400	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	0.09 U	0.10 U	5.15 U	4.95 U	4.81 U	0.09 U	0.09 U	0.10 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.09 U	0.09 U	0.09 U	5.00 U	0.09 U	0.09 U	0.09 U	0.09 U	0.10 U	5.15 U	**43.8**	4.81 U	0.09 U	0.09 U	0.10 U
Naphthalene	140	700	20000	100000	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	0.47 U	0.48 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	0.48 U
Phenanthrene	40	NE	10000	100000	0.47 U	0.47 U	0.47 U	5.00 U	0.47 U	0.47 U	0.47 U	0.47 U	0.48 U	5.15 U	4.95 U	4.81 U	0.47 U	0.47 U	0.48 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	0.07 U	5.00 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	5.15 U	4.95 U	4.81 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)																			
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	100 U	100 U	100 U	75.0 U	100 U	100 U	100 U	100 U	100 U	**402 J+**	**785 J+**	**224 J+**	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	100 U	100 U	25.0 U	100 U	100 U	100 U	100 U	100 U	**59.3**	**38.5**	**28.8**	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**130**	100 U	100 U	25.0 U	100 U	100 U	100 U	100 U	100 U	**55.9**	**34.9**	25.0 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	**2.2**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.0 U	5.0 U	5.0 U	1.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.00 U	**1.2**	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	**1.59**	1.00 U	**1.4**	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	2.0 U	2 U	2 U	2.00 U	**1.2**	2.0 U	2 U	2 U	2 U	10 U	**1.59**	2.00 U	**1.4**	2.0 U	2 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 4-4
Summary of 2016 - 2022 Groundwater Analytical Results
for Petroleum Hydrocarbons

Analyte	MCP Method 1	MCP Method 1	MCP Method 1	MCP Upper Concentration	Location Group	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL
					Location ID	GZA-105D	GZA-105D	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	PZ-2S	PZ-2S	PZ-2S	PZ-2S	PZ-2S
					Sample ID	21A-GZA105D-091521-2	22A-GZA105D-100622-1	16A-GZA105S-061516-1	17A-GZA105S-100917-1	17A-GZA105S-100917-2	18A-GZA105S-092518-1	19A-GZA105S-091819-1	20A-GZA105S-092420-1	21A-GZA105S-091521-1	22A-GZA105S-100622-1	18A-PZ2S-092418-1	19A-PZ2S-093019-1	20A-PZ2S-092520-1	21A-PZ2S-092121-1	22A-PZ2S-100322-1
					Sample Date	9/15/2021	10/6/2022	6/15/2016	10/9/2017	10/9/2017	9/25/2018	9/18/2019	9/24/2020	9/15/2021	10/6/2022	9/24/2018	9/30/2019	9/25/2020	9/21/2021	10/3/2022
					Sample Type	FD	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Depth Interval	16 - 26 ft	16 - 26 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	3.55 - 8.55 ft	3.55 - 8.55 ft	3.55 - 8.55 ft	3.5 - 8.5 ft	3.5 - 8.5 ft
EPH (ug/l)																			
2-Methylnaphthalene	10	2000	20000	100000	0.48 U	0.49 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	0.49 U	4.85 UJ	0.49 U	0.49 U	**0.51**	0.47 U
Acenaphthene	20	NE	10000	100000	0.48 U	0.49 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	0.49 U	4.85 UJ	0.49 U	0.49 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	R	0.10 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	R	0.10 U	4.85 UJ	0.10 U	0.10 U	0.09 U	0.09 U
Anthracene	60	NE	30	600	0.09 U	0.09 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.09 U	0.09 U	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.14**	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	0.19 U	0.19 U	5.10 U	4.81 U	4.85 U	4.85 U	0.19 U	0.19 U	0.19 U	0.20 U	**11.0 J-**	0.19 U	0.20 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	0.10 U	0.10 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.19 J**	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	0.02 UJ	0.02 U	5.10 U	4.81 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 UJ	0.02 U	**10.9 J-**	0.02 UJ	**0.06**	**0.17**	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.18**	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	200 U	190 U	102 UJ	96.2 U	97.1 U	97.1 U	200 U	200 U	200 U	190 U	97.1 U	200 U	200 U	200 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	200 U	190 U	102 U	96.2 U	97.1 U	97.1 U	200 U	200 U	200 U	190 U	97.1 U	200 U	200 U	200 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	200 U	190 U	102 U	96.2 U	97.1 U	97.1 U	200 U	200 U	200 U	190 U	97.1 UJ	200 UJ	**690**	**3000**	200 U
Chrysene	**2**	NE	70	700	0.05 U	0.05 U	5.10 U	4.81 U	4.85 U	4.85 U	0.05 U	0.05 U	0.05 U	0.05 U	4.85 UJ	0.05 U	**0.06**	**0.19**	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	0.02 U	0.02 U	5.10 U	4.81 U	4.85 U	4.85 U	0.02 U	0.02 U	0.02 U	0.02 U	4.85 UJ	0.02 UJ	0.02 U	**0.03 J**	0.02 U
Fluoranthene	90	NE	200	2000	0.48 U	0.49 UJ	5.10 U	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	0.49 U	4.85 UJ	0.49 U	0.49 U	0.47 U	0.47 U
Fluorene	30	NE	40	400	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	0.10 U	4.85 UJ	0.10 U	0.10 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	0.10 U	0.10 U	5.10 U	4.81 U	4.85 U	4.85 U	0.09 U	0.09 U	0.10 U	0.10 U	4.85 UJ	0.10 U	0.10 U	**0.20**	0.09 U
Naphthalene	140	700	20000	100000	0.48 U	0.49 U	5.10 UJ	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	0.49 U	4.85 UJ	0.49 U	0.49 U	**1.9**	0.47 U
Phenanthrene	40	NE	10000	100000	0.48 U	0.49 U	5.10 U	4.81 U	4.85 U	4.85 U	0.47 U	0.47 U	0.48 U	0.49 U	4.85 UJ	0.49 U	0.49 U	0.47 U	0.47 U
Pyrene	60	NE	20	600	0.07 U	0.07 U	5.10 U	4.81 U	4.85 U	4.85 U	0.07 U	0.07 U	0.07 U	0.07 U	4.85 UJ	0.07 U	**0.14**	**0.36**	0.07 U
VPH (ug/l)																			
Benzene	5	1000	10000	100000	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U	100 U	100 U	75.0 U	100 U	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	100 U	100 U	**106 J+**	**127**	**124**	**161**	100 U	100 U	100 U	100 U	**159 J-**	**100**	100 U	**120**	**120**
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	100 U	100 U	**77.9**	**127**	**125**	**112**	**150**	**220**	**130**	**210**	**107**	**160**	**220**	**330**	**390**
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	**1.8**	**2.3**	**1.5**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.0 U	5.00 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	10.0 U	2.00 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	5.0 U	5.0 U	5.00 U	**1.08**	**1.18**	1.00 U	5.0 U	5.0 U	5.0 U	5.0 U	**1.10**	5.0 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	5.00 U	**3.00**	**2.88**	1.00 U	1.0 U	**1.3**	1.0 U	**1.6**	**4.40**	**2.0**	**2.1**	**2.3**	**2.9**
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	5.00 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	2 U	2 U	10 U	**3.00**	**2.88**	2.00 U	2.0 U	**1.3**	2 U	**1.6**	**4.40**	**2.0**	**2.1**	**2.3**	**2.9**

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 4-4
Summary of 2016 - 2022 Groundwater Analytical Results
for Petroleum Hydrocarbons

				Location Group	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL
				Location ID	TRC-101	TRC-101	TRC-101	TRC-101	TRC-101	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102
				Sample ID	18A-TRC101-092418-1	19A-TRC101-091919-1	20A-TRC101-092320-1	21A-TRC101-091421-1	22A-TRC101-100322-1	16A-TRC102-062716-1	16A-TRC102-062716-2	17A-TRC102-100217-1	18A-TRC102-092418-1	19A-TRC102-092019-1	20A-TRC102-092320-1	21A-TRC102-090721-1	22A-TRC102-093022-1
				Sample Date	9/24/2018	9/19/2019	9/23/2020	9/14/2021	10/3/2022	6/27/2016	6/27/2016	10/2/2017	9/24/2018	9/20/2019	9/23/2020	9/7/2021	9/30/2022
				Sample Type	N	N	N	N	N	N	FD	N	N	N	N	N	N
				Depth Interval	1.5 - 10.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	1.5 - 10.5 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft
Analyte	Method 1	Method 1	Method 1	Concentration													
EPH (ug/l)																	
2-Methylnaphthalene	10	2000	20000	100000	4.85 UJ	**0.62**	**0.52**	**0.86**	**0.51**	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	0.48 U
Acenaphthene	20	NE	10000	100000	4.85 UJ	0.47 U	0.48 U	0.49 U	0.47 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	0.48 U
Acenaphthylene	30	10000	40	100000	4.85 UJ	0.09 U	0.10 U	R	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	**0.21**	0.09 U	0.09 UJ	0.10 U
Anthracene	60	NE	30	600	4.85 UJ	0.09 U	0.09 U	0.09 U	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	4.85 UJ	0.09 U	**0.10**	0.10 U	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	0.10 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	**11.1 J-**	0.19 U	0.19 U	0.19 U	0.19 U	5.15 U	5.15 U	5.00 U	**9.13 J-**	0.19 U	0.19 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	4.85 UJ	0.09 U	**0.20**	0.10 U	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	0.10 U
Benzo(g,h,i)Perylene	50	NE	20	500	**11.0 J-**	**0.03**	**0.16**	**0.03 J-**	0.02 U	5.15 U	5.15 U	5.00 U	**8.90 J-**	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	4.85 UJ	0.09 U	**0.13**	0.10 U	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 UJ	0.09 U	0.10 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	97.1 U	200 U	200 U	200 U	190 U	103 U	103 U	100 U	98.0 U	200 U	190 U	190 U	190 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	97.1 U	200 U	200 U	200 U	190 U	103 U	103 U	100 U	98.0 U	200 U	190 U	190 U	190 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	97.1 UJ	200 U	**1100**	200 U	190 U	103 U	103 U	100 U	98.0 UJ	200 U	190 U	190 U	190 U
Chrysene	**2**	NE	70	700	4.85 UJ	0.05 U	**0.16**	0.05 U	0.05 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.05 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	4.85 UJ	0.02 U	**0.03**	**0.03**	0.02 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.02 UJ	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	4.85 UJ	0.47 U	0.48 U	0.49 U	0.47 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	0.48 U
Fluorene	30	NE	40	400	4.85 UJ	0.09 U	0.10 U	0.10 U	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	0.10 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	4.85 UJ	0.09 UJ	**0.17**	0.10 U	0.09 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.09 U	0.09 U	0.09 U	0.10 U
Naphthalene	140	700	20000	100000	4.85 UJ	0.47 U	0.48 U	0.49 U	0.47 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	0.48 U
Phenanthrene	40	NE	10000	100000	4.85 UJ	0.47 U	0.48 U	0.49 U	0.47 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.47 U	0.47 U	0.47 U	0.48 U
Pyrene	60	NE	20	600	4.85 UJ	**0.09**	**0.26**	0.07 U	0.07 U	5.15 U	5.15 U	5.00 U	4.90 UJ	0.07 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)																	
Benzene	5	1000	10000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	75.0 U	100 U	100 U	100 U	100 U	75.0 U	75.0 U	75.0 U	75.0 U	100 U	100 U	100 U	100 U
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**272**	**220**	**210**	**240**	**190**	**33.7**	**31.6**	**43.0**	**47.6**	100 U	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**131**	**280**	**420**	**520**	**340**	25.0 U	25.0 U	**41.5**	25.0 U	100 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	**1.15**	1.0 U	1.0 U	**5.8**	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U	**1.1**	**1.5**	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U	10.0 U	10.0 U	2.00 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	**1.59**	5.0 U	5.0 U	5.0 U	5.0 U	5.00 U	5.00 U	1.00 U	1.00 U	5.0 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	**1.4**	**1.3**	**1.2**	5.00 U	5.00 U	**1.18**	1.00 U	**2.4**	**2.7**	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.00 U	5.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	2.00 U	2.0 U	**1.4**	**1.3**	**1.2**	10 U	10 U	**1.18**	2.00 U	**2.4**	**2.7**	2 U	2 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 4-4
Summary of 2016 - 2022 Groundwater Analytical Results for Petroleum Hydrocarbons

				Location Group	EPL	EPL	EPL	EPL	EPL	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm
				Location ID	TRC-103	TRC-103	TRC-103	TRC-103	TRC-103	AE100R-1	AE100R-1	AE100R-1	AE100R-1	AE100R-1
				Sample ID	18A-TRC103-092418-1	19A-TRC103-091919-1	20A-TRC103-092320-1	21A-TRC103-090721-1	22A-TRC103-093022-1	18A-AE100R1-091918-1	19A-AE100R1-092319-1	20A-AE100R1-091020-1	21A-AE100R1-090921-1	22A-AE100R1-100422-1
				Sample Date	9/24/2018	9/19/2019	9/23/2020	9/7/2021	9/30/2022	9/19/2018	9/23/2019	9/10/2020	9/9/2021	10/4/2022
				Sample Type	N	N	N	N	N	N	N	N	N	N
				Depth Interval	1.25 - 11.25 ft	1.25 - 11.25 ft	1.25 - 11.25 ft	1.25 - 11.25 ft	1.25 - 11.25 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft
Analyte	MCP Method 1	MCP Method 1	MCP Method 1	MCP Upper Concentration										
EPH (ug/l)														
2-Methylnaphthalene	10	2000	20000	100000	4.90 U	0.47 U	0.47 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	0.47 U
Acenaphthene	20	NE	10000	100000	4.90 U	0.47 U	0.47 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	0.47 U
Acenaphthylene	30	10000	40	100000	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	0.09 U
Anthracene	60	NE	30	600	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U
Benzo(a)Anthracene	**1**	NE	1000	10000	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	0.09 U
Benzo(a)Pyrene	**0.2**	NE	500	5000	4.90 U	0.19 U	0.19 U	0.19 U	0.19 U	4.90 U	0.20 U	0.19 U	0.19 U	0.19 U
Benzo(b)Fluoranthene	1	NE	400	4000	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	0.09 U
Benzo(g,h,i)Perylene	50	NE	20	500	4.90 U	0.02 U	0.02 U	0.02 U	0.02 U	4.90 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzo(k)Fluoranthene	1	NE	100	1000	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	0.09 U
C11-C22 Aromatic Hydrocarbons	**200**	50000	5000	100000	98.0 U	200 U	200 U	200 U	190 U	98.0 U	190 U	200 U	190 U	200 U
C19-C36 Aliphatic Hydrocarbons	14000	NE	50000	100000	98.0 U	200 U	200 U	200 U	190 U	98.0 U	190 U	200 U	190 U	200 U
C9-C18 Aliphatic Hydrocarbons	**700**	5000	50000	100000	98.0 U	200 U	200 U	200 U	190 U	98.0 UJ	190 UJ	200 U	190 U	200 U
Chrysene	**2**	NE	70	700	4.90 U	0.05 U	0.05 U	0.05 U	0.05 U	4.90 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	**0.5**	NE	**40**	400	4.90 U	0.02 UJ	0.02 U	0.02 U	0.02 U	4.90 U	0.02 U	0.02 U	0.02 U	0.02 U
Fluoranthene	90	NE	200	2000	4.90 U	0.47 U	0.47 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	0.47 U
Fluorene	30	NE	40	400	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	0.09 U
Indeno(1,2,3-cd)Pyrene	**0.5**	NE	100	1000	4.90 U	0.09 U	0.09 U	0.09 U	0.09 U	4.90 U	0.10 U	0.09 U	0.09 U	0.09 U
Naphthalene	140	700	20000	100000	4.90 U	0.47 U	0.47 U	0.47 UJ	0.47 U	4.90 U	**1.7**	**0.76**	0.47 U	0.47 U
Phenanthrene	40	NE	10000	100000	4.90 U	0.47 U	0.47 U	0.47 U	0.47 U	4.90 U	0.49 U	0.47 U	0.47 U	0.47 U
Pyrene	60	NE	20	600	4.90 U	0.07 U	0.07 U	0.07 U	0.07 U	4.90 U	0.07 U	0.07 U	0.07 U	0.07 U
VPH (ug/l)														
Benzene	5	1000	10000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	**300**	**3000**	**50000**	**100000**	75.0 U	100 U	100 U	100 U	100 U	**393 J+**	100 U	100 U	100 U	**700**
C9-C10 Aromatic Hydrocarbons	**200**	4000	50000	100000	**65.7**	100 U	100 U	100 U	100 U	**123**	**100**	100 U	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	700	5000	50000	100000	**36.0**	100 U	100 U	100 U	100 U	25.0 U	100 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	**1.9**	**1.7**	1.0 U	**7.84**	**4.4**	**2.8**	**1.9**	**1.5**
Methyl tert-butyl ether	70	50000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U	2.00 U	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.00 U	5.0 U	5.0 U	5.0 UJ	5.0 U	**1.74**	5.0 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	**1.61**	1.0 U	**2.7**	1.0 U	1.0 U	**2.49**	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**3.23**	**1.3**	**2.4**	1.0 U	1.0 U
Total Xylenes_VPH	NE	NE	NE	NE	**1.61**	2.0 U	**2.7**	2 U	2 U	**2.49**	2.0 U	2.0 U	2 U	2 U

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low
R = rejected
ft = feet
ug/l = micrograms per liter
NE = not established
Detects are bolded
Criteria exceedances are highlighted

Table 4-5
Groundwater Mann Kendall Trend Tests for Chlorinated Petroleum Compounds
Former GE Facility, Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE03	Ethylbenzene	10	7	-38	-38	11	Downward Trend	17	Downward Trend
AE03	Naphthalene	10	10	-37	-37	11	Downward Trend	17	Downward Trend
AE03	Calculated VPH	10	10	-11	-11	11	Downward Trend	17	Not Significant
AE04	Calculated VPH	10	8	-28	-28	11	Downward Trend	17	Downward Trend
AE100R-1	Ethylbenzene	8	7	-16	-16	8	Downward Trend	12	Downward Trend
AE100R-1	Toluene	8	6	-22	-22	8	Downward Trend	12	Downward Trend
AE100R-1	Xylenes (Total)	8	4	-15	-15	8	Downward Trend	12	Downward Trend
AE100R-1	Naphthalene	8	6	-16	-16	8	Downward Trend	12	Downward Trend
AE100R-1	Calculated VPH	5	5	-2	-2	6	Not Significant	8	Not Significant
AE100R-2	Toluene	6	3	-1	-1	7	Not Significant	9	Not Significant
AE105D	Methyl Tert-Butyl Ether	9	6	24	24	10	Upward Trend	14	Upward Trend
AE105R-2	Methyl Tert-Butyl Ether	9	6	3	3	10	Not Significant	14	Not Significant
AE105R-3	Methyl Tert-Butyl Ether	4	3	6	6	4	Upward Trend	6	Upward Trend
AE105R-4	Methyl Tert-Butyl Ether	9	6	4	4	10	Not Significant	14	Not Significant
AE105R-5	Methyl Tert-Butyl Ether	8	5	8	8	8	Upward Trend	12	Not Significant
AE106R-1	Toluene	9	3	-21	-21	10	Downward Trend	14	Downward Trend
AE106R-3	Toluene	9	3	-17	-17	10	Downward Trend	14	Downward Trend
AE108R-1	Toluene	9	7	-29	-29	10	Downward Trend	14	Downward Trend
AE108R-5	Toluene	9	3	-10	-10	10	Downward Trend	14	Not Significant
AE111R-1	Toluene	8	3	-16	-16	8	Downward Trend	12	Downward Trend
AE111R-2	Toluene	5	4	-10	-10	6	Downward Trend	8	Downward Trend
AE111R-6	Toluene	8	3	-12	-12	8	Downward Trend	12	Downward Trend
AE112R-3	Toluene	8	4	-20	-20	8	Downward Trend	12	Downward Trend
AE23R	Toluene	11	9	13	0.9399	0.8416	Upward Trend	1.282	Not Significant
AE29R-6	Toluene	9	4	-20	-20	10	Downward Trend	14	Downward Trend
GZA-101R	Toluene	24	8	-164	-4.081	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	Calculated VPH	7	4	-8	-8	7	Downward Trend	11	Not Significant
GZA-105R	Toluene	33	3	-24	-0.3602	0.8416	Not Significant	1.282	Not Significant
GZA-105S	Calculated VPH	13	10	-27	-1.597	0.8416	Downward Trend	1.282	Downward Trend
MW-4A	Methyl Tert-Butyl Ether	9	7	1	1	10	Not Significant	14	Not Significant
PS-1D	Methyl Tert-Butyl Ether	18	18	-58	-2.164	0.8416	Downward Trend	1.282	Downward Trend
PS-1M	Methyl Tert-Butyl Ether	7	6	-7	-7	7	Downward Trend	11	Not Significant
PS-5D	Methyl Tert-Butyl Ether	13	12	-21	-1.227	0.8416	Downward Trend	1.282	Not Significant
PZ-2S	Calculated VPH	6	6	9	9	7	Upward Trend	9	Upward Trend
STM-8D	Methyl Tert-Butyl Ether	16	12	18	0.7690	0.8416	Not Significant	1.282	Not Significant
STM-8R	Methyl Tert-Butyl Ether	17	8	18	0.7460	0.8416	Not Significant	1.282	Not Significant
TRC-101	Calculated VPH	9	6	21	21	10	Upward Trend	14	Upward Trend
TRC-102	Calculated VPH	13	7	-48	-2.893	0.8416	Downward Trend	1.282	Downward Trend
TRC-103	Calculated VPH	8	3	-2	-2	8	Not Significant	12	Not Significant
TRC-301R-1	Methyl Tert-Butyl Ether	6	6	-10	-10	7	Downward Trend	9	Downward Trend
TRC-301R-2	Methyl Tert-Butyl Ether	9	6	19	19	10	Upward Trend	14	Upward Trend
TRC-301R-3	Methyl Tert-Butyl Ether	6	5	4	4	7	Not Significant	9	Not Significant
TRC-301R-4	Methyl Tert-Butyl Ether	9	9	13	13	10	Upward Trend	14	Not Significant

Notes:
Datasets presented for wells that were included in the sampling program in September 2022.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend is concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward trend
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S. When the normal approximation is used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made
NA = The Mann-Kendall trend test was not performed because there were less than 4 samples
ND = The Mann-Kendall trend test was not performed because there were less than 3 detected concentrations
- Analyte results not available for location.

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
				Location ID	AE23R	AE23R	AE23R	AE23R	AE23R	AE23R	AE23S	AE23S	AE23S	AE23S	AE23S
				Sample ID	16B-AE23R-062716-1	17A-AE23R-101317-1	18A-AE23R-091918-1	19A-AE23R-092319-1	20A-AE23R-091420-1	21A-AE23R-090321-1	22A-AE23R-100522-1	16A-AE23S-062716-1	17A-AE23S-100517-1	21A-AE23S-090321-1	22A-AE23S-100522-1
				Sample Date	6/27/2016	10/13/2017	9/19/2018	9/23/2019	9/14/2020	9/3/2021	10/5/2022	6/27/2016	10/5/2017	9/3/2021	10/5/2022
				Sample Type	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	44.75 - 54.75 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft	10 - 20 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**											
Volatile Organic Compounds (ug/l)															
1,1,1,2-Tetrachloroethane	5	10	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 UJ	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	2000 U	**1520**	5000 U	**1200**	**1000**	**1500**	**1100 J+**	1.0 U	1.00 UJ	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	1000 U	250 U	2500 U	R	500 U	500 U	130 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	2000 U	**965**	5000 U	**800**	**730**	**900**	**890**	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	2000 U	**645**	5000 U	**580**	**640**	**660**	**530**	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	3000 U	500 U	5000 U	500 U	500 U	500 UJ	130 U	1.0 U	1.00 U	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	4000 U	1000 U	10000 UJ	R	500 U	500 U	250 UJ	2.0 U	2.00 UJ	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	1000 U	250 U	2500 U	500 U	500 U	500 U	130 U	0.5 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	2000 U	500 U	5000 U	600 U	600 U	600 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	370 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	10000 U	100000 UJ	40000 U	100000 U	100000 U	20000 U	20.0 U	20.0 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	2000 U	500 U	5000 UJ	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	20000 U	1000 U	10000 U	R	5000 U	5000 U	1000 UJ	10.0 U	2.00 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	240 U	1.0 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	20000 U	1000 U	10000 UJ	R	5000 U	5000 U	1000 UJ	10.0 U	2.00 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 UJ	500 U	1.0 U	1.00 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	250 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	20000 U	1000 U	10000 U	R	5000 U	5000 U	1000 UJ	10.0 U	2.00 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	20000 UJ	5000 U	50000 UJ	R	6300 U	6300 U	6300 UJ	10.0 UJ	10.0 U	25 U	25 UJ
Benzene	5	1000	10000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	1000 U	250 U	2500 U	500 U	500 U	500 U	130 U	0.5 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	2000 U	500 U	5000 UJ	500 UJ	500 U	500 U	130 UJ	1.0 U	1.00 UJ	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	4000 UJ	1000 UJ	10000 UJ	R	500 U	500 U	130 UJ	2.0 U	2.00 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	4000 U	1000 U	10000 U	810 U	810 U	810 U	810 U	2.0 U	2.00 UJ	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	2000 U	500 U	5000 UJ	500 U	500 U	500 U	130 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	4000 UJ	1000 U	10000 U	1000 U	1000 UJ	1000 U	500 U	2.0 U	2.00 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	4000 UJ	1000 UJ	10000 U	500 U	500 U	500 U	190 U	2.0 U	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	**140**	**29.5**	**21.6**	**2.1**	**9.6**
cis-1,3-Dichloropropene	NE	NE	NE	NE	1000 U	250 U	2500 U	500 U	500 U	500 U	130 U	0.5 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 UJ	500 U	1.0 U	1.00 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	1000 U	250 U	2500 UJ	500 U	500 U	500 U	130 U	0.5 U	0.50 UJ	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	4000 UJ	1000 U	10000 U	500 U	500 U	500 U	200 U	2.0 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	2000 UJ	500 U	5000 U	1000 U	1000 UJ	1000 U	500 U	1.0 UJ	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 UJ	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	2000 U	500 U	5000 U	700 U	700 U	700 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	1000 U	250 U	2500 U	500 U	500 U	500 U	130 U	0.5 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	500 U	500 U	500 UJ	450 U	1.0 U	1.00 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	4000 UJ	1000 U	10000 U	500 U	1000 U	5000 U	250 U	2.0 UJ	2.00 UJ	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	4000 U	1000 U	10000 U	1000 U	1000 U	1000 U	500 U	2.0 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	2000 U	500 U	10000 U	500 U	1000 U	1000 UJ	250 U	1.0 U	1.00 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	660 U	660 U	660 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	2000 U	500 U	5000 U	500 U	500 U	500 UJ	130 U	1.0 U	1.00 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	2000 U	500 U	5000 U	690 U	690 U	690 UJ	500 U	1.0 U	1.00 U	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	2000 U	500 U	5000 U	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**51400**	**67300**	**48400**	**100000**	**54000**	**56000 J+**	**39000**	**11.0**	**10.4**	**260 J+**	**94**
Tetrahydrofuran	NE	NE	NE	NE	4000 U	1000 U	10000 U	R	2500 U	2500 U	1300 UJ	2.0 U	2.00 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	**3280**	**4660**	5000 U	**4200**	**3300**	**3600**	**3300**	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	**1.3**	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	1000 U	250 U	2500 U	500 U	500 U	500 U	130 U	0.5 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**125000**	**179000**	**163000**	**240000**	**130000**	**150000**	**140000**	**2.6**	**2.68**	**17**	**16**
Trichlorofluoromethane	NE	NE	NE	NE	2000 U	500 U	5000 UJ	1000 U	1000 U	1000 U	500 U	1.0 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	2000 U	500 U	5000 U	500 U	500 U	500 U	130 U	1.0 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	4000 U	1000 U	10000 U	1000 U	1000 U	1000 U	500 U	2.0 U	2.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R = rejected
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
				Location ID	AE24	AE24	AE24	AE24	AE24	AE24	AE24	AE24	AE24	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1
				Sample ID	16A-AE24-062316-1	17A-AE24-101917-1	17A-AE24-101917-2	18A-AE24-092518-1	19A-AE24-092319-1	20A-AE24-091420-1	21A-AE24-090321-1	22A-AE24-100522-1	22A-AE24-100522-2	16A-AE26R1-062316-1	17A-AE26R1-100417-1	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-1	21A-AE26R1-090121-1	22A-AE26R1-100522-1
				Sample Date	6/23/2016	10/19/2017	10/19/2017	9/25/2018	9/23/2019	9/14/2020	9/3/2021	10/5/2022	10/5/2022	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	10/5/2022
				Sample Type	N	N	FD	N	N	N	N	N	FD	N	N	N	N	N	N	N
				Depth Interval	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	5.00 U	5.00 U	10.0 UJ	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	2.50 U	2.50 U	5.00 U	R	2.5 U	1.0 U	2.0 U	2.0 U	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	2.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	5.00 U	5.00 U	10.0 U	70 U	5.0 U	2.0 U	5.0 U	5.0 U	**15.8**	**25.1**	**29.3**	**22**	**36**	**30**	**26**
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	5.00 UJ	5.00 UJ	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	**5.40 J**	**3.7**	**6.7**	**3.7**	5.0 U
1,1-Dichloropropene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 UJ	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U	1.0 U	1.3 U	1.3 U	5.0 U	10.0 U	5.00 U	2.5 U	2.5 U	1.0 U	1.3 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	5.00 U	5.00 U	10.0 U	70 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	56 U	5.0 U	2.0 UJ	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 UJ	10.0 U	10.0 U	20.0 U	R	2.5 U	1.0 U	2.5 UJ	2.5 UJ	10.0 U	20.0 UJ	10.0 U	R	2.5 UJ	1.0 U	2.5 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	1.0 U	1.3 U	1.3 U	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	1.3 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,2-Dichloroethane	5	5	20000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	3.0 U	1.2 U	3.0 U	3.0 U	5.0 U	10.0 U	5.00 U	3.0 U	3.0 U	1.2 U	3.0 U
1,2-Dichloropropane	5	3	50000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	3.0 U	2.0 U	3.0 U	3.0 U	5.0 U	10.0 U	5.00 U	3.0 U	3.0 U	2.0 U	3.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	60 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	4000 U	100 U	100 U	200 UJ	4000 U	500 U	200 U	200 U	200 U	NS	200 U	100 UJ	200 U	500 U	200 U	200 U
2,2-Dichloropropane	NE	NE	NE	NE	200 UJ	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 UJ	R	5.0 U	5.0 U	2.0 U	5.0 U
2-Butanone	4000	50000	50000	100000	2000 U	10.0 UJ	10.0 UJ	20.0 U	R	25 U	10 U	25 UJ	25 UJ	50.0 U	20.0 U	10.0 U	R	25 U	10 U	25 UJ
2-Chlorotoluene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
2-Hexanone	NE	NE	NE	NE	2000 UJ	10.0 U	10.0 U	20.0 UJ	R	25 U	10 U	25 UJ	25 UJ	50.0 U	20.0 U	10.0 U	25 U	25 U	10 U	25 UJ
2-Phenylbutane	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 UJ	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 UJ	10.0 U	10.0 U	20.0 UJ	R	25 U	10 U	25 UJ	25 UJ	50.0 U	20.0 U	10.0 U	25 U	25 U	10 U	25 UJ
Acetone	6300	50000	50000	100000	2000 UJ	50.0 U	50.0 U	100 U	R	130 U	50 U	130 UJ	130 UJ	50.0 U	100 U	50.0 UJ	R	130 UJ	50 U	130 UJ
Benzene	5	1000	10000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	3.5 U	1.4 U	3.5 U	3.5 U	5.0 U	10.0 U	5.00 U	3.5 U	3.5 U	1.4 U	3.5 U
Bromobenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	62 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Bromochloromethane	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	83 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Bromodichloromethane	3	6	50000	100000	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	1.0 U	2.5 U	2.5 U	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	2.5 U
Bromoform	4	700	50000	100000	200 U	5.00 U	5.00 U	10.0 UJ	50 U	4.0 U	2.0 U	4.0 UJ	4.0 UJ	5.0 U	10.0 UJ	5.00 U	R	4.0 U	2.0 U	4.0 UJ
Bromomethane	10	7	800	8000	400 U	10.0 UJ	10.0 UJ	20.0 U	R	5.0 U	2.0 U	5.0 UJ	5.0 UJ	10.0 U	20.0 U	10.0 UJ	5.0 U	5.0 UJ	2.0 U	5.0 UJ
Carbon Disulfide	NE	NE	NE	NE	400 U	10.0 U	10.0 U	20.0 U	500 U	25 U	10 U	25 U	25 U	10.0 U	20.0 U	10.0 U	25 U	25 U	10 U	25 U
Carbon tetrachloride	5	2	5000	50000	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U	2.0 U	2.0 U	2.0 U	5.0 U	10.0 U	5.00 U	2.5 U	2.5 U	2.0 U	2.0 U
Chlorobenzene	100	200	1000	10000	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Chloroethane	NE	NE	NE	NE	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 UJ	2.0 U	5.0 U	5.0 U	10.0 U	20.0 U	10.0 UJ	5.0 U	5.0 UJ	2.0 U	5.0 U
Chloroform	70	50	20000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
chloromethane	NE	NE	NE	NE	400 UJ	10.0 U	10.0 U	20.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	10.0 U	20.0 U	10.0 U	5.0 U	5.0 U	2.0 U	5.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	**11**	**13**	**22.8**	**152**	**248 J-**	**260**	**230**	**78**	**45**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	2.50 U	2.50 U	5.00 U	50 U	2.5 U	1.0 U	1.3 U	1.3 U	2.5 U	5.00 U	2.50 UJ	2.5 U	2.5 U	1.0 U	1.3 U
Cymene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 UJ	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U
Dibromochloromethane	2	20	50000	100000	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	1.0 U	2.0 UJ	2.0 UJ	2.5 U	5.00 U	2.50 U	2.5 U	2.5 U	1.0 U	2.0 UJ
Dibromomethane	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	10.0 U	20.0 UJ	10.0 U	5.0 U	5.0 U	2.0 U	5.0 U
Diethyl Ether	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 UJ	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 UJ	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Ethylbenzene	700	20000	5000	100000	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 UJ	5.0 U	5.0 U	2.0 U	5.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	2.50 U	2.50 U	5.00 U	50 U	2.5 U	1.0 U	1.3 U	1.3 U	2.5 U	5.00 UJ	2.50 U	2.5 U	2.5 U	1.0 U	1.3 U
Isopropylbenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 UJ	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U
Methyl tert-butyl ether	70	50000	50000	100000	200 UJ	5.00 U	5.00 U	10.0 U	70 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 UJ	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Methylene Chloride	5	2000	50000	100000	400 U	10.0 U	10.0 U	20.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	10.0 U	20.0 U	10.0 UJ	5.0 U	5.0 UJ	2.0 U	5.0 U
mp-xylene	10000	3000	5000	NE	400 U	10.0 U	10.0 U	20.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	10.0 U	20.0 U	10.0 U	5.0 U	5.0 U	2.0 U	5.0 U
Naphthalene	140	700	20000	100000	200 U	5.00 U	5.00 U	20.0 U	100 U	5.0 U	2.0 UJ	5.0 U	5.0 U	5.0 U	10.0 U	10.0 UJ	5.0 U	5.0 U	2.0 UJ	5.0 U
N-Butylbenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
N-Propylbenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Styrene	100	100	6000	60000	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 UJ	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 UJ	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 UJ	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**7660**	**164**	**157**	**733**	**5500**	**680**	**350 J+**	**710**	**650**	**131**	**179 J**	**316 J-**	**270**	**870**	**340 J+**	**410**
Tetrahydrofuran	NE	NE	NE	NE	400 U	10.0 U	10.0 U	20.0 U	R	13 U	5.0 U	13 UJ	13 UJ	10.0 U	20.0 U	10.0 U	13 U	13 U	5.0 U	13 UJ
Toluene	**1000**	50000	40000	100000	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	**20.7**	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	5.00 U	5.00 U	10.0 U	80 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	**12.6**	**19**	**21**	**20**	**9.5**
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	2.50 U	2.50 U	5.00 U	50 U	2.5 U	1.0 U	1.3 UJ	1.3 UJ	2.5 U	5.00 UJ	2.50 UJ	2.5 U	2.5 U	1.0 U	1.3 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	200 U	5.00 U	5.00 U	10.0 U	50 U	5.0 U	2.0 U	5.0 U	5.0 U	**236**	**478**	**719**	**500**	**1400**	**600**	**730**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	5.00 U	5.00 U	10.0 U	100 U	5.0 U	2.0 U	5.0 U	5.0 U	5.0 U	10.0 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U
Vinyl chloride	**2**	**2**	50000	100000	200 U	5.00 U	5.00 U	10.0 U	50 U	2.5 U	2.0 U	2.0 U	2.0 U	5.0 UJ	10.0 U	5.00 UJ	2.5 U	**2.5**	**130**	**75**
Xylenes (Total)	10000	3000	5000	NE	400 U	10 U	10 U	20 U	100 U	5.0 U	2 U	5 U	5 U	10 U	20 U	10 U	5.0 U	5.0 U	2 U	5 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
Location ID					AE26R-4	AE26R-4	AE26R-4	AE26R-4	AE26R-5	AE26R-5	AE26R-5	AE26R-5	AE26R-5	AE26R-5	AE26R-5	AE26S	AE26S	AE26S	AE26S	AE26S
Sample ID					16B-AE26R4-062316-1	17A-AE26R4-100417-1	21A-AE26R4-090121-1	22A-AE26R4-100522-1	16B-AE26R5-062316-1	17A-AE26R5-100417-1	18A-AE26R5-091818-1	19A-AE26R5-092319-1	20A-AE26R5-091420-1	21A-AE26R5-090121-1	22A-AE26R5-100522-1	16A-AE26S-062316-1	17A-AE26S-100517-1	18A-AE26S-092518-1	19A-AE26S-092319-1	20A-AE26S-091420-1	21A-AE26S-090321-1	22A-AE26S-100522-1
Sample Date					6/23/2016	10/4/2017	9/1/2021	10/5/2022	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	10/5/2022	6/23/2016	10/5/2017	9/25/2018	9/23/2019	9/14/2020	9/3/2021	10/5/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					104 - 114 ft	104 - 114 ft	104 - 114 ft	104 - 114 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft	123 - 132 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft	25 - 30 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):																		
Volatile Organic Compounds (ug/l)																						
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	5.0 U	5.00 U	1.0 U	2.0 U	10.0 U	25.0 U	2.50 U	R	10 U	5.0 U	5.0 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**21.5**	**24.9**	**26**	**24**	**43.0**	**50.5**	**42.9**	**38**	**42**	**44**	**39**	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	10.0 U	10.0 U	**6.0**	**5.1**	20.0 U	50.0 U	**12.4 J**	10 U	**14**	**11**	**10**	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	7.0 U	7.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10.0 U	10.0 U	1.0 U	1.3 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 UJ	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 UJ	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	20.0 U	20.0 UJ	1.0 U	2.5 UJ	40.0 U	100 UJ	10.0 U	R	10 UJ	5.0 U	10 UJ	2.0 U	10.0 UJ	2.00 U	R	0.50 UJ	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	5.0 U	5.00 U	1.0 U	1.3 U	10.0 U	25.0 U	2.50 U	10 U	10 U	5.0 U	5.0 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	10.0 U	10.0 U	1.2 U	3.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	10.0 U	10.0 U	2.0 U	3.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	200 U	200 U	200 U	200 U	NS	1000 U	100 U	800 U	2000 U	1000 U	800 U	20.0 U	100 U	20.0 UJ	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	10.0 U	10.0 UJ	2.0 U	5.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	100 U	20.0 U	10 U	25 UJ	200 U	100 U	10.0 U	R	100 U	50 U	40 UJ	10.0 U	10.0 U	2.00 UJ	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	100 U	20.0 U	10 U	25 UJ	200 U	100 U	10.0 U	R	100 U	50 U	40 UJ	10.0 U	10.0 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	10.0 U	10.0 U	2.0 UJ	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 UJ	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	20.0 U	10 U	25 UJ	200 U	100 U	10.0 U	R	100 U	50 U	100 UJ	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	100 U	100 U	50 UJ	130 UJ	200 U	500 U	50.0 UJ	R	500 UJ	250 UJ	500 UJ	10.0 U	50.0 U	10.0 U	R	25 UJ	25 U	25 UJ
Benzene	5	1000	10000	100000	10.0 U	10.0 U	1.4 U	3.5 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	5.0 U	5.00 U	1.0 U	2.5 U	10.0 U	25.0 U	2.50 U	10 U	10 U	5.0 U	5.0 U	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	**0.73**	0.50 U
Bromoform	4	700	50000	100000	10.0 U	10.0 UJ	2.0 U	4.0 UJ	20.0 U	50.0 UJ	5.00 U	10 U	10 U	5.0 U	5.0 UJ	1.0 U	5.00 UJ	1.00 U	R	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	20.0 U	20.0 U	2.0 U	5.0 UJ	40.0 U	100 U	10.0 UJ	R	10 UJ	7.0 U	7.0 UJ	2.0 U	10.0 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	20.0 U	20.0 U	10 U	25 U	40.0 U	100 U	10.0 U	100 U	100 U	50 U	100 U	2.0 U	10.0 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	10.0 U	10.0 U	2.0 U	2.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	20.0 U	20.0 U	2.0 U	5.0 U	40.0 U	100 U	10.0 UJ	20 U	20 UJ	10 U	20 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	20.0 UJ	20.0 U	2.0 U	5.0 U	40.0 U	100 U	10.0 U	20 U	20 U	10 U	20 U	2.0 UJ	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**69.2**	**440**	**430**	**600**	**111**	**310**	**466**	**510**	**390**	**340**	**320**	**117**	**111**	**63.2**	**57**	**34**	**17**	**27**
cis-1,3-Dichloropropene	NE	NE	NE	NE	5.0 U	5.00 U	1.0 U	1.3 U	10.0 U	25.0 U	2.50 U	10 U	10 U	5.0 U	5.0 U	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 UJ	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 UJ	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	5.0 U	5.00 U	1.0 U	2.0 UJ	10.0 U	25.0 U	2.50 U	10 U	10 U	5.0 U	5.0 U	0.5 U	2.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	10 U	10 U	8.3 U	8.3 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20.0 U	20.0 UJ	2.0 U	5.0 U	40.0 U	100 UJ	10.0 U	20 U	20 U	10 U	20 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	10.0 UJ	10.0 UJ	2.0 U	5.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	10 U	20 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 UJ	20 U	20 U	10 U	20 U	**4.1**	5.00 UJ	**2.04**	**2.2**	**1.4**	1.0 U	**1.1**
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	5.0 U	5.00 UJ	1.0 U	1.3 U	10.0 U	25.0 UJ	2.50 U	10 U	10 U	5.0 U	5.0 U	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 UJ	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 UJ	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	10.0 UJ	10.0 UJ	2.0 U	5.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	10 U	20 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	20.0 U	20.0 U	2.0 U	5.0 U	40.0 U	100 U	10.0 UJ	10 U	20 UJ	50 U	10 U	2.0 U	10.0 UJ	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	20.0 U	20.0 U	2.0 U	5.0 U	40.0 U	100 U	10.0 U	20 U	20 U	10 U	20 U	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	10.0 U	10.0 U	2.0 UJ	5.0 U	20.0 UJ	50.0 U	10.0 U	20 U	20 U	10 UJ	20 U	1.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	10.0 UJ	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	10.0 U	10.0 U	2.0 UJ	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 UJ	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	10.0 U	10.0 U	2.0 UJ	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 UJ	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	10.0 U	10.0 UJ	2.0 U	5.0 U	20.0 U	50.0 UJ	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**322**	**188 J**	**440 J+**	**360**	**1130**	**965 J**	**952**	**1000**	**1300 J+**	**1300 J+**	**1700**	**56.5**	**41.8**	**31.1**	**29**	**24 J+**	**22 J+**	**20**
Tetrahydrofuran	NE	NE	NE	NE	20.0 U	20.0 U	5.0 U	13 UJ	40.0 U	100 U	10.0 U	R	50 U	25 U	50 UJ	2.0 U	10.0 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	10.0 U	**19.3**	**68**	**39**	20.0 U	50.0 U	**18.4**	**37**	**30**	**27**	20 U	**4.0**	5.00 U	**2.24**	**2.3**	**1.4**	1.0 U	**1.0**
trans-1,3-Dichloropropene	NE	NE	NE	NE	5.0 UJ	5.00 UJ	1.0 U	1.3 UJ	10.0 U	25.0 UJ	2.50 U	10 U	10 U	5.0 U	5.0 U	0.5 UJ	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**395**	**580**	**530**	**490**	**1260**	**2030**	**1970**	**1900**	**2100**	**1600**	**2000**	**34.2**	**36.0**	**21.4**	**23**	**13**	**7.5**	**11**
Trichlorofluoromethane	NE	NE	NE	NE	10.0 U	10.0 U	2.0 U	5.0 U	20.0 U	50.0 U	5.00 U	20 U	20 U	10 U	20 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	10.0 U	10.0 U	**140**	**140**	20.0 UJ	50.0 U	5.00 UJ	10 U	10 U	**32**	**26**	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	20 U	20 U	2 U	5 U	40 U	100 U	10 U	20 U	20 U	10 U	20 U	2.0 U	10 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
Location ID					AE27R	AE27R	AE27R	AE27R	AE28R-1	AE28R-1	AE28R-1	AE28R-1	AE28R-1	AE28R-1	AE28R-1	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2
Sample ID					16B-AE27R-062316-1	17A-AE27R-100517-1	21A-AE27R-090321-1	22A-AE27R-100522-1	16B-AE28R1-062316-	17A-AE28R1-100417-	18A-AE28R1-091818-	19A-AE28R1-092319-	20A-AE28R1-091420-	21A-AE28R1-090121-	22A-AE28R1-100522-	16B-AE28R2-062316-	17A-AE28R2-100417-	18A-AE28R2-091818-	19A-AE28R2-092319-	20A-AE28R2-091420-	21A-AE28R2-090121-	22A-AE28R2-100522-
Sample Date					6/23/2016	10/5/2017	9/3/2021	10/5/2022	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	10/5/2022	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	10/5/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					34 - 46 ft	50 - 60 ft	50.5 - 60.5 ft	50.5 - 60.5 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft	45 - 51 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																		
Volatile Organic Compounds (ug/l)																						
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10.0 U	5.00 UJ	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	10.0 U	5.00 UJ	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	5.0 U	2.50 U	1.0 U	1.0 U	25.0 U	100 U	250 U	R	50 U	5.0 U	25 U	250 U	100 U	250 U	R	50 U	50 U	25 U
1,1,2-Trichloroethane	**5**	900	50000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
1,1-Dichloroethane	**70**	2000	20000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	**100**	**98**	**74**	**160**	500 U	200 U	500 U	**160**	**140**	**160**	**190**
1,1-Dichloroethene	**7**	**80**	30000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	**25**	**65**	500 U	200 U	500 UJ	**50**	50 U	**56**	**65**
1,1-Dichloropropene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	7.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10.0 U	5.00 U	1.0 U	0.50 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	10.0 UJ	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	70 U	70 U	10 U	70 U	500 U	200 U	500 U	70 U	70 U	70 U	70 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 UJ	2.0 U	50.0 U	200 U	500 U	56 U	56 U	10 UJ	56 U	500 U	200 U	500 U	56 U	56 U	56 UJ	56 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	20.0 U	10.0 UJ	1.0 U	1.0 UJ	100 U	400 UJ	1000 U	R	50 U	5.0 U	50 U	1000 U	400 UJ	1000 U	R	50 U	50 U	50 U
1,2-Dibromoethane	0.02	2	50000	100000	5.0 U	2.50 U	1.0 U	0.50 U	25.0 U	100 U	250 U	50 U	50 U	5.0 U	25 U	250 U	100 U	250 U	50 U	50 U	50 U	25 U
1,2-Dichlorobenzene	600	8000	2000	80000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
1,2-Dichloroethane	5	5	20000	100000	10.0 U	5.00 U	1.2 U	1.2 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
1,2-Dichloropropane	5	3	50000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	60 U	60 U	10 U	60 U	500 U	200 U	500 U	60 U	60 U	60 U	60 U
1,3-Dichlorobenzene	100	6000	50000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	10 U	100 U	500 U	200 U	500 U	50 U	50 U	100 U	100 U
1,3-Dichloropropane	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
1,4-Dichlorobenzene	5	60	8000	80000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
1,4-Dioxane	**0.3**	6000	50000	100000	200 U	100 UJ	200 U	80 U	1000 U	4000 U	10000 U	4000 U	10000 U	1000 U	4000 U	NS	4000 U	10000 U	4000 U	10000 U	10000 U	4000 U
2,2-Dichloropropane	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 UJ	500 UJ	100 U	100 U	10 U	100 U	500 U	200 UJ	500 U	100 U	100 U	100 U	100 U
2-Butanone	4000	50000	50000	100000	100 U	10.0 UJ	10 U	10 UJ	500 U	400 U	1000 U	R	500 U	50 U	200 U	5000 U	400 U	1000 U	R	500 U	500 U	200 U
2-Chlorotoluene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
2-Hexanone	NE	NE	NE	NE	100 U	10.0 U	10 U	10 UJ	500 U	400 U	1000 U	R	500 U	50 U	200 U	5000 U	400 U	1000 U	R	500 U	500 U	200 U
2-Phenylbutane	NE	NE	NE	NE	10.0 U	5.00 U	2.0 UJ	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 UJ	100 U	500 U	200 U	500 U	100 U	100 U	100 UJ	100 U
4-Chlorotoluene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	10.0 U	10 U	10 UJ	500 U	400 U	1000 U	R	500 U	50 U	350 U	5000 U	400 U	1000 U	R	500 U	500 U	350 U
Acetone	6300	50000	50000	100000	100 U	**1040**	50 U	50 UJ	500 U	2000 U	5000 U	R	2500 U	250 UJ	2500 U	5000 U	2000 U	5000 UJ	R	2500 U	2500 U	2500 U
Benzene	5	1000	10000	100000	10.0 U	5.00 U	1.4 U	1.4 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
Bromobenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	62 U	62 U	10 U	62 U	500 U	200 U	500 U	62 U	62 U	62 U	62 U
Bromochloromethane	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	83 U	83 U	10 U	83 U	500 U	200 U	500 U	83 U	83 U	83 U	83 U
Bromodichloromethane	3	6	50000	100000	5.0 U	2.50 U	1.0 U	1.0 U	25.0 U	100 U	250 U	50 U	50 U	5.0 U	25 U	250 U	100 U	250 U	50 U	50 U	50 U	25 U
Bromoform	4	700	50000	100000	10.0 U	5.00 UJ	2.0 U	2.0 UJ	50.0 U	200 UJ	500 U	50 U	50 U	5.0 U	25 U	500 U	200 UJ	500 U	50 U	50 U	50 U	25 U
Bromomethane	10	7	800	8000	20.0 U	10.0 U	2.0 U	2.0 UJ	100 U	400 U	1000 U	R	50 U	7.0 U	25 UJ	1000 U	400 U	1000 UJ	R	50 U	50 U	25 UJ
Carbon Disulfide	NE	NE	NE	NE	20.0 U	10.0 UJ	10 U	10 U	100 U	400 U	1000 UJ	500 U	500 U	50 U	500 U	1000 U	400 U	1000 U	500 U	500 U	500 U	500 U
Carbon tetrachloride	5	2	5000	50000	10.0 U	5.00 UJ	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	5.0 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
Chlorobenzene	100	200	1000	10000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
Chloroethane	NE	NE	NE	NE	20.0 U	10.0 U	2.0 U	2.0 U	100 U	400 U	1000 U	100 U	100 UJ	10 U	100 U	1000 U	400 U	1000 UJ	100 U	100 UJ	100 U	100 U
Chloroform	70	50	20000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	10 U	50 U	500 U	200 U	500 U	50 U	50 U	50 U	50 U
chloromethane	NE	NE	NE	NE	20.0 UJ	10.0 U	2.0 U	2.0 U	100 UJ	400 U	1000 U	100 U	100 U	10 U	100 U	1000 UJ	400 U	1000 U	100 U	100 U	100 U	100 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	10.0 U	**393**	**500**	**120**	50.0 U	**738**	**1280**	**1900**	**2200**	**2100**	**4900**	500 U	**298**	500 U	**840**	**1100**	**1600**	**1700**
cis-1,3-Dichloropropene	NE	NE	NE	NE	5.0 U	2.50 U	1.0 U	0.50 U	25.0 U	100 U	250 U	50 U	50 U	5.0 U	25 U	250 U	100 U	250 U	50 U	50 U	50 U	25 U
Cymene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 UJ	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 UJ	100 U	500 U	200 U	500 U	100 U	100 U	100 UJ	100 U
Dibromochloromethane	2	20	50000	100000	5.0 U	2.50 UJ	1.0 U	1.0 UJ	25.0 U	100 U	250 U	50 U	50 U	5.0 U	25 U	250 U	100 U	250 U	50 U	50 U	50 U	25 U
Dibromomethane	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	50 U	50 U	8.3 U	25 U	500 U	200 U	500 U	50 U	50 U	50 U	25 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20.0 U	10.0 U	2.0 U	2.0 U	100 U	400 UJ	1000 U	100 U	100 U	10 U	100 U	1000 U	400 UJ	1000 U	100 U	100 U	100 U	100 U
Diethyl Ether	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
Diisopropyl Ether	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	10.0 UJ	5.00 UJ	2.0 U	2.0 U	50.0 UJ	200 UJ	500 U	100 U	100 U	10 U	100 U	500 UJ	200 UJ	500 U	100 U	100 U	100 U	100 U
Ethylbenzene	700	20000	5000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	10.0 U	5.00 UJ	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 UJ	100 U	100 U	100 U	100 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	5.0 U	2.50 U	1.0 U	0.60 U	25.0 U	100 UJ	250 U	50 U	50 U	5.0 U	25 U	250 U	100 UJ	250 U	50 U	50 U	50 U	25 U
Isopropylbenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 UJ	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 UJ	100 U	500 U	200 U	500 U	100 U	100 U	100 UJ	100 U
Methyl tert-butyl ether	70	50000	50000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 UJ	200 UJ	500 U	70 U	70 U	10 U	70 U	500 UJ	200 UJ	500 U	70 U	70 U	70 U	70 U
Methylene Chloride	5	2000	50000	100000	20.0 U	10.0 UJ	2.0 U	2.0 U	100 U	400 U	1000 U	50 U	100 U	50 U	50 U	1000 U	400 U	1000 UJ	50 U	100 U	500 U	50 U
mp-xylene	10000	3000	5000	NE	20.0 U	10.0 U	2.0 U	2.0 U	100 U	400 U	1000 U	100 U	100 U	10 U	100 U	1000 U	400 U	1000 U	100 U	100 U	100 U	100 U
Naphthalene	140	700	20000	100000	10.0 UJ	5.00 U	2.0 UJ	2.0 U	50.0 U	200 U	1000 U	100 U	100 U	10 UJ	100 U	500 U	200 U	1000 U	100 U	100 U	100 UJ	100 U
N-Butylbenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
N-Propylbenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
o-Xylene	10000	3000	5000	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 UJ	200 U	500 U	100 U	100 U	10 U	100 U	500 UJ	200 U	500 U	100 U	100 U	100 U	100 U
Styrene	100	100	6000	60000	10.0 U	5.00 U	2.0 UJ	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 UJ	100 U
Tert-Butylbenzene	NE	NE	NE	NE	10.0 U	5.00 U	2.0 UJ	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 UJ	100 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 UJ	500 U	100 U	100 U	10 U	100 U	500 U	200 UJ	500 U	100 U	100 U	100 U	100 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**364**	**71.0**	2.0 UJ	**130**	**1570**	**3600 J**	**5500**	**3500**	**4300 J+**	**3400 J+**	**8600**	**19700**	**20200 J**	**18300**	**17000**	**15000 J+**	**20000 J+**	**26000**
Tetrahydrofuran	NE	NE	NE	NE	20.0 U	10.0 U	5.0 U	5.0 UJ	100 U	400 U	1000 U	R	250 U	25 U	250 U	1000 U	400 U	1000 U	R	250 U	250 U	250 U
Toluene	**1000**	50000	40000	100000	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	10.0 U	5.00 U	**3.2**	2.0 U	50.0 U	200 U	500 U	**250**	**310**	**290**	**760**	500 U	200 U	500 U	**140**	**260**	**250**	**260**
trans-1,3-Dichloropropene	NE	NE	NE	NE	5.0 U	2.50 U	1.0 U	0.50 UJ	25.0 UJ	100 UJ	250 U	50 U	50 U	5.0 U	25 U	250 UJ	100 UJ	250 U	50 U	50 U	50 U	25 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**635**	**101**	**2.8**	**240**	**1550**	**9930**	**13900**	**10000**	**11000**	**6600**	**18000**	**15700**	**18000**	**19600**	**19000**	**16000**	**19000**	**26000**
Trichlorofluoromethane	NE	NE	NE	NE	10.0 U	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	100 U	100 U	10 U	100 U	500 U	200 U	500 U	100 U	100 U	100 U	100 U
Vinyl chloride	**2**	**2**	50000	100000	10.0 UJ	5.00 U	2.0 U	2.0 U	50.0 U	200 U	500 U	**380**	**540**	**710**	**930**	500 U	200 U	500 UJ	**99**	**370**	**180**	**260**
Xylenes (Total)	10000	3000	5000	NE	20 U	10 U	2 U	2 U	100 U	400 U	1000 U	100 U	100 U	10 U	100 U	1000 U	400 U	1000 U	100 U	100 U	100 U	100 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
Location ID					AE28R-3	AE28R-3	AE28R-3	AE28R-3	AE28R-3	AE28R-3	AE28R-3	AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE28R-4	AE28R-4
Sample ID					16B-AE28R3-062316-1	17A-AE28R3-100417-1	18A-AE28R3-091818-1	19A-AE28R3-092319-1	20A-AE28R3-091420-2	21A-AE28R3-090121-2	22A-AE28R3-100522-1	16B-AE28R4-062316-1	17A-AE28R4-100517-1	18A-AE28R4-091818-1	19A-AE28R4-092319-1	20A-AE28R4-091420-2	21A-AE28R4-090121-2	22A-AE28R4-100522-1
Sample Date					6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	10/5/2022	6/23/2016	10/5/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	10/5/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					98 - 108 ft	98 - 108 ft	98 - 108 ft	98 - 108 ft	98 - 108 ft	98 - 108 ft	81 - 88 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft	132 - 142 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 UJ	1.00 U	50 U	50 U	10 U	13 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 UJ	**3.94**	100 U	100 U	20 U	50 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	100 U	50.0 U	R	50 U	10 U	13 U	100 U	50.0 U	0.50 U	R	50 U	10 U	13 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	200 U	100 U	70 U	**140**	**74**	**58**	200 U	**100**	**77.1**	**72**	**78**	**87**	**84**
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	200 U	100 U	50 U	50 U	**20**	**16 J+**	200 U	100 U	**31.0**	50 U	50 U	**26**	**24**
1,1-Dichloropropene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	200 U	100 U	70 U	70 U	20 U	50 U	200 U	100 U	1.00 U	70 U	70 U	20 U	50 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	56 U	56 U	20 UJ	50 U	200 U	100 U	**3.53**	56 U	56 U	20 UJ	50 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 U	400 UJ	200 U	R	50 UJ	10 U	25 UJ	400 U	200 UJ	2.00 U	R	50 U	10 U	25 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	100 U	50.0 U	50 U	50 U	10 U	13 U	100 U	50.0 U	0.50 U	50 U	50 U	10 U	13 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
1,2-Dichloroethane	5	5	20000	100000	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
1,2-Dichloropropane	5	3	50000	100000	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	60 U	60 U	20 U	50 U	200 U	100 U	**1.94**	60 U	60 U	20 U	50 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	200 U	100 U	50 U	50 U	20 U	50 U	200 U	100 U	1.00 U	50 U	50 U	20 U	50 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
1,4-Dioxane	**0.3**	6000	50000	100000	4000 U	4000 U	2000 U	4000 U	10000 U	2000 U	2000 U	4000 U	2000 U	20.0 U	4000 U	10000 U	2000 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	200 U	200 UJ	100 UJ	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
2-Butanone	4000	50000	50000	100000	2000 U	400 U	200 U	R	500 U	100 U	100 UJ	2000 U	200 U	2.00 U	R	500 U	100 U	100 UJ
2-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
2-Hexanone	NE	NE	NE	NE	2000 U	400 U	200 U	R	500 U	100 U	100 UJ	2000 U	200 U	2.00 U	R	500 U	100 U	100 UJ
2-Phenylbutane	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 UJ	50 U	200 U	100 U	1.00 U	100 U	100 U	20 UJ	50 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 U	400 U	200 U	R	500 U	100 U	250 UJ	2000 U	200 U	2.00 U	R	500 U	100 U	250 UJ
Acetone	6300	50000	50000	100000	2000 U	2000 U	1000 U	R	2500 UJ	500 U	1300 UJ	2000 U	1000 U	10.0 U	R	2500 U	500 U	1300 UJ
Benzene	5	1000	10000	100000	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
Bromobenzene	NE	NE	NE	NE	200 U	200 U	100 U	62 U	62 U	20 U	50 U	200 U	100 U	1.00 U	62 U	62 U	20 U	50 U
Bromochloromethane	NE	NE	NE	NE	200 U	200 U	100 U	83 U	83 U	20 U	50 U	200 U	100 U	1.00 U	83 U	83 U	20 U	50 U
Bromodichloromethane	3	6	50000	100000	100 U	100 U	50.0 U	50 U	50 U	10 U	13 U	100 U	50.0 U	0.50 U	50 U	50 U	10 U	13 U
Bromoform	4	700	50000	100000	200 U	200 UJ	100 U	50 UJ	50 U	10 U	13 UJ	200 U	100 UJ	1.00 U	50 UJ	50 U	10 U	13 UJ
Bromomethane	10	7	800	8000	400 U	400 U	200 U	R	50 UJ	10 U	13 U	400 U	200 U	2.00 U	R	50 U	10 U	13 U
Carbon Disulfide	NE	NE	NE	NE	400 U	400 U	200 UJ	500 U	500 U	100 U	250 U	400 U	200 UJ	2.00 U	500 U	500 U	100 U	250 U
Carbon tetrachloride	5	2	5000	50000	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 UJ	1.00 U	50 U	50 U	10 U	13 U
Chlorobenzene	100	200	1000	10000	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	**1.41**	100 U	100 U	20 U	50 U
Chloroethane	NE	NE	NE	NE	400 U	400 U	200 U	100 U	100 UJ	20 U	50 U	400 U	200 U	2.00 U	100 U	100 UJ	20 U	50 U
Chloroform	70	50	20000	100000	200 U	200 U	100 U	50 U	50 U	20 U	50 U	200 U	100 U	1.00 U	50 U	50 U	20 U	50 U
chloromethane	NE	NE	NE	NE	400 UJ	400 U	200 U	100 U	100 U	20 U	50 U	400 UJ	200 U	2.00 U	100 U	100 U	20 U	50 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	200 U	**294**	**462**	**730**	**1500**	**830**	**440**	200 U	**311**	**484**	**540**	**640**	**690**	**790**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 U	100 U	50.0 U	50 U	50 U	10 U	13 U	100 U	50.0 U	0.50 U	50 U	50 U	10 U	13 U
Cymene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 UJ	50 U	200 U	100 U	1.00 U	100 U	100 U	20 UJ	50 U
Dibromochloromethane	2	20	50000	100000	100 U	100 U	50.0 U	50 U	50 U	10 U	13 UJ	100 U	50.0 UJ	0.50 U	50 U	50 U	10 U	13 UJ
Dibromomethane	NE	NE	NE	NE	200 U	200 U	100 U	50 U	50 U	10 U	13 U	200 U	100 U	1.00 U	50 U	50 U	10 U	13 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	400 UJ	200 U	100 U	100 U	20 U	50 U	400 U	200 U	2.00 UJ	100 U	100 U	20 U	50 U
Diethyl Ether	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 UJ	20 U	50 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 UJ	20 U	50 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 UJ	200 UJ	100 U	100 U	100 U	20 U	50 U	200 UJ	100 U	1.00 U	100 U	100 U	20 U	50 U
Ethylbenzene	700	20000	5000	100000	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	**1.11**	100 U	100 U	20 U	50 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 UJ	1.00 U	100 U	100 U	20 U	50 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	100 UJ	50.0 U	50 U	50 U	10 U	13 U	100 U	50.0 U	0.50 U	50 U	50 U	10 U	13 U
Isopropylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 UJ	50 U	200 U	100 U	1.00 U	100 U	100 U	20 UJ	50 U
Methyl tert-butyl ether	70	50000	50000	100000	200 UJ	200 UJ	100 U	70 U	70 U	20 U	50 U	200 UJ	100 U	1.00 U	70 U	70 U	20 U	50 U
Methylene Chloride	5	2000	50000	100000	400 U	400 U	200 U	50 U	100 UJ	100 U	25 U	400 U	200 UJ	2.00 U	50 U	100 U	100 U	25 U
mp-xylene	10000	3000	5000	NE	400 U	400 U	200 U	100 U	100 U	20 U	50 U	400 U	200 U	2.00 U	100 U	100 U	20 U	50 U
Naphthalene	140	700	20000	100000	200 U	200 U	100 U	100 U	100 U	20 UJ	50 U	200 U	100 U	2.00 U	100 U	100 U	20 UJ	50 U
N-Butylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
N-Propylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
o-Xylene	10000	3000	5000	NE	200 UJ	200 U	100 U	100 U	100 U	20 U	50 U	200 UJ	100 U	1.00 U	100 U	100 U	20 U	50 U
Styrene	100	100	6000	60000	200 U	200 U	100 U	100 U	100 U	20 UJ	50 U	200 U	100 U	1.00 U	100 U	100 U	20 UJ	50 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 UJ	50 U	200 U	100 U	1.00 U	100 U	100 U	20 UJ	50 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	200 UJ	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 U	100 U	100 U	20 U	50 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**7210**	**5400 J**	**4200**	**3600**	**6900 J+**	**4100 J+**	**4400**	**6960**	**6910**	**5110 J-**	**7000**	**5900**	**6200 J+**	**6200**
Tetrahydrofuran	NE	NE	NE	NE	400 U	400 U	200 U	R	250 U	50 U	130 UJ	400 U	200 U	2.00 U	R	250 U	50 U	130 UJ
Toluene	**1000**	50000	40000	100000	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	**5.45**	100 U	100 U	20 U	50 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	200 U	100 U	**120**	**280**	**140**	**110**	200 U	100 U	**61.3**	80 U	**120**	**100**	**130**
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	100 UJ	50.0 U	50 U	50 U	10 U	13 UJ	100 UJ	50.0 U	0.50 U	50 U	50 U	10 U	13 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**3690**	**5190**	**6220**	**5100**	**9000**	**3800**	**4100**	**3730**	**6060**	**5550 J-**	**7300**	**6500**	**6700**	**8700**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	200 U	100 U	100 U	100 U	20 U	50 U	200 U	100 U	1.00 UJ	100 U	100 U	20 U	50 U
Vinyl chloride	**2**	**2**	50000	100000	200 U	200 U	100 U	50 U	**290**	**340**	**550 J+**	200 U	100 U	1.00 UJ	50 U	**76**	**130**	**360**
Xylenes (Total)	10000	3000	5000	NE	400 U	400 U	200 U	100 U	100 U	20 U	50 U	400 U	200 U	2.0 U	100 U	100 U	20 U	50 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
Location ID					AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-1	AE29R-3	AE29R-3	AE29R-3	AE29R-3	AE29R-3	AE29R-3	AE29R-3
Sample ID					16B-AE29R1-062816-1	17A-AE29R1-101717-1	18A-AE29R1-091818-1	19A-AE29R1-092419-1	20A-AE29R1-092220-1	21A-AE29R1-091021-1	22A-AE29R1-100422-1	16B-AE29R3-062816-1	17A-AE29R3-101717-1	18A-AE29R3-091818-1	19A-AE29R3-092419-1	20A-AE29R3-092220-1	21A-AE29R3-091021-1	22AAE29R3-100422-1
Sample Date					6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	9/10/2021	10/4/2022	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	9/10/2021	10/4/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					37 - 44 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	37 - 44 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**3.6**	**10.8**	**3.81**	**6.3**	**5.2**	**2.3**	**5.0**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	**1.2**	**3.53 J**	1.00 U	**1.7**	**1.2**	1.0 UJ	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	0.50 U	0.50 U	0.50 U	2.0 U	2.00 U	2.00 U	0.50 U	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	100 U	100 U	100 U	40 U	20.0 U	**23.3**	20.0 U	10 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	**2.89**	5.0 UJ	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	25 U	25 U	25 UJ	25 U	10.0 U	10.0 U	10.0 U	25 U	25 U	25 UJ	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**5.7**	**47.5**	**21.2**	**36**	**31**	**16**	**13**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	**2.0 J**	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	**3.6 J+**	1.0 UJ	1.0 U	1.0 U	1.00 U	**5.38**	1.0 U	R	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 UJ	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.12**	1.00 U	1.0 U	**1.0**	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**4.2**	**2.75**	1.00 U	**2.4**	**4.0**	**1.4**	**1.7**	**16.7**	**47.9**	**17.1**	**21**	**8.8**	**3.4**	**12**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	**19**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
				Location ID	AE29R-5	AE29R-5	AE29R-5	AE29R-5	AE29R-5	AE29R-5	AE29R-5	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE2R	AE2R	AE2R
				Sample ID	16B-AE29R5-062816-1	17A-AE29R5-101717-1	18A-AE29R5-091818-1	19A-AE29R5-092419-1	20A-AE29R5-092220-1	21A-AE29R5-091021-1	22A-AE29R5-100422-1	16B-AE29R6-062816-1	17A-AE29R6-101717-1	18A-AE29R6-091818-1	19A-AE29R6-092419-1	20A-AE29R6-092220-1	21A-AE29R6-091421-1	22A-AE29R6-100422-1	16A-AE02R-062816-1	17A-AE2R-100517-1	21A-AE2R-091021-1	22A-AE2R-100322-1
				Sample Date	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	9/10/2021	10/4/2022	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	9/14/2021	10/4/2022	6/28/2016	10/5/2017	9/10/2021	10/3/2022
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	113 - 119 ft	113 - 119 ft	113 - 119 ft	113 - 119 ft	113 - 119 ft	113 - 119 ft	113 - 119 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	22 - 36 ft	22 - 36 ft	22 - 36 ft	22 - 36 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 UJ	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.5 UJ	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	1.0 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**10.1**	**37.2**	**33.1**	**34**	**36**	**29**	**45**	**8.3**	**89.0 J**	**60.6**	**56**	**47**	**50**	**59**	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	**2.4**	**8.45 J**	**6.06**	**7.5**	**7.5**	**7.0**	**9.1**	**2.0**	**19.6**	**13.3 J**	**13**	**12**	**14**	**15**	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	5.00 U	5.0 U	1.0 U	1.0 U	0.50 U	1.0 U	1.00 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	10.0 U	2.00 U	0.50 U	0.50 U	0.50 UJ	1.0 U	2.0 U	2.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	1.0 U	2.0 U	2.00 UJ	0.50 UJ	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.50 U	0.5 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	5.00 U	1.00 U	0.60 U	0.60 U	0.60 U	1.2 U	1.0 U	1.00 UJ	5.00 U	3.0 U	1.2 U	1.2 U	1.2 U	1.0 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	3.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	100 U	20.0 U	10 U	100 U	100 U	80 U	NS	**50.8**	100 U	500 U	200 U	200 U	80 U	20.0 U	20.0 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	10.0 U	2.00 U	5.0 UJ	5.0 U	5.0 U	10 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10 U	10 U	10.0 U	2.00 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	10 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10 U	10 U	10.0 U	2.00 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	10 U	10.0 U	2.00 U	10.0 U	25 U	10 U	10 U	10 U	10.0 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	50.0 U	10.0 U	25 U	25 U	25 UJ	50 U	10.0 U	10.0 U	50.0 UJ	130 U	50 U	50 UJ	50 U	10.0 UJ	10.0 U	25 UJ	25 U
Benzene	5	1000	10000	100000	1.0 U	5.00 U	1.00 U	0.70 U	0.70 U	0.70 U	1.4 U	1.0 U	1.00 U	5.00 U	3.5 U	1.4 U	1.4 U	1.4 U	1.0 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	1.0 U	0.5 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	4.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.0 U	2.00 UJ	10.0 UJ	5.0 U	2.0 U	2.0 U	2.0 UJ	2.0 UJ	2.00 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	10 U	2.0 U	2.00 U	10.0 U	25 U	10 U	10 U	10 U	2.0 U	2.00 UJ	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	5.00 U	2.5 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	10.0 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	2.0 U	2.0 U	2.00 U	10.0 UJ	5.0 U	2.0 U	2.0 UJ	2.0 U	2.0 UJ	2.00 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 UJ	10.0 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**20.7**	**212**	**224**	**190**	**220**	**140**	**160**	**27.8**	**325**	**349**	**320**	**320**	**300**	**370**	1.0 U	1.00 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.50 U	0.5 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	1.0 U	0.5 U	0.50 UJ	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	10.0 U	2.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	10.0 U	5.0 U	2.0 UJ	2.0 U	2.0 U	2.0 UJ	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 UJ	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	5.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 UJ	5.0 U	2.0 UJ	2.0 U	2.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.60 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.60 U	0.5 U	0.50 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	10.0 U	2.00 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	10.0 UJ	5.0 U	2.0 U	2.0 U	2.0 U	2.0 UJ	2.00 UJ	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	10.0 U	5.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 UJ	1.00 U	10.0 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	5.00 U	**3.17**	1.0 U	R	1.0 UJ	2.0 U	1.0 U	1.00 U	5.00 U	5.0 U	R	2.0 UJ	2.0 U	**6.5**	**9.76**	**4.4 J+**	**6.0**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	10.0 U	2.00 U	2.5 UJ	2.5 U	2.5 U	5.0 U	2.0 U	2.00 U	10.0 U	13 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	**7.8**	**1.80**	5.00 U	5.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	**5.95**	**5.25**	**5.8**	**6.5**	**5.2**	**6.1**	**1.5**	**23.8 J**	**17.2**	**19**	**19**	**20**	**25**	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.50 U	0.5 U	0.50 U	2.50 U	2.5 U	1.0 U	1.0 U	0.50 U	0.5 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**20.5**	**22.2**	**13.3**	**41**	**33**	**52**	**78**	**16.0**	**146**	**90.9**	**85**	**120**	**70**	**70**	1.0 U	**1.25**	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 UJ	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	2.0 U	1.0 UJ	1.00 UJ	5.00 U	5.0 U	2.0 UJ	2.0 U	2.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	**21**	1.0 UJ	**1.78**	5.00 UJ	2.5 U	2.0 U	**4.9**	**14**	1.0 U	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	10 U	2.0 U	1.0 U	1.0 U	1 U	2 U	2.0 U	2.0 U	10 U	5.0 U	2.0 U	2 U	2 U	2.0 U	2.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland
Location ID					GZA-101R	GZA-101R	GZA-101R	GZA-101R	GZA-101R	GZA-101R	GZA-101R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	TRC-201R	MW-4A	MW-4A	MW-4A	MW-4A
Sample ID					6A-GZA101R-061416	7A-GZA101R-101017	8A-GZA101R-091818	9A-GZA101R-092619	0A-GZA101R-092420	1A-GZA101R-091421	2A-GZA101R-100422	6A-TRC201R-062816	7A-TRC201R-100617	8A-TRC201R-092618	9A-TRC201R-092519	0A-TRC201R-092220	1A-TRC201R-091021	2A-TRC201R-100622	16A-MW4A-062416-1	17A-MW4A-101817-1	21A-MW4A-092021-1	22A-MW4A-093022-1
Sample Date					6/14/2016	10/10/2017	9/18/2018	9/26/2019	9/24/2020	9/14/2021	10/4/2022	6/28/2016	10/6/2017	9/26/2018	9/25/2019	9/22/2020	9/10/2021	10/6/2022	6/24/2016	10/18/2017	9/20/2021	9/30/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					36.5 - 38 ft	36 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	36.5 - 38 ft	112 - 112 ft	38 - 161 ft	38 - 161 ft	38 - 161 ft	38 - 161 ft	38 - 161 ft	38 - 161 ft	38 - 48 ft	38 - 48 ft	38 - 48 ft	38 - 48 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	10.0 UJ	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	10.0 UJ	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	5.00 U	2.50 U	R	0.50 U	0.50 U	1.0 U	2.5 U	2.50 U	2.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	**95.3**	**67.7**	**73.2**	**77**	**73**	**74**	**82**	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	10.0 U	5.00 UJ	5.0 U	1.0 U	1.0 U	2.0 U	**23.4**	**16.9**	**18.0**	**20**	**17**	**19**	**23 J+**	1.0 U	1.00 UJ	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U	5.00 U	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U	1.00 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 UJ	20.0 UJ	10.0 U	R	0.50 U	0.50 UJ	1.0 U	10.0 U	10.0 U	10.0 U	R	0.50 U	0.50 UJ	1.0 UJ	2.0 U	2.00 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	5.00 U	2.50 U	2.5 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	10.0 U	5.00 U	3.0 U	0.60 U	0.60 U	1.2 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	10.0 U	5.00 U	3.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	200 U	100 U	200 U	100 U	100 U	80 U	100 U	100 U	100 UJ	**55 J**	100 U	100 U	100 U	20.0 U	20.0 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	10.0 UJ	5.00 U	5.0 U	1.0 U	1.0 UJ	2.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	20.0 U	10.0 U	R	5.0 U	5.0 U	10 U	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	R	5.0 U	5.0 U	10 U	50.0 U	10.0 U	10.0 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	20.0 U	10.0 U	R	5.0 U	5.0 U	10 U	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	100 U	50.0 UJ	R	R	25 UJ	50 U	50.0 UJ	50.0 U	50.0 U	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	25 U	25 UJ
Benzene	5	1000	10000	100000	1.0 U	10.0 U	5.00 U	3.5 U	0.70 U	0.70 U	1.4 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	5.00 UJ	2.50 U	2.5 U	0.50 U	0.50 U	1.0 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	10.0 UJ	5.00 U	R	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	20.0 U	10.0 UJ	R	1.0 UJ	1.0 U	2.0 UJ	10.0 UJ	10.0 U	10.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	20.0 U	10.0 U	25 UJ	5.0 U	5.0 U	10 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	10.0 UJ	5.00 U	2.5 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	20.0 U	10.0 UJ	5.0 U	1.0 U	1.0 UJ	2.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	2.0 U	2.00 U	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	20.0 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**4.5**	10.0 U	5.00 U	5.0 U	**5.4**	**4.8**	**7.9**	**165**	**178 J**	**160**	**170**	**140**	**180**	**180**	**39.7**	**24.8**	**8.3**	**9.2**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	5.00 U	2.50 U	2.5 U	0.40 U	0.40 U	0.50 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	5.00 UJ	2.50 U	2.5 U	0.50 U	0.50 U	1.0 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	20.0 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.4**	1.00 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	10.0 UJ	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	10.0 U	5.00 UJ	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	5.00 U	2.50 U	2.5 U	0.40 U	0.40 U	0.60 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	10.0 UJ	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**8.7**	**5.68**	**1.8**	**2.0**
Methylene Chloride	5	2000	50000	100000	2.0 U	20.0 U	10.0 UJ	5.0 UJ	1.0 U	1.0 U	2.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	20.0 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	10.0 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	10.0 UJ	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 UJ	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**441**	**356**	**277**	**300**	**240 J+**	**220 J+**	**220**	5.0 U	5.00 U	5.00 U	1.0 U	R	1.0 UJ	1.0 UJ	1.0 U	1.00 U	**1.1**	**1.1**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	20.0 U	10.0 U	R	2.5 U	2.5 U	5.0 U	10.0 U	10.0 U	10.0 U	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	**34.0 J**	**26.4**	**29.0**	**28**	**29**	**31**	**34**	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	5.00 UJ	2.50 U	2.5 U	0.40 U	0.40 U	0.50 U	2.5 U	2.50 UJ	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**186**	**176**	**134**	**120**	**110**	**110**	**150**	**62.8**	**60.4**	**48.2**	**50**	**40**	**44**	**40**	1.0 U	**2.30**	**1.7**	**1.2**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	10.0 U	5.00 U	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	10.0 U	5.00 UJ	2.5 UJ	1.0 U	1.0 U	2.0 U	5.0 U	5.00 U	5.00 U	**2.1**	**2.3**	**2.4**	**2.9 J+**	**2.0 J**	1.00 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	20 U	10 U	5.0 U	1.0 U	1 U	2 U	10 U	10 U	10 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland
				Location ID	MW-4A	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7
				Sample ID	22A-MW4A-093022-2	16A-MW5-061716-1	17A-MW5-102017-1	18A-MW-5-092818-1	19A-MW5-093019-1	20A-MW5-092120-1	21A-MW5-092121-1	22A-MW5-100322-1	16A-MW7-061716-1	17A-MW7-102017-1	18A-MW-7-092818-1	19A-MW7-092619-1	20A-MW7-091720-1	21A-MW7-092121-1	22A-MW7-100322-1
				Sample Date	9/30/2022	6/17/2016	10/20/2017	9/28/2018	9/30/2019	9/21/2020	9/21/2021	10/3/2022	6/17/2016	10/20/2017	9/28/2018	9/26/2019	9/17/2020	9/21/2021	10/3/2022
				Sample Type	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	38 - 48 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	28 - 38 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.5 U	0.50 U	0.50 UJ	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	40 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 UJ	10.0 U	2.00 UJ	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 UJ	2.00 U	R	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	25 U
Benzene	5	1000	10000	100000	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 UJ	2.0 UJ	2.00 UJ	2.00 U	R	1.0 U	1.0 U	1.0 UJ	2.0 UJ	2.00 UJ	2.00 UJ	1.0 UJ	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**8.9**	**6.4**	**14.1**	**12.5**	**11**	**10**	**12**	**13**	**10.0**	**23.8**	**16.0**	**29**	**35**	**27**	**26**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	**1.9**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1.1**	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	R	**10 J+**	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	**1.25**	1.00 U	1.0 U	**1.1**	1.0 U	**1.3**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.1**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.8**	**4.26**	**8.50**	**27**	**17**	**49**	**9.3**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	**1.5**	**1.52**	**1.39 J**	**2.0**	**2.8**	**2.5 J+**	**1.9**
Xylenes (Total)	10000	3000	5000	NE	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland
Location ID					PS-1D	PS-1D	PS-1D	PS-1D	PS-1D	PS-1D	PS-1D	PS-1M	PS-1M	PS-1M	PS-1M	PS-3	PS-3	PS-3	PS-3	PS-3
Sample ID					16A-PS1D-062916-1	17A-PS1D-101617-1	18A-PS1D-092718-1	19A-PS1D-091719-1	20A-PS1D-091520-1	21A-PS1D-091721-1	22A-PS1D-092922-1	16A-PS1M-062916-1	17A-PS1M-101617-1	21A-PS1M-091721-1	22A-PS1M-092922-1	16A-PS3-062416-1	17A-PS3-101817-1	18A-PS3-100418-1	19A-PS3-091919-1	20A-PS3-091820-1	21A-PS3-092021-1	22A-PS3-093022-1
Sample Date					6/29/2016	10/16/2017	9/27/2018	9/17/2019	9/15/2020	9/17/2021	9/29/2022	6/29/2016	10/16/2017	9/17/2021	9/29/2022	6/24/2016	10/18/2017	10/4/2018	9/19/2019	9/18/2020	9/20/2021	9/30/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	49.25 - 54.25 ft	34.25 - 39.25 ft	34.25 - 39.25 ft	34.25 - 39.25 ft	34.25 - 39.25 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft	2.7 - 7.7 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):																		
Volatile Organic Compounds (ug/l)																						
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.0 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.0 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U	2.0 U	2.00 U	1.0 U	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	1.0 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.2 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	50 U	40 U	20.0 U	100 U	50 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	10.0 U	2.00 U	**26**	**59 J+**	10.0 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ		
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	10 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	10 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ	25 U	10.0 U	10.0 U	50 UJ	**33 J+**	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.4 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.0 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	R	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	10 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U	2.0 U	2.00 U	2.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**12.3**	**13.5**	**8.99**	**9.0**	**7.4**	**8.3**	**8.4**	**1.5**	1.00 U	2.0 U	**2.2**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	1.0 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	1.0 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	1.0 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	**1.0**	**1.10**	**1.34**	**2.2**	**2.5**	**3.0**	**3.0**	**7.9**	**7.44**	**3.4**	**2.7**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 UJ	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3.3**	**1.62**	**3.45**	**3.1**	**3.0 J+**	1.0 U	**4.1**	**3.4**	**1.90**	**3.6**	**4.0 J+**	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	**34**	**110 J+**	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	1.0 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**16.1**	**15.0**	**15.0**	**13**	**13**	**6.3**	**16**	**4.4**	**2.72**	**4.9**	**4.8 J**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	2.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 U	**1.2**	1.0 U	1.0 U	**1.1**	1.0 UJ	1.00 U	2.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland	Downgradient Wetland
Location ID					PS-5D	PS-5D	PS-5D	PS-5D	PS-5D	PS-5D	PS-5D	PS-8D	PS-8D	PS-8D	PS-8D	PS-8D	PS-8D	PS-8D
Sample ID					16A-PS5D-062716-1	17A-PS5D-101917-1	18A-PS5D-100418-1	19A-PS5D-091919-1	20A-PS5D-091820-1	21A-PS5D-092121-1	22A-PS5D-093022-1	16A-PS8D-062916-1	17A-PS8D-101917-1	18A-PS8D-100218-1	19A-PS8D-091719-1	20A-PS8D-091520-1	21A-PS8D-092121-1	22A-PS8D-092922-1
Sample Date					6/27/2016	10/19/2017	10/4/2018	9/19/2019	9/18/2020	9/21/2021	9/30/2022	6/29/2016	10/19/2017	10/2/2018	9/17/2019	9/15/2020	9/21/2021	9/29/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	24.1 - 29.1 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft	51.8 - 56.8 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	50 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	**2.62**	**5.75**	**14 J+**	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 UJ	**51.8**	**33.3**	**29 J+**	25 U	25 U	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**11.6**	**21.0**	**16.6**	**13**	**13**	**14**	**17**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	**1.8**	**1.86**	**1.39**	**1.8**	**1.5**	**2.0**	**2.0**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**3.8**	**3.16**	**4.31**	**4.6**	**2.3**	**2.5 J+**	**2.8**	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL
					Location ID	GZA-102S	GZA-102S	GZA-102S	GZA-102S	GZA-102S	GZA-102S	GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105D	GZA-105D
					Sample ID	8A-GZA102S-092418	9A-GZA102S-091319	0A-GZA102S-092320	1A-GZA102S-091621	2A-GZA102S-100322	2A-GZA102S-100322	6A-GZA105D-061516	7A-GZA-105D-101917	8A-GZA105D-092518	9A-GZA105D-091819	0A-GZA105D-092420	1A-GZA105D-091521	1A-GZA105D-091521	2A-GZA105D-100622
					Sample Date	9/24/2018	9/13/2019	9/23/2020	9/16/2021	10/3/2022	10/3/2022	6/15/2016	10/19/2017	9/25/2018	9/18/2019	9/24/2020	9/15/2021	9/15/2021	10/6/2022
					Sample Type	N	N	N	N	N	FD	N	N	N	N	N	N	FD	N
					Depth Interval	1.7 - 10.7 ft	1.7 - 10.7 ft	1.7 - 10.7 ft	2.5 - 11.5 ft	2.5 - 11.5 ft	2.5 - 11.5 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft	16 - 26 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	R	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**11.5**	**23.0**	**7.40**	**3.6**	**1.8**	**1.3**	**1.4**	**2.0**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**11.6**	**11.0 J**	5.00 U	**2.8**	**1.3**	**1.0**	**1.1**	**1.4 J+**
1,1-Dichloropropene	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.25 U	10.0 U	10.0 U	5.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	0.50 U	0.50 UJ	0.50 U	0.50 U	20.0 U	20.0 U	10.0 U	R	0.50 U	0.50 UJ	0.50 UJ	1.0 UJ	
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.25 U	5.0 U	5.00 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	10.0 U	10.0 U	5.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 UJ	40 U	100 U	100 U	40 U	40 U	NS	200 U	100 UJ	40 U	100 U	100 U	100 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 UJ	5.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
2-Butanone	4000	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	20.0 UJ	10.0 U	R	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2.00 UJ	R	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	20.0 U	10.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 UJ	R	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	100 U	20.0 U	10.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 UJ	R	25 U	25 UJ	25 U	25 U	100 U	100 U	50.0 U	R	25 U	25 UJ	25 UJ	25 UJ	
Benzene	5	1000	10000	100000	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	10.0 U	10.0 U	5.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 UJ	R	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	20.0 U	20.0 UJ	10.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20.0 U	20.0 U	10.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	20.0 UJ	20.0 U	10.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	
Chloroform	70	50	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20.0 UJ	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**14.8**	**2.7**	**2.5**	1.0 U	1.0 U	1.0 U	**419**	**823**	**244**	**130**	**54**	**33**	**35**	**65**	
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	5.0 U	5.00 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.00 U	2.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	
Dibromomethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20.0 U	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	
Diethyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Diisopropyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	5.0 U	5.00 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Methyl tert-butyl ether	70	50000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Methylene Chloride	5	2000	50000	100000	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20.0 U	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20.0 U	20.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Naphthalene	140	700	20000	100000	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**2.27 J**	**2.0**	**1.3 J+**	1.0 UJ	**2.1**	**2.1**	**134**	**382**	**116**	**24**	**5.9 J+**	**17 J+**	**19 J+**	**12 J+**	
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	R	2.5 U	2.5 U	2.5 U	2.5 U	20.0 U	20.0 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	**1.5**	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	5.0 U	5.00 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**6.39**	**2.9**	**2.5**	1.0 U	**1.4**	**1.3**	**250**	**994**	**289**	**55**	**23**	**38**	**42**	**42**	
Trichlorofluoromethane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Vinyl chloride	**2**	**2**	50000	100000	**9.57**	**1.3**	**1.2**	1.0 U	1.0 U	1.0 U	**79.7**	**83.9**	**46.8**	**23**	**16**	**8.4**	**9.4**	**8.7 J+**	
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1 U	1 U	1 U	20 U	20 U	10 U	1.0 U	1.0 U	1 U	1 U	1 U	

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL
					Location ID	GZA-105R	GZA-105R	GZA-105R	GZA-105R	GZA-105R	GZA-105R	GZA-105R	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S	GZA-105S
					Sample ID	6A-GZA105R-061516	7A-GZA105R-100917	8A-GZA105R-091918	9A-GZA105R-091819	0A-GZA105R-092420	1A-GZA105R-091421	2A-GZA105R-100622	6A-GZA105S-061516	7A-GZA105S-100917	7A-GZA105S-100917	8A-GZA105S-092518	9A-GZA105S-091819	0A-GZA105S-092420	1A-GZA105S-091521	2A-GZA105S-100622
					Sample Date	6/15/2016	10/9/2017	9/19/2018	9/18/2019	9/24/2020	9/14/2021	10/6/2022	6/15/2016	10/9/2017	10/9/2017	9/25/2018	9/18/2019	9/24/2020	9/15/2021	10/6/2022
					Sample Type	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N
					Depth Interval	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	34.5 - 36.5 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	200 UJ	200 UJ	50 U	50 U	20 U	13 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	200 UJ	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	100 U	100 U	50 U	50 U	20 U	13 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	200 U	200 U	**93**	**86**	**97**	**85**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	200 U	200 U	50 U	50 U	**30**	**25**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	200 U	200 U	70 U	70 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	56 U	56 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 UJ	400 UJ	400 UJ	R	50 U	20 UJ	25 UJ	2.0 UJ	2.00 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	100 U	100 U	100 U	50 U	50 U	20 U	13 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	60 U	60 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	200 U	200 U	50 U	50 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	4000 U	4000 U	4000 UJ	4000 U	10000 U	4000 U	2000 U	20.0 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	50 U
2,2-Dichloropropane	NE	NE	NE	NE	200 U	200 UJ	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	2000 U	400 U	400 U	R	500 U	200 U	100 UJ	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2000 U	400 U	400 U	200 U	500 U	200 U	100 UJ	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	**1.8**	**1.77 J**	**1.93 J**	**1.19**	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 U	400 U	400 U	350 U	500 U	200 U	250 UJ	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	2000 U	2000 U	2000 UJ	R	2500 U	1000 UJ	1300 UJ	10.0 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 U
Benzene	5	1000	10000	100000	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	200 U	200 U	200 U	62 U	62 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	200 U	200 U	200 U	83 U	83 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	100 U	100 UJ	100 U	50 U	50 U	20 U	13 U	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	200 U	200 UJ	200 UJ	R	50 U	20 U	13 UJ	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	400 UJ	400 U	400 U	50 U	50 UJ	20 U	13 U	2.0 U	2.00 U	2.00 U	2.00 UJ	R	1.0 UJ	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	400 U	400 U	400 U	500 U	500 U	200 U	250 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	200 U	200 UJ	200 UJ	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	400 U	400 U	400 U	100 U	100 U	40 UJ	50 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	200 U	200 U	200 U	50 U	50 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	400 UJ	400 U	400 UJ	100 U	100 U	40 U	50 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**216**	**222**	**264**	**210**	**190**	**150**	**210**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 U	100 U	100 U	50 U	50 U	20 U	13 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	100 U	100 UJ	100 UJ	50 UJ	50 U	20 U	13 UJ	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	400 U	400 U	100 U	100 U	40 U	50 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 U	200 UJ	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	100 U	100 U	50 U	50 U	20 U	13 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	200 U	200 UJ	200 U	70 U	70 U	40 U	50 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	400 U	400 U	400 U	50 U	100 U	200 U	25 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	400 U	400 U	400 U	100 U	100 U	40 U	50 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	200 UJ	200 U	400 U	100 U	100 U	40 U	50 U	1.0 UJ	**2.00**	**1.31**	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	**1.1**	**1.90 J**	**1.47 J**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	**1.03**	**1.12**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	**7.1**	**4.17**	**4.77**	**2.54**	**2.9**	**1.8**	**1.9**	**2.1**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	200 UJ	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4980**	**5630**	**5350**	**5100**	**5300 J+**	**5600 J+**	**5200**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	400 U	400 U	400 U	250 U	250 U	100 U	130 UJ	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	200 U	200 U	80 U	80 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 U	100 UJ	100 U	50 U	50 U	20 U	13 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**7120**	**8270**	**7570**	**6700**	**8200**	**7500**	**8000**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	50 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	200 U	200 U	200 U	50 U	50 U	20 U	13 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	400 U	400 U	400 U	100 U	100 U	40 U	50 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL
Location ID					IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	IP-01R2	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102	TRC-102
Sample ID					16A-IP1R2-062716-1	17A-IP1R2-100617-1	17A-IP1R2-100617-2	18A-IP1R2-092418-1	18A-IP1R2-092418-2	19A-IP1R2-091319-1	20A-IP1R2-092420-1	21A-IP1R2-092121-1	21A-IP1R2-092121-2	22A-IP1R2-100322-1	16A-TRC102-062716-1	16A-TRC102-062716-2	17A-TRC102-100217-1	18A-TRC102-092418-1	19A-TRC102-092019-1	20A-TRC102-092320-1	21A-TRC102-090721-2	22A-TRC102-093022-1
Sample Date					6/27/2016	10/6/2017	10/6/2017	9/24/2018	9/24/2018	9/13/2019	9/24/2020	9/21/2021	9/21/2021	10/3/2022	6/27/2016	6/27/2016	10/2/2017	9/24/2018	9/20/2019	9/23/2020	9/7/2021	9/30/2022
Sample Type					N	N	FD	N	FD	N	N	N	FD	N	N	FD	N	N	N	N	N	N
Depth Interval					54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	54 - 74 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft	2.25 - 12.25 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):																		
Volatile Organic Compounds (ug/l)																						
1,1,1,2-Tetrachloroethane	5	10	50000	100000	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U	10 U	10 U	5.0 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**149**	**109**	**101**	200 U	200 U	**130**	**86**	**81**	**81**	**75**	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	100 U	100 U	100 U	200 U	200 U	**34**	**24**	**23**	**25**	**19**	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	100 U	100 U	100 U	200 UJ	200 UJ	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	7.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	200 U	200 U	200 U	400 U	400 U	R	10 U	10 U	10 U	10 U	2.0 U	2.0 UJ	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U	10 U	10 U	5.0 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	2000 U	2000 U	2000 U	4000 UJ	4000 UJ	1600 U	2000 U	2000 U	2000 U	800 U	20.0 U	20.0 UJ	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	1000 U	200 U	200 U	400 U	400 U	R	100 U	100 U	100 U	40 U	10.0 U	10.0 UJ	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	1000 U	200 U	200 U	400 UJ	400 UJ	80 U	100 U	100 U	100 U	40 U	10.0 U	10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	1000 U	200 U	200 U	400 UJ	400 UJ	200 U	100 U	100 U	100 U	100 U	10.0 U	10.0 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	1000 U	1000 U	1000 U	2000 UJ	2000 UJ	R	500 U	500 U	500 U	500 U	10.0 UJ	10.0 UJ	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ
Benzene	5	1000	10000	100000	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U	10 U	10 U	5.0 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	100 U	100 U	100 U	200 U	200 U	R	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	200 U	200 U	200 U	400 U	400 U	20 U	10 UJ	10 U	10 U	7.0 UJ	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	200 U	200 U	200 U	400 U	400 U	200 U	100 U	100 U	100 U	100 U	2.0 U	2.0 UJ	2.00 UJ	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	200 UJ	200 U	200 U	400 U	400 U	40 U	20 U	20 UJ	20 UJ	20 U	2.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	200 UJ	200 U	200 U	400 U	400 U	40 U	20 U	20 U	20 U	20 U	2.0 U	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**110**	**105 J**	**121 J**	200 U	200 U	**120**	**87**	**85**	**89**	**84**	**6.7 J**	**3.8 J**	**1.66**	**1.16 J**	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U	10 U	10 U	5.0 U	0.5 U	0.5 UJ	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U	10 U	10 U	5.0 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	8.3 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	200 U	200 U	200 U	400 U	400 U	40 U	20 U	20 U	20 U	20 U	2.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 UJ	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 UJ	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	50.0 U	50.0 U	50.0 U	100 U	100 U	20 U	10 U	10 U	10 U	5.0 U	0.5 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	200 U	200 U	200 U	400 U	400 U	20 UJ	20 U	100 U	100 U	10 U	2.0 UJ	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	200 U	200 U	200 U	400 U	400 U	40 U	20 U	20 U	20 U	20 U	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	100 UJ	100 U	100 U	400 U	400 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	**2.88**	**2.81**	**6.1**	**6.7**	**2.3 J**	**4.7**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 U	100 UJ	100 UJ	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3560**	**4450**	**4700**	**2930 J**	**3090 J**	**3400**	**2900 J+**	**2200**	**2600**	**2800**	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 R	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	200 U	200 U	200 U	400 U	400 U	100 U	50 U	50 U	50 U	50 U	2.0 U	2.0 UJ	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	100 U	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 UJ	50.0 UJ	100 U	100 U	20 U	10 U	10 U	10 U	5.0 U	0.5 U	0.5 UJ	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**7290 J-**	**8450**	**8590**	**7430**	**7570**	**7300**	**6600**	**5100**	**5800**	**6000**	**1.1**	**1.0 J-**	**1.10**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	100 UJ	100 U	100 U	200 U	200 U	40 U	20 U	20 U	20 U	20 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	100 UJ	100 U	100 U	200 U	200 U	20 U	10 U	10 U	10 U	5.0 U	**5.2**	**5.2 J-**	**1.09 J**	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	200 U	200 U	200 U	400 U	400 U	40 U	20 U	20 U	20 U	20 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm
Location ID					AE100R-2	AE100R-2	AE100R-2	AE100R-2	AE100R-3	AE100R-3	AE100R-3	AE100R-3	AE100R-3	AE100R-3	AE100R-3
Sample ID					6A-AE100R2-061516-	7A-AE100R2-100417-	1A-AE100R2-090921-	2A-AE100R2-100422-	6A-AE100R3-061516-	7A-AE100R3-100417-	8A-AE100R3-091918-	9A-AE100R3-092319-	0A-AE100R3-091020-	1A-AE100R3-090921-	2A-AE100R3-100422-
Sample Date					6/15/2016	10/4/2017	9/9/2021	10/4/2022	6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	9/9/2021	10/4/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N
Depth Interval					43 - 48 ft	43.68 - 48.68 ft	43 - 48 ft	43 - 48 ft	50 - 56 ft	50.68 - 56.68 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**											
Volatile Organic Compounds (ug/l)															
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	10 U	5.0 U	50.0 U	50.0 U	100 U	50 U	25 U	25 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	10 U	2.0 U	25.0 U	25.0 U	50.0 U	R	25 U	25 U	2.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	10 U	5.0 U	50.0 U	50.0 U	100 U	50 U	25 U	25 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**2.7**	**5.15**	20 U	**6.5**	50.0 U	50.0 U	100 U	**73**	**52**	**65**	**42**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	**1.49 J**	10 U	5.0 U	50.0 U	50.0 U	100 U	50 U	25 U	25 U	**13**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	10 U	5.0 U	50.0 U	50.0 U	100 U	100 U	25 U	25 U	7.0 UJ
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	10 U	1.3 U	50.0 U	50.0 U	100 U	100 U	25 U	25 U	2.5 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	70 U	50 U	50 U	10 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	**3.3**	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 UJ	10 U	2.5 UJ	100 UJ	100 UJ	200 UJ	R	25 UJ	25 U	5.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	10 U	1.3 U	25.0 U	25.0 U	50.0 U	50 U	25 U	25 U	2.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	10 U	3.0 U	50.0 U	50.0 U	100 U	50 U	25 U	25 U	5.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	10 U	3.0 U	50.0 U	50.0 U	100 U	50 U	25 U	25 U	3.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	50 U	40 U	50 U	10 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	10 U	5.0 U	50.0 U	50.0 U	100 U	50 U	25 U	25 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	2000 U	200 U	NS	1000 U	2000 UJ	4000 U	5000 U	5000 U	400 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 UJ	20 UJ	5.0 U	50.0 U	50.0 UJ	100 UJ	100 U	50 U	50 UJ	10 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	100 U	25 UJ	500 U	100 U	200 U	R	250 U	250 U	38 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	100 U	25 UJ	500 U	100 U	200 UJ	R	250 U	250 U	38 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	100 U	25 U	500 U	100 U	200 U	R	250 U	250 U	50 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	500 U	130 UJ	500 U	500 U	1000 UJ	R	1300 UJ	1300 U	250 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	10 U	3.5 U	50.0 U	50.0 U	100 U	50 U	25 U	25 U	5.0 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	10 U	2.5 U	25.0 U	25.0 U	50.0 U	50 U	25 U	25 U	3.0 U
Bromoform	4	700	50000	100000	1.0 U	1.00 UJ	10 U	4.0 UJ	50.0 U	50.0 UJ	100 UJ	50 U	25 U	25 U	4.0 UJ
Bromomethane	10	7	800	8000	2.0 UJ	2.00 U	10 UJ	5.0 UJ	100 U	100 U	200 UJ	R	25 UJ	25 UJ	7.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	100 UJ	25 U	100 U	100 U	200 U	500 U	250 U	250 UJ	50 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 U	10 U	2.0 U	50.0 U	50.0 U	100 UJ	50 U	25 U	25 U	2.5 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	20 U	5.0 U	100 U	100 U	200 U	100 U	50 UJ	50 U	10 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	50 U	50 U	50 U	10 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	20 U	5.0 U	100 U	100 U	200 U	100 U	50 U	50 U	10 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**54.1**	**49.4**	**73**	**130**	50.0 U	50.0 U	100 U	**61**	**52**	**61**	**65**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	10 U	1.3 U	25.0 U	25.0 U	50.0 U	50 U	25 U	25 U	2.5 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	20 UJ	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 UJ	10 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	10 U	2.0 U	25.0 U	25.0 U	50.0 UJ	50 U	25 U	25 U	2.5 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	10 U	5.0 U	50.0 U	50.0 U	100 U	100 U	25 U	25 U	8.3 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 UJ	20 U	5.0 U	100 U	100 UJ	200 U	100 U	50 U	50 U	10 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 UJ	50 U	10 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	20 U	5.0 U	50.0 U	50.0 UJ	100 U	100 U	50 U	50 U	10 U
Ethylbenzene	700	20000	5000	100000	**2.4**	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	20 UJ	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 UJ	10 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	10 U	1.3 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	25 U	2.5 U
Isopropylbenzene	NE	NE	NE	NE	**1.1**	1.00 U	20 UJ	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 UJ	10 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.00 UJ	20 U	5.0 U	50.0 U	50.0 UJ	100 U	70 U	50 U	50 U	10 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	100 U	5.0 U	100 U	100 U	200 U	50 U	50 UJ	250 U	5.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	20 U	5.0 U	100 U	100 U	200 U	100 U	50 U	50 U	10 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	20 UJ	5.0 U	50.0 UJ	50.0 U	200 U	100 U	50 U	50 UJ	10 UJ
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
N-Propylbenzene	NE	NE	NE	NE	**1.9**	**1.09 J**	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
o-Xylene	10000	3000	5000	NE	**1.0**	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Tert-Butylbenzene	NE	NE	NE	NE	**2.5**	**1.75**	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	20 U	5.0 U	50.0 U	50.0 UJ	100 U	100 U	50 U	50 U	10 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**72.2**	**114 J**	**1300 J+**	**590**	**2270**	**3440 J**	**1390**	**5700**	**4000 J+**	**6100 J+**	**3900 J+**
Tetrahydrofuran	NE	NE	NE	NE	3.0 U	2.00 U	50 U	13 U	100 U	100 U	200 U	R	130 U	130 U	25 U
Toluene	**1000**	50000	40000	100000	**3.1**	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 U	100 U	50 U	50 U	10 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**2.0**	**1.32**	20 U	5.0 U	50.0 U	50.0 U	100 U	80 U	50 U	50 U	10 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 UJ	10 U	1.3 U	25.0 U	25.0 UJ	50.0 U	50 U	25 U	25 U	2.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**81.1**	**182**	**1500**	**550**	**3410**	**4780**	**2200**	**7300**	**4900**	**7300**	**4400**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	20 U	5.0 U	50.0 U	50.0 U	100 UJ	100 U	50 U	50 U	10 U
Vinyl chloride	**2**	**2**	50000	100000	**13.8**	**9.87 J**	10 U	**13**	50.0 UJ	50.0 U	100 U	50 U	25 U	25 U	**3.4**
Xylenes (Total)	10000	3000	5000	NE	**2.0**	2.0 U	20 U	5 U	100 U	100 U	200 U	100 U	50 U	50 U	10 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm
Location ID					AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-4	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5
Sample ID					6A-AE100R4-061516	7A-AE100R4-100417	8A-AE100R4-091918	9A-AE100R4-092319	0A-AE100R4-091020	1A-AE100R4-090921	2A-AE100R4-100422	6A-AE100R5-061516	7A-AE100R5-100417	8A-AE100R5-091918	9A-AE100R5-092319	0A-AE100R5-091020	1A-AE100R5-090921	2A-AE100R5-100422
Sample Date					6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	9/9/2021	10/4/2022	6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	9/9/2021	10/4/2022
Sample Type					N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					63 - 68 ft	63.68 - 68.68 ft	63 - 68 ft	63 - 68 ft	63 - 68 ft	63 - 68 ft	63 - 68 ft	88 - 93 ft	88.68 - 93.68 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	50.0 U	50.0 U	100 U	50 U	25 U	10 U	5.0 U	10.0 U	10.0 U	50.0 U	25 U	10 U	5.0 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	25.0 U	25.0 U	50.0 U	R	25 U	10 U	5.0 U	5.00 U	10.0 U	25.0 U	R	10 U	2.5 U	2.5 U
1,1,2-Trichloroethane	**5**	900	50000	100000	50.0 U	50.0 U	100 U	50 U	25 U	**21**	5.0 U	10.0 U	10.0 U	50.0 U	25 U	10 U	5.0 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	50.0 U	50.0 U	100 U	70 U	**53**	**39**	**41**	**22.0**	**27.1**	50.0 U	50 U	**36**	**30**	**30**
1,1-Dichloroethene	**7**	**80**	30000	100000	50.0 U	50.0 U	100 U	50 U	25 U	**13**	**13**	10.0 U	10.0 U	50.0 U	25 U	**10**	**10**	**10**
1,1-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	25 U	10 U	7.0 UJ	10.0 U	10.0 U	50.0 U	50 U	10 U	5.0 U	7.0 UJ
1,2,3-Trichloropropane	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	25 U	10 U	5.0 U	10.0 U	10.0 U	50.0 U	50 U	10 U	2.5 U	2.5 U
1,2,4-Trichlorobenzene	70	200	50000	NE	50.0 U	50.0 U	100 U	70 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	100 UJ	100 UJ	200 UJ	R	25 UJ	10 U	10 UJ	20.0 U	20.0 UJ	100 UJ	R	10 UJ	2.5 UJ	5.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	25.0 U	25.0 U	50.0 U	50 U	25 U	10 U	5.0 U	5.00 U	25.0 U	25 U	25 U	10 U	2.5 U	2.5 U
1,2-Dichlorobenzene	600	8000	2000	80000	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
1,2-Dichloroethane	5	5	20000	100000	50.0 U	50.0 U	100 U	50 U	25 U	10 U	5.0 U	10.0 U	10.0 U	50.0 U	25 U	10 U	3.0 U	5.0 U
1,2-Dichloropropane	5	3	50000	100000	50.0 U	50.0 U	100 U	50 U	25 U	10 U	5.0 U	10.0 U	10.0 U	50.0 U	25 U	10 U	3.0 U	3.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
1,3-Dichlorobenzene	100	6000	50000	100000	50.0 U	50.0 U	100 U	50 U	40 U	20 U	20 U	10.0 U	10.0 U	50.0 U	40 U	20 U	5.0 U	10 U
1,3-Dichloropropane	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
1,4-Dichlorobenzene	5	60	8000	80000	50.0 U	50.0 U	100 U	50 U	25 U	10 U	5.0 U	10.0 U	10.0 U	50.0 U	25 U	10 U	5.0 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	1000 U	2000 UJ	4000 U	5000 U	2000 U	800 U	NS	200 U	1000 UJ	2000 U	2000 U	500 U	400 U
2,2-Dichloropropane	NE	NE	NE	NE	50.0 U	50.0 UJ	100 UJ	100 U	50 U	20 UJ	20 U	10.0 U	10.0 UJ	50.0 UJ	50 U	20 U	5.0 U	10 U
2-Butanone	4000	50000	50000	100000	500 U	100 U	200 U	R	250 U	100 U	40 UJ	100 U	20.0 U	100 U	R	100 U	25 U	38 UJ
2-Chlorotoluene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
2-Hexanone	NE	NE	NE	NE	500 U	100 U	200 UJ	R	250 U	100 U	40 UJ	100 U	20.0 U	100 UJ	R	100 U	25 U	38 UJ
2-Phenylbutane	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
4-Chlorotoluene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
4-Methyl-2-pentanone	350	50000	50000	100000	500 U	100 U	200 U	R	250 U	100 U	100 U	100 U	20.0 U	100 U	R	100 U	25 U	50 U
Acetone	6300	50000	50000	100000	500 U	500 U	1000 UJ	R	1300 UJ	500 U	500 UJ	100 U	100 U	500 UJ	R	500 UJ	130 UJ	250 UJ
Benzene	5	1000	10000	100000	50.0 U	50.0 U	100 U	50 U	25 U	10 U	5.0 U	10.0 U	10.0 U	50.0 U	25 U	10 U	3.5 U	5.0 U
Bromobenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Bromochloromethane	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Bromodichloromethane	3	6	50000	100000	25.0 U	25.0 U	50.0 U	50 U	25 U	10 U	5.0 U	5.0 U	5.00 U	25.0 U	25 U	10 U	2.5 U	3.0 U
Bromoform	4	700	50000	100000	50.0 U	50.0 UJ	100 UJ	50 U	25 U	10 U	5.0 UJ	10.0 U	10.0 UJ	50.0 UJ	25 U	10 U	4.0 U	4.0 UJ
Bromomethane	10	7	800	8000	100 U	100 U	200 UJ	R	25 UJ	10 UJ	7.0 UJ	20.0 UJ	20.0 U	100 UJ	R	10 UJ	5.0 U	7.0 UJ
Carbon Disulfide	NE	NE	NE	NE	100 U	100 U	200 U	500 U	250 U	100 UJ	100 U	20.0 U	20.0 U	100 U	250 U	100 U	25 U	50 U
Carbon tetrachloride	5	2	5000	50000	50.0 U	50.0 U	100 UJ	50 U	25 U	10 U	5.0 U	10.0 U	10.0 U	50.0 UJ	25 U	10 U	2.5 U	2.5 U
Chlorobenzene	100	200	1000	10000	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Chloroethane	NE	NE	NE	NE	100 U	100 U	200 U	100 U	50 UJ	20 U	20 U	20.0 U	20.0 U	100 U	50 U	20 UJ	5.0 U	10 U
Chloroform	70	50	20000	100000	50.0 U	50.0 U	100 U	50 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
chloromethane	NE	NE	NE	NE	100 U	100 U	200 U	100 U	50 U	20 U	20 U	20.0 U	20.0 U	100 U	50 U	20 U	5.0 U	10 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**58.5**	50.0 U	100 U	**89**	**92**	**140**	**160**	**118**	**65.2**	**68.5**	**160**	**400**	**740**	**950**
cis-1,3-Dichloropropene	NE	NE	NE	NE	25.0 U	25.0 U	50.0 U	50 U	25 U	10 U	5.0 U	5.0 U	5.00 U	25.0 U	25 U	10 U	2.5 U	2.5 U
Cymene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 UJ	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Dibromochloromethane	2	20	50000	100000	25.0 U	25.0 U	50.0 UJ	50 U	25 U	10 U	5.0 U	5.0 U	5.00 U	25.0 UJ	25 U	10 U	2.5 U	2.5 U
Dibromomethane	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	25 U	10 U	8.3 U	10.0 U	10.0 U	50.0 U	50 U	10 U	5.0 U	8.3 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	100 U	100 UJ	200 U	100 U	50 U	20 U	20 U	20.0 U	20.0 UJ	100 U	50 U	20 U	5.0 U	10 U
Diethyl Ether	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Diisopropyl Ether	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 UJ	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	50.0 U	50.0 UJ	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 UJ	50.0 U	50 U	20 U	5.0 U	10 U
Ethylbenzene	700	20000	5000	100000	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 UJ	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	25.0 U	25.0 UJ	50.0 U	50 U	25 U	10 U	5.0 U	5.0 U	5.00 UJ	25.0 U	25 U	10 U	2.5 U	2.5 U
Isopropylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 UJ	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Methyl tert-butyl ether	70	50000	50000	100000	50.0 U	50.0 UJ	100 U	70 U	50 U	20 U	20 U	10.0 U	10.0 UJ	50.0 U	50 U	20 U	5.0 U	10 U
Methylene Chloride	5	2000	50000	100000	100 U	100 U	200 U	50 U	50 UJ	100 U	10 U	20.0 U	20.0 U	100 U	25 U	20 UJ	5.0 U	5.0 U
mp-xylene	10000	3000	5000	NE	100 U	100 U	200 U	100 U	50 U	20 U	20 U	20.0 U	20.0 U	100 U	50 U	20 U	5.0 U	10 U
Naphthalene	140	700	20000	100000	50.0 UJ	50.0 U	200 U	100 U	50 U	20 UJ	20 UJ	10.0 UJ	10.0 U	100 U	50 U	20 U	5.0 U	10 UJ
N-Butylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
N-Propylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
o-Xylene	10000	3000	5000	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Styrene	100	100	6000	60000	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Tert-Butylbenzene	NE	NE	NE	NE	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	50.0 U	50.0 UJ	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 UJ	50.0 U	50 U	20 U	5.0 U	10 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1490**	**1900 J**	**1500**	**4000**	**3400 J+**	**2600 J+**	**2900**	**302**	**493 J**	**884**	**1400**	**1100 J+**	**1100 J+**	**980**
Tetrahydrofuran	NE	NE	NE	NE	100 U	100 U	200 U	R	130 U	50 U	50 U	30.0 U	20.0 U	100 U	R	50 U	13 U	25 U
Toluene	**1000**	50000	40000	100000	50.0 U	50.0 U	100 U	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	5.0 U	10 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	50.0 U	50.0 U	100 U	80 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 U	50 U	20 U	**10**	**13**
trans-1,3-Dichloropropene	NE	NE	NE	NE	25.0 U	25.0 UJ	50.0 U	50 U	25 U	10 U	5.0 U	5.0 U	5.00 UJ	25.0 U	25 U	10 U	2.5 U	2.5 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**2350**	**2990**	**2740**	**5400**	**4700**	**3400**	**3700**	**718**	**1020**	**1810**	**2300**	**2200**	**1600**	**1400**
Trichlorofluoromethane	NE	NE	NE	NE	50.0 U	50.0 U	100 UJ	100 U	50 U	20 U	20 U	10.0 U	10.0 U	50.0 UJ	50 U	20 U	5.0 U	10 U
Vinyl chloride	**2**	**2**	50000	100000	50.0 UJ	50.0 U	100 U	50 U	25 U	10 U	**5.1**	**33.2**	10.0 U	50.0 U	25 U	**38**	**33**	**43**
Xylenes (Total)	10000	3000	5000	NE	100 U	100 U	200 U	100 U	50 U	20 U	20 U	20 U	20 U	100 U	50 U	20 U	5 U	10 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
				Location ID	AE101D	AE101D	AE101D	AE101D	AE101D	AE101D	AE101D	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-2	AE101R-4	AE101R-4
				Sample ID	16A-AE101D-061516-	16A-AE101D-061516-1	7A-AE101D-100217-	18A-AE101D-092618-	19A-AE101D-093019-	20A-AE101D-091820-	21A-AE101D-090721-	22A-AE101D-100622-	16A-AE101R2-061616-	7A-AE101R2-101117-	8A-AE101R2-092018-	9A-AE101R2-092519-	0A-AE101R2-092320-	1A-AE101R2-091021-	2A-AE101R2-100322-	1A-AE101R4-091021-	2A-AE101R4-100322-
				Sample Date	6/15/2016	6/15/2016	10/2/2017	9/26/2018	9/30/2019	9/18/2020	9/7/2021	10/6/2022	6/16/2016	10/11/2017	9/20/2018	9/25/2019	9/23/2020	9/10/2021	10/3/2022	9/10/2021	10/3/2022
				Sample Type	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	20 - 25 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	55 - 60 ft	153 - 158 ft	153 - 158 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	**1.0**	1.0 U	**7.7**	**7.88**	**5.44 J**	**5.8**	**7.2**	**7.1**	**8.6**	**11**	**9.2**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.8**	2.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	1.0 UJ	2.0 U	2.00 U	2.00 UJ	R	0.50 U	0.50 UJ	0.50 U	0.50 UJ	1.0 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	NS	100 U	80 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U	10 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U	10 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U	10 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	25 UJ	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ	25 U	25 UJ	50 U
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	1.4 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Bromomethane	10	7	800	8000	2.0 UJ	2.0 UJ	2.00 UJ	2.00 U	R	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	2.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	2.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.0 UJ	2.00 U	2.00 U	**1.5**	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**20.2**	**20.3**	**51.6**	**24.4**	**32**	**64**	**32**	**80**	**116**	**62.8**	**80.1**	**34**	**71**	**74**	**68**	**380**	**240**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.60 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	**1.2**	1.0 U	**1.4 J**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1.4**	**1.3**	1.00 UJ	**21.4**	1.0 U	**2.3 J+**	**2.5 J+**	**7.8 J+**	**6.4**	**5.06**	**4.66**	**19**	**8.2 J+**	**33 J+**	**25**	**31 J+**	**53**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.6**	2.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 UJ	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**3.4**	**3.0**	**2.73**	**11.3**	**3.8**	**14**	**25**	**10**	**28.0**	**25.6**	**35.4**	**44**	**46**	**91**	**75**	**160**	**160**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.00 UJ	**1.66**	**1.6**	**2.3**	**1.8**	**2.4 J+**	**11.6**	**10.5**	**14.3**	**5.8**	**18**	**13**	**18**	**26**	**13**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	1 U	2 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
				Location ID	AE101R-6	AE101R-6	AE101R-6	AE101R-6	AE101R-6	AE101R-6	AE101R-6	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M
				Sample ID	6A-AE101R6-061716-	7A-AE101R6-101917-	8A-AE101R6-092618-	9A-AE101R6-093019-	0A-AE101R6-092420-	1A-AE101R6-091621-	2A-AE101R6-100322-	16A-AE102M-061316-	17A-AE102M-100217-	18A-AE102M-100118-	19A-AE102M-092519-	19A-AE102M-092519-	20A-AE102M-090920-	20A-AE102M-090920-	21A-AE102M-091521-	22A-AE102M-100322-
				Sample Date	6/17/2016	10/19/2017	9/26/2018	9/30/2019	9/24/2020	9/16/2021	10/3/2022	6/13/2016	10/2/2017	10/1/2018	9/25/2019	9/25/2019	9/9/2020	9/9/2020	9/15/2021	10/3/2022
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	FD	N	FD	N	N
				Depth Interval	227 - 232 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft	227 - 232 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	10.0 UJ	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	10.0 UJ	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	5.0 U	10.0 U	5.00 U	R	10 U	5.0 U	5.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	10.0 U	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**30.5 J**	**36.2**	**33.8**	**42**	**36**	**51**	**61**	**1.3**	**1.82**	**1.91**	**2.4**	**2.5**	**2.2**	**2.4**	**2.2**	**3.0**
1,1-Dichloroethene	**7**	**80**	30000	100000	10.0 U	20.0 U	10.0 U	10 U	**12**	**17 J+**	**20**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.1 J+**	**1.3**	**1.3**
1,1-Dichloropropene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	10 U	10 U	7.0 U	7.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	10.0 UJ	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	20.0 U	40.0 U	20.0 U	R	10 U	5.0 UJ	10 U	2.0 U	2.00 U	2.00 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	5.0 U	10.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	10.0 U	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	10.0 U	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	10.0 UJ	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	10.0 U	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	400 U	200 U	800 U	2000 U	NS	NS	NS	20.0 U	20.0 U	10 U	10 U	100 U	100 U	100 U	NS
2,2-Dichloropropane	NE	NE	NE	NE	10.0 UJ	20.0 UJ	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	100 U	40.0 U	20.0 UJ	R	100 U	50 U	40 U	10.0 U	2.00 U	2.00 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	100 U	40.0 U	20.0 UJ	R	100 U	50 U	40 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	100 U	40.0 U	20.0 U	R	100 U	50 U	100 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	100 U	200 U	100 UJ	R	500 U	250 UJ	500 U	10.0 U	10.0 U	10.0 UJ	25 U	25 U	R	R	25 UJ	25 U
Benzene	5	1000	10000	100000	10.0 U	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	5.0 U	10.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	10.0 U	20.0 U	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U
Bromomethane	10	7	800	8000	20.0 U	40.0 U	20.0 U	R	10 UJ	7.0 U	7.0 UJ	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	20.0 U	40.0 UJ	20.0 U	100 U	100 U	50 U	100 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	10.0 UJ	20.0 UJ	10.0 U	10 U	10 U	5.0 U	5.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	20.0 U	40.0 U	20.0 U	20 U	20 U	10 UJ	20 U	2.0 U	2.00 U	2.00 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	20.0 U	40.0 U	20.0 U	20 U	20 U	10 U	20 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**853**	**1140**	**1620**	**1500**	**1700**	**1500**	**970**	**51.0**	**50.3**	**23.2**	**43**	**45**	**36**	**39**	**49**	**53**
cis-1,3-Dichloropropene	NE	NE	NE	NE	5.0 UJ	10.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	5.0 U	10.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	10 U	10 U	8.3 U	8.3 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	20.0 U	40.0 U	20.0 U	20 U	20 U	10 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	10.0 UJ	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	10.0 U	20.0 UJ	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	5.0 U	10.0 UJ	5.00 U	10 U	10 U	5.0 U	5.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	10.0 UJ	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	20.0 U	40.0 UJ	20.0 U	10 U	20 U	50 U	10 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	20.0 U	40.0 U	20.0 U	20 U	20 U	10 U	20 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	10.0 U	20.0 U	20.0 U	20 U	20 U	10 U	20 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	**1.79**	**2.85**	**2.8**	**3.0**	**3.2**	**3.2**	**2.9**	**3.0**
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**145**	**378**	**28.3**	**17**	**27 J+**	**170 J+**	**630**	**5.1**	**26.8 J**	**12.9**	**8.8**	**10**	**6.7 J+**	**6.8 J+**	**10 J+**	**7.1**
Tetrahydrofuran	NE	NE	NE	NE	20.0 U	40.0 U	20.0 U	R	50 U	25 U	50 U	2.0 U	2.00 U	2.00 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	10.0 U	20.0 U	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**12.0**	20.0 U	**15.6**	**25**	**32**	**66**	**52**	1.0 U	1.00 U	1.00 U	**1.2**	**1.1**	**1.2 J+**	**1.4 J+**	1.0 U	**1.2**
trans-1,3-Dichloropropene	NE	NE	NE	NE	5.0 UJ	10.0 U	5.00 U	10 U	10 U	5.0 U	5.0 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**695**	**1270**	**993**	**1300**	**920**	**1800**	**3200**	**10.7**	**17.4**	**16.9**	**23**	**24**	**18**	**19**	**23**	**24**
Trichlorofluoromethane	NE	NE	NE	NE	10.0 U	20.0 UJ	10.0 U	20 U	20 U	10 U	20 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	10.0 U	20.0 U	**52.4**	**250**	**310**	**340 J+**	**320**	**9.6**	**22.3 J**	**11.4 J-**	**14**	**15**	**13**	**13**	**13**	**16**
Xylenes (Total)	10000	3000	5000	NE	20 U	40 U	20 U	20 U	20 U	10 U	20 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
Location ID					AE102RR-1	AE102RR-1	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-2	AE102RR-4	AE102RR-4	AE102RR-4	AE102RR-4	AE102RR-4	AE102RR-4
Sample ID					LA-AE102RR1-090721	A-AE102RR1-092822	A-AE102RR2-061416	A-AE102RR2-100317	A-AE102RR2-091918	A-AE102RR2-091918	A-AE102RR2-092419	A-AE102RR2-090920	LA-AE102RR2-090721	A-AE102RR2-092822	A-AE102RR4-061416	A-AE102RR4-100317	A-AE102RR4-091918	A-AE102RR4-092419	A-AE102RR4-090920	LA-AE102RR4-090721	A-AE102RR4-092822
Sample Date					9/7/2021	9/28/2022	6/14/2016	10/3/2017	9/19/2018	9/19/2018	9/24/2019	9/9/2020	9/7/2021	9/28/2022	6/14/2016	10/3/2017	9/19/2018	9/24/2019	9/9/2020	9/7/2021	9/28/2022
Sample Type					N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					43 - 48 ft	43 - 48 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	75 - 80 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	5.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 UJ	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	2.0 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U	2.5 U	1.0 U	2.0 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	2.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**8.0**	**11**	**10.3**	**7.95**	**12.2**	**12.8**	**11**	**11**	**12**	**13**	20.0 U	20.0 U	20.0 U	**13**	**12**	**26**	**11**
1,1-Dichloroethene	**7**	**80**	30000	100000	**1.8**	5.0 U	**2.9**	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	**3.1**	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	**6.1**	5.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	1.3 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	2.5 U	1.0 U	1.3 U	20.0 U	20.0 U	20.0 U	5.0 U	2.5 U	2.5 U	1.3 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	2.5 UJ	2.0 UJ	10.0 U	10.0 U	10.0 U	5.0 U	2.5 UJ	1.0 U	2.5 UJ	40.0 U	40.0 U	40.0 UJ	R	2.5 UJ	2.5 U	2.5 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	1.3 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U	2.5 U	1.0 U	1.3 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	1.3 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	3.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	3.0 U	3.0 U	1.2 U	3.0 U	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	3.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	3.0 U	1.0 U	5.00 U	5.00 U	5.00 U	3.0 U	3.0 U	2.0 U	3.0 U	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	3.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	5.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	200 U	200 U	100 U	100 U	100 U	500 U	500 U	200 U	200 U	NS	400 U	400 UJ	200 U	500 U	500 U	200 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	25 UJ	10.0 U	10.0 U	10.0 U	10.0 U	25 U	25 U	10 U	25 UJ	200 U	40.0 U	40.0 U	R	25 U	25 U	25 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	25 UJ	10.0 U	10.0 U	10.0 U	10.0 U	25 U	25 U	10 U	25 UJ	200 U	40.0 U	40.0 U	R	25 U	25 U	25 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 UJ	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	25 UJ	10.0 U	10.0 U	10.0 U	10.0 U	25 U	25 U	10 U	25 UJ	200 U	40.0 U	40.0 U	25 U	25 U	25 U	25 UJ
Acetone	6300	50000	50000	100000	25 UJ	130 UJ	10.0 U	50.0 U	50.0 U	50.0 U	130 U	130 UJ	50 U	130 UJ	200 UJ	200 U	200 UJ	R	130 UJ	130 U	130 UJ
Benzene	5	1000	10000	100000	0.70 U	3.5 U	1.0 U	5.00 U	5.00 U	5.00 U	3.5 U	3.5 U	1.4 U	3.5 U	20.0 U	20.0 U	20.0 U	3.5 U	3.5 U	3.5 U	3.5 U
Bromobenzene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	2.5 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U	2.5 U	1.0 U	2.5 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromoform	4	700	50000	100000	1.0 U	4.0 UJ	1.0 U	5.00 U	5.00 U	5.00 U	4.0 U	4.0 U	2.0 U	4.0 UJ	20.0 U	20.0 U	20.0 UJ	R	4.0 U	4.0 U	4.0 UJ
Bromomethane	10	7	800	8000	1.0 U	5.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 UJ	2.0 U	5.0 U	40.0 UJ	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
Carbon Disulfide	NE	NE	NE	NE	5.0 U	25 U	2.0 U	10.0 U	10.0 U	10.0 U	25 U	25 U	10 U	25 U	40.0 U	40.0 UJ	40.0 U	25 U	25 U	25 U	25 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	2.0 U	1.0 U	5.00 U	5.00 U	5.00 U	2.5 U	2.5 U	2.0 U	2.0 U	20.0 U	20.0 U	20.0 UJ	2.5 U	2.5 U	2.5 U	2.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloroethane	NE	NE	NE	NE	1.0 U	5.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 UJ	2.0 U	5.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
Chloroform	70	50	20000	100000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
chloromethane	NE	NE	NE	NE	1.0 U	5.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	2.0 U	5.0 U	40.0 U	40.0 UJ	40.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**150**	**410**	**88.8**	**211**	**188**	**184**	**130**	**170**	**150**	**190**	**64.8**	**74.4**	**91.8**	**83**	**61**	**100**	**70**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	1.3 U	0.5 UJ	2.50 U	2.50 U	2.50 U	2.5 U	2.5 U	1.0 U	1.3 U	10.0 U	10.0 UJ	10.0 U	2.5 U	2.5 U	2.5 U	1.3 U
Cymene	NE	NE	NE	NE	1.0 UJ	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	2.0 UJ	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U	2.5 U	1.0 U	2.0 UJ	10.0 U	10.0 U	10.0 UJ	2.5 U	2.5 U	2.5 U	2.0 UJ
Dibromomethane	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	5.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	2.0 U	5.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	1.3 U	0.5 U	2.50 U	2.50 U	2.50 U	2.5 U	2.5 U	1.0 U	1.3 U	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	1.3 U
Isopropylbenzene	NE	NE	NE	NE	1.0 UJ	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	5.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	5.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 UJ	2.0 U	5.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	5.0 U	2.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	2.0 U	5.0 U	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	5.0 U	1.0 UJ	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	20.0 UJ	20.0 U	40.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	100	100	6000	60000	1.0 UJ	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 UJ	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 UJ	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 UJ	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**4.4 J+**	**6.6**	**256**	**109**	**122**	**128**	**130**	**93 J+**	**120 J+**	**130**	**657**	**414**	**548**	**340**	**310 J+**	**650 J+**	**300**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	13 UJ	2.0 U	10.0 U	10.0 UJ	10.0 UJ	13 U	13 U	5.0 U	13 UJ	40.0 U	40.0 U	40.0 U	13 U	13 U	13 U	13 UJ
Toluene	**1000**	50000	40000	100000	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	**1.4**	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	1.3 UJ	0.5 UJ	2.50 UJ	2.50 U	2.50 U	2.5 U	2.5 U	1.0 U	1.3 UJ	10.0 U	10.0 UJ	10.0 U	2.5 U	2.5 U	2.5 U	1.3 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**200**	**100**	**468**	**256**	**408**	**413**	**400**	**370**	**420**	**460**	**970**	**606**	**864 J-**	**550**	**490 J**	**1100**	**480**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	5.0 U	1.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	2.0 U	5.0 U	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	**2**	**2**	50000	100000	**16**	**50**	1.0 UJ	**5.25**	**9.05**	**8.05**	**5.8**	**12**	**9.0**	**13**	20.0 U	20.0 UJ	20.0 U	2.5 U	2.5 U	2.5 U	2.0 U
Xylenes (Total)	10000	3000	5000	NE	1 U	5 U	2.0 U	10 U	10 U	10 U	5.0 U	5.0 U	2 U	5 U	40 U	40 U	40 U	5.0 U	5.0 U	5 U	5 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE102RR-5	AE102RR-5	AE102RR-5	AE102RR-5	AE102RR-5	AE102RR-5	AE102RR-5	AE102RR-5	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE103D	AE103D	AE103D
					Sample ID	5A-AE102RR5-061416	7A-AE102RR5-100317	8A-AE102RR5-091918	9A-AE102RR5-092419	0A-AE102RR5-090920	1A-AE102RR5-090721	2A-AE102RR5-092822	3A-AE102RR5-092822	4A-AE102RR6-061416	7A-AE102RR6-100317	8A-AE102RR6-091918	9A-AE102RR6-092419	0A-AE102RR6-090920	1A-AE102RR6-090721	2A-AE102RR6-092822	16A-AE103D-061316-1	7A-AE103D-100317-1	8A-AE103D-092418-1
					Sample Date	6/14/2016	10/3/2017	9/19/2018	9/24/2019	9/9/2020	9/7/2021	9/28/2022	9/28/2022	6/14/2016	10/3/2017	9/19/2018	9/24/2019	9/9/2020	9/7/2021	9/28/2022	6/13/2016	10/3/2017	9/24/2018
					Sample Type	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Depth Interval	141 - 146 ft	141 - 146 ft	141 - 146 ft	141 - 146 ft	141 - 146 ft	141 - 146 ft	141 - 146 ft	141 - 146 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft
Volatile Organic Compounds (ug/l)																						
1,1,1,2-Tetrachloroethane	5	10	50000	100000		50.0 U	50.0 U	100 U	10 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
1,1,1-Trichloroethane	**200**	4000	20000	100000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000		25.0 U	25.0 U	50.0 U	10 U	10 U	5.0 U	5.0 UJ	5.0 UJ	50.0 U	50.0 U	100 U	10 U	10 U	10 U	10 U	0.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000		50.0 U	50.0 U	100 U	10 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
1,1-Dichloroethane	**70**	2000	20000	100000		50.0 U	50.0 U	100 U	**47**	**38**	**58**	**39**	**39**	100 U	100 U	200 U	**80**	**61**	**83**	**68**	**1.9**	**2.31**	**2.15**
1,1-Dichloroethene	**7**	**80**	30000	100000		50.0 U	50.0 U	100 U	**11**	**11**	**14**	**9.6**	**9.6**	100 U	100 U	200 U	**23**	**19**	**22**	**18**	1.0 U	1.00 U	1.00 U
1,1-Dichloropropene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	10 U	7.0 U	7.0 U	7.0 U	100 U	100 U	200 U	20 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
1,2,3-Trichloropropane	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U	20 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	70	200	50000	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 UJ	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 UJ	40 U	1.0 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE		100 U	100 U	200 UJ	20 U	10 UJ	5.0 U	10 UJ	10 UJ	200 U	200 U	400 UJ	20 U	10 UJ	10 U	20 UJ	2.0 U	2.00 U	2.00 U
1,2-Dibromoethane	0.02	2	50000	100000		25.0 U	25.0 U	50.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	10 U	10 U	0.5 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
1,2-Dichloroethane	5	5	20000	100000		50.0 U	50.0 U	100 U	10 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
1,2-Dichloropropane	5	3	50000	100000		50.0 U	50.0 U	100 U	10 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
1,3-Dichlorobenzene	100	6000	50000	100000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
1,3-Dichloropropane	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
1,4-Dichlorobenzene	5	60	8000	80000		50.0 U	50.0 U	100 U	10 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
1,4-Dioxane	**0.3**	6000	50000	100000		NS	1000 U	2000 UJ	2000 U	2000 U	1000 U	800 U	800 U	NS	2000 U	4000 UJ	2000 U	2000 U	2000 U	1600 U	NS	20.0 U	20.0 U
2,2-Dichloropropane	NE	NE	NE	NE		50.0 U	50.0 UJ	100 UJ	20 U	20 U	10 U	20 U	20 U	100 U	100 UJ	200 UJ	20 U	20 U	20 U	40 U	1.0 U	1.00 UJ	1.00 U
2-Butanone	4000	50000	50000	100000		500 U	100 U	200 U	100 U	100 U	50 U	40 UJ	40 UJ	1000 U	200 U	400 U	100 U	100 U	100 U	80 UJ	10.0 U	2.00 U	2.00 U
2-Chlorotoluene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
2-Hexanone	NE	NE	NE	NE		500 U	100 U	200 UJ	100 U	100 U	50 U	40 UJ	40 UJ	1000 U	200 U	400 UJ	100 U	100 U	100 U	80 UJ	10.0 U	2.00 U	2.00 U
2-Phenylbutane	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 UJ	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 UJ	40 U	1.0 U	1.00 U	1.00 U
4-Chlorotoluene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
4-Methyl-2-pentanone	350	50000	50000	100000		500 U	100 U	200 U	100 U	100 U	50 U	100 UJ	100 UJ	1000 U	200 U	400 U	100 U	100 U	100 U	200 UJ	10.0 U	2.00 U	2.00 U
Acetone	6300	50000	50000	100000		500 UJ	500 U	1000 UJ	500 U	500 UJ	250 U	500 UJ	500 UJ	1000 UJ	1000 U	2000 UJ	500 U	500 UJ	500 U	1000 UJ	10.0 U	10.0 U	10.0 U
Benzene	5	1000	10000	100000		50.0 U	50.0 U	100 U	10 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
Bromobenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Bromochloromethane	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Bromodichloromethane	3	6	50000	100000		25.0 U	25.0 U	50.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	10 U	10 U	0.5 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000		50.0 U	50.0 U	100 UJ	10 U	10 U	5.0 U	5.0 UJ	5.0 UJ	100 U	100 U	200 UJ	10 U	10 U	10 U	10 UJ	1.0 U	1.00 U	1.00 U
Bromomethane	10	7	800	8000		100 UJ	100 U	200 UJ	10 U	10 UJ	7.0 U	7.0 U	7.0 U	200 UJ	200 U	400 UJ	10 U	10 U	10 UJ	10 U	2.0 U	2.00 U	2.00 U
Carbon Disulfide	NE	NE	NE	NE		100 U	100 UJ	200 U	100 U	100 U	50 U	100 U	100 U	200 U	200 UJ	400 U	100 U	100 U	100 U	200 U	2.0 U	2.00 UJ	2.00 U
Carbon tetrachloride	5	2	5000	50000		50.0 U	50.0 U	100 UJ	10 U	10 U	5.0 U	5.0 U	5.0 U	100 U	100 U	200 UJ	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
Chlorobenzene	100	200	1000	10000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Chloroethane	NE	NE	NE	NE		100 U	100 U	200 U	20 U	20 UJ	10 U	20 U	20 U	200 U	200 U	400 U	20 U	20 U	20 UJ	40 U	2.0 U	2.00 U	2.00 U
Chloroform	70	50	20000	100000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
chloromethane	NE	NE	NE	NE		100 U	100 UJ	200 U	20 U	20 U	10 U	20 U	20 U	200 U	200 UJ	400 U	20 U	20 U	20 U	40 U	2.0 U	2.00 UJ	2.00 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000		**122**	**125**	**127**	**180**	**130**	**160**	**180**	**180**	**229**	**215**	**202**	**240**	**120**	**120**	**140**	**3.9**	**4.99**	**5.20**
cis-1,3-Dichloropropene	NE	NE	NE	NE		25.0 U	25.0 UJ	50.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 UJ	100 U	10 U	10 U	10 U	10 U	0.5 U	0.50 UJ	0.50 U
Cymene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 UJ	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 UJ	40 U	1.0 U	1.00 U	1.00 U
Dibromochloromethane	2	20	50000	100000		25.0 U	25.0 U	50.0 UJ	10 U	10 U	5.0 U	5.0 UJ	5.0 UJ	50.0 U	50.0 U	100 UJ	10 U	10 U	10 U	10 UJ	0.5 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	10 U	8.3 U	8.3 U	8.3 U	100 U	100 U	200 U	20 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE		100 U	100 U	200 U	20 U	20 U	10 U	20 U	20 U	200 U	200 U	400 U	20 U	20 U	20 U	40 U	2.0 U	2.00 U	2.00 U
Diethyl Ether	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Diisopropyl Ether	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE		50.0 U	50.0 UJ	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 UJ	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 UJ	1.00 U
Ethylbenzene	700	20000	5000	100000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000		25.0 U	25.0 U	50.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U	50.0 U	50.0 U	100 U	10 U	10 U	10 U	10 U	0.5 U	0.50 U	0.50 U
Isopropylbenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 UJ	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Methyl tert-butyl ether	70	50000	50000	100000		50.0 U	50.0 UJ	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 UJ	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 UJ	1.00 U
Methylene Chloride	5	2000	50000	100000		100 U	100 U	200 U	10 U	20 UJ	50 U	10 U	10 U	200 U	200 U	400 U	10 U	20 UJ	100 U	20 U	2.0 U	2.00 U	2.00 U
mp-xylene	10000	3000	5000	NE		100 U	100 U	200 U	20 U	20 U	10 U	20 U	20 U	200 U	200 U	400 U	20 U	20 U	20 U	40 U	2.0 U	2.00 U	2.00 U
Naphthalene	140	700	20000	100000		50.0 UJ	50.0 U	200 U	20 U	20 U	10 UJ	20 U	20 U	100 UJ	100 U	400 U	20 U	20 U	20 UJ	40 U	1.0 UJ	1.00 U	2.00 U
N-Butylbenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
N-Propylbenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
o-Xylene	10000	3000	5000	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Styrene	100	100	6000	60000		50.0 U	50.0 U	100 U	20 U	20 U	10 UJ	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 UJ	40 U	1.0 U	1.00 U	1.00 U
Tert-Butylbenzene	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 UJ	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 UJ	40 U	1.0 U	1.00 U	1.00 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Tetrachloroethene	**5**	**50**	**30000**	100000		**1750**	**1200**	**1320**	**1200**	**1400 J+**	**1800 J+**	**1500**	**1400**	**3940**	**2910**	**3230**	**3200**	**3600 J+**	**4000 J+**	**3900**	**5.7**	**78.3 J-**	**45.9**
Tetrahydrofuran	NE	NE	NE	NE		100 U	100 U	200 U	50 U	50 U	25 U	50 UJ	50 UJ	200 U	200 U	400 U	50 U	50 U	50 U	100 UJ	2.0 U	2.00 U	2.00 UJ
Toluene	**1000**	50000	40000	100000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000		50.0 U	50.0 U	100 U	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
trans-1,3-Dichloropropene	NE	NE	NE	NE		25.0 U	25.0 UJ	50.0 U	10 U	10 U	5.0 U	5.0 UJ	5.0 UJ	50.0 U	50.0 UJ	100 U	10 U	10 U	10 U	10 UJ	0.5 U	0.50 UJ	0.50 U
Trichloroethene	**5**	**5**	**5000**	**50000**		**2360**	**1650**	**2060**	**2100**	**1800**	**2700**	**2100**	**2100**	**5310**	**3680**	**4540**	**4300**	**4600**	**4700**	**4900**	**28.1**	**94.4**	**99.4 J**
Trichlorofluoromethane	NE	NE	NE	NE		50.0 U	50.0 U	100 UJ	20 U	20 U	10 U	20 U	20 U	100 U	100 U	200 UJ	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U
Vinyl chloride	**2**	**2**	50000	100000		50.0 U	50.0 UJ	100 U	10 U	10 U	5.0 U	**7.4**	**7.5**	100 U	100 UJ	200 U	10 U	10 U	10 U	10 U	1.0 U	1.00 UJ	1.00 U
Xylenes (Total)	10000	3000	5000	NE		100 U	100 U	200 U	20 U	20 U	10 U	20 U	20 U	200 U	200 U	400 U	20 U	20 U	20 U	40 U	2.0 U	2.0 U	2.0 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE103D	AE103D	AE103D	AE103D	AE103D	AE103R-2	AE103R-2	AE103R-2	AE103R-2	AE103R-3	AE103R-3	AE103R-3	AE103R-3	AE103R-3
					Sample ID	18A-AE103D-092418-	19A-AE103D-091919-	20A-AE103D-091020-	21A-AE103D-091421-	22A-AE103D-100322-	16A-AE103R2-061516-	17A-AE103R2-100217-	1A-AE103R2-090921-	2A-AE103R2-092822-	6A-AE103R3-061516-	7A-AE103R3-100217-	8A-AE103R3-092518-	9A-AE103R3-091819-	0A-AE103R3-091020-	1A-AE103R3-090921-	2A-AE103R3-092822-
					Sample Date	9/24/2018	9/19/2019	9/10/2020	9/14/2021	10/3/2022	6/15/2016	10/2/2017	9/9/2021	9/28/2022	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	9/9/2021	9/28/2022
					Sample Type	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	62 - 67 ft	62 - 67 ft	62 - 67 ft	62 - 67 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft	70 - 76 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	10 U	5.0 UJ	200 U	100 U	20.0 U	10 U	5.0 U	10 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 UJ	20 U	20 U	200 U	100 UJ	20.0 U	20 U	10 U	20 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	100 U	50.0 U	10 U	5.0 U	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	5.0 UJ
1,1,2-Trichloroethane	**5**	900	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	10 U	5.0 U	200 U	100 U	20.0 U	10 U	5.0 U	10 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**2.35 J**	**1.6**	**1.9**	**1.6**	**2.3**	200 U	100 U	**80**	**34**	200 U	100 U	**66.6**	**77 J+**	**32**	**110**	**34**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	**29 J**	**9.7**	200 U	100 U	20.0 U	**20 J+**	**7.3**	**39 J**	**7.7**
1,1-Dichloropropene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 UJ	20 U	10 U	20 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	10 U	7.0 U	200 U	100 U	20.0 U	10 U	7.0 U	10 U	7.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	200 U	100 U	10 U	5.0 U	200 U	100 U	20.0 U	10 U	5.0 U	10 U	5.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.00 U	R	0.50 UJ	0.50 UJ	0.50 U	400 UJ	200 UJ	10 U	10 UJ	400 UJ	200 UJ	40.0 U	R	5.0 UJ	10 U	10 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 UJ	0.50 U	0.50 U	0.50 U	0.25 U	100 U	50.0 U	10 U	5.0 U	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	5.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
1,2-Dichloroethane	5	5	20000	100000	1.00 UJ	0.60 U	0.60 U	0.60 U	0.60 U	200 U	100 U	10 U	5.0 U	200 U	100 U	20.0 U	10 U	5.0 U	10 U	5.0 U
1,2-Dichloropropane	5	3	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	10 U	5.0 U	200 U	100 U	20.0 U	10 U	5.0 U	10 U	5.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	10 U	5.0 U	200 U	100 U	20.0 U	10 U	5.0 U	10 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	40 U	100 U	100 U	NS	NS	2000 U	2000 U	800 U	NS	2000 U	400 UJ	800 U	1000 U	2000 U	800 U
2,2-Dichloropropane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 UJ	20 U	20 U	200 U	100 UJ	20.0 U	20 U	10 U	20 U	20 U
2-Butanone	4000	50000	50000	100000	2.00 U	R	5.0 U	5.0 U	5.0 U	2000 U	200 U	100 U	40 UJ	2000 U	200 U	40.0 UJ	R	50 U	100 U	40 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
2-Hexanone	NE	NE	NE	NE	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2000 U	200 U	100 U	40 UJ	2000 U	200 U	40.0 UJ	40 U	50 U	100 U	40 UJ
2-Phenylbutane	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
4-Chlorotoluene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2000 U	200 U	100 U	100 UJ	2000 U	200 U	40.0 U	100 U	50 U	100 U	100 UJ
Acetone	6300	50000	50000	100000	10.0 U	R	25 UJ	25 UJ	25 U	2000 U	1000 U	500 UJ	500 UJ	2000 U	1000 U	200 U	R	250 UJ	500 UJ	500 UJ
Benzene	5	1000	10000	100000	1.00 U	**0.75**	0.70 U	0.70 U	0.70 U	200 U	100 U	10 U	5.0 U	200 U	100 U	20.0 U	10 U	5.0 U	10 U	5.0 U
Bromobenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Bromochloromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	100 U	50.0 UJ	10 U	5.0 U	100 U	50.0 UJ	10.0 U	10 U	5.0 U	10 U	5.0 U
Bromoform	4	700	50000	100000	1.00 U	R	1.0 U	1.0 U	1.0 U	200 U	100 UJ	10 U	5.0 UJ	200 U	100 UJ	20.0 U	R	5.0 U	10 U	5.0 UJ
Bromomethane	10	7	800	8000	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	400 U	200 UJ	10 U	7.0 U	400 U	200 UJ	40.0 UJ	10 U	7.0 UJ	10 U	7.0 U
Carbon Disulfide	NE	NE	NE	NE	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	400 U	200 UJ	100 U	100 U	400 U	200 UJ	40.0 U	100 U	50 U	100 U	100 U
Carbon tetrachloride	5	2	5000	50000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 UJ	10 U	5.0 U	200 U	100 UJ	20.0 U	10 U	5.0 U	10 U	5.0 U
Chlorobenzene	100	200	1000	10000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Chloroethane	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U	400 U	200 U	20 U	20 U	400 U	200 U	40.0 U	20 U	10 UJ	20 U	20 U
Chloroform	70	50	20000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
chloromethane	NE	NE	NE	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	400 U	200 U	20 U	20 U	400 U	200 U	40.0 U	20 U	10 U	20 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**5.74 J**	**3.2**	**3.2**	**3.5**	**6.6**	**2320**	**373**	**210**	**190**	**3130**	**511**	**436**	**330 J+**	**140**	**480**	**210**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	100 U	50.0 U	10 U	5.0 U	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	5.0 U
Cymene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	100 U	50.0 UJ	10 U	5.0 UJ	100 U	50.0 UJ	10.0 U	10 UJ	5.0 U	10 U	5.0 UJ
Dibromomethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	10 U	8.3 U	200 U	100 U	20.0 U	10 U	8.3 U	10 U	8.3 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	400 U	200 U	20 UJ	20 U	400 U	200 U	40.0 U	20 U	10 U	20 UJ	20 U
Diethyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 UJ	20 U	20 U	200 U	100 UJ	20.0 U	20 U	10 U	20 U	20 U
Ethylbenzene	700	20000	5000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 UJ	20 U	200 U	100 U	20.0 U	20 U	10 U	20 UJ	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	100 U	50.0 U	10 U	5.0 U	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	5.0 U
Isopropylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Methyl tert-butyl ether	70	50000	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 UJ	20 U	20 U	200 U	100 UJ	20.0 U	20 U	10 U	20 U	20 U
Methylene Chloride	5	2000	50000	100000	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	400 U	200 U	100 U	10 U	400 U	200 U	40.0 U	10 U	10 UJ	100 U	10 U
mp-xylene	10000	3000	5000	NE	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	400 U	200 U	20 U	20 U	400 U	200 U	40.0 U	20 U	10 U	20 U	20 U
Naphthalene	140	700	20000	100000	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 UJ	100 U	20 U	20 U	200 UJ	100 U	40.0 U	20 U	10 U	20 U	20 U
N-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
N-Propylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
o-Xylene	10000	3000	5000	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Styrene	100	100	6000	60000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Tert-Butylbenzene	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**49.4**	**28**	**42 J+**	**47 J+**	**54**	**4550**	**2790**	**2600 J+**	**1500**	**3290**	**2950**	**1730**	**1700**	**950 J+**	**3400 J+**	**1200**
Tetrahydrofuran	NE	NE	NE	NE	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U	400 U	200 U	50 U	50 UJ	400 U	200 U	40.0 U	50 U	25 U	50 U	50 UJ
Toluene	**1000**	50000	40000	100000	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 U	20 U	200 U	100 U	20.0 U	20 U	10 U	20 U	20 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	100 U	50.0 U	10 U	5.0 UJ	100 U	50.0 U	10.0 U	10 U	5.0 U	10 U	5.0 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**58.8 J**	**53**	**75**	**77**	**93**	**7840**	**3970**	**4300**	**2100**	**6430**	**4450**	**3190**	**3200**	**1300**	**6000**	**1900**
Trichlorofluoromethane	NE	NE	NE	NE	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 U	100 U	20 UJ	20 U	200 U	100 U	20.0 U	20 U	10 U	20 UJ	20 U
Vinyl chloride	**2**	**2**	50000	100000	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	200 UJ	100 U	**33**	**12**	**268 J**	**139**	**147**	**100 J+**	**36**	**110**	**38**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	1.0 U	1.0 U	1 U	1 U	400 U	200 U	20 U	20 U	400 U	200 U	40 U	20 U	10 U	20 U	20 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-4	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-5
					Sample ID	6A-AE103R4-061516-	7A-AE103R4-100217-	8A-AE103R4-092518-	9A-AE103R4-091819-	0A-AE103R4-091020-	1A-AE103R4-090921-	2A-AE103R4-092822-	6A-AE103R5-061516-	7A-AE103R5-100217-	8A-AE103R5-092518-	9A-AE103R5-091819-	0A-AE103R5-091020-	1A-AE103R5-090921-	2A-AE103R5-092822-
					Sample Date	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	9/9/2021	9/28/2022	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	9/9/2021	9/28/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	98 - 105 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	98 - 105 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	200 UJ	200 UJ	50 U	50 U	20 U	25 U	200 U	200 UJ	200 UJ	50 U	50 U	20 U	13 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	200 UJ	200 U	100 U	100 U	40 U	100 U	200 U	200 UJ	200 U	100 U	100 U	40 U	50 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	100 U	100 U	50 U	50 U	20 U	25 UJ	100 U	100 U	100 U	50 U	50 U	20 U	13 U
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	200 U	200 U	**140**	**100**	**110**	**110**	200 U	200 U	200 U	**120**	**110**	**89**	**110**
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	200 U	200 U	50 U	50 U	**32**	**28**	200 U	200 U	200 U	50 U	50 U	**26**	**31**
1,1-Dichloropropene	NE	NE	NE	NE	200 U	200 U	200 UJ	100 U	100 U	40 U	100 U	200 U	200 U	200 UJ	100 U	100 U	40 U	50 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	200 U	200 U	70 U	70 U	40 U	70 U	200 U	200 U	200 U	70 U	70 U	40 U	50 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	56 U	56 U	40 U	56 U	200 U	200 U	200 U	56 U	56 U	40 U	50 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 UJ	400 U	400 U	R	50 U	20 UJ	50 UJ	400 UJ	400 U	400 U	R	50 U	20 UJ	25 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	100 U	100 U	50 U	50 U	20 U	25 U	100 U	100 U	100 U	50 U	50 U	20 U	13 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
1,2-Dichloroethane	5	5	20000	100000	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
1,2-Dichloropropane	5	3	50000	100000	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	60 U	60 U	40 U	60 U	200 U	200 U	200 U	60 U	60 U	40 U	50 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	200 U	200 U	50 U	50 U	40 U	100 U	200 U	200 U	200 U	50 U	50 U	40 U	50 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	4000 U	4000 UJ	4000 U	10000 U	4000 U	4000 U	NS	4000 U	4000 UJ	4000 U	10000 U	4000 U	2000 U
2,2-Dichloropropane	NE	NE	NE	NE	200 U	200 UJ	200 U	100 U	100 U	40 U	100 U	200 U	200 UJ	200 U	100 U	100 U	40 U	50 U
2-Butanone	4000	50000	50000	100000	2000 U	400 U	400 U	R	500 U	200 U	200 UJ	2000 U	400 U	400 U	R	500 U	200 U	100 UJ
2-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
2-Hexanone	NE	NE	NE	NE	2000 U	400 U	400 UJ	200 U	500 U	200 U	200 UJ	2000 U	400 U	400 UJ	200 U	500 U	200 U	100 UJ
2-Phenylbutane	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 U	400 U	400 UJ	350 U	500 U	200 U	350 UJ	2000 U	400 U	400 UJ	350 U	500 U	200 U	250 UJ
Acetone	6300	50000	50000	100000	2000 U	2000 U	2000 U	R	2500 U	1000 UJ	2500 UJ	2000 U	2000 U	2000 U	R	2500 U	1000 UJ	1300 UJ
Benzene	5	1000	10000	100000	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
Bromobenzene	NE	NE	NE	NE	200 U	200 UJ	200 U	62 U	62 U	40 U	62 U	200 U	200 UJ	200 U	62 U	62 U	40 U	50 U
Bromochloromethane	NE	NE	NE	NE	200 U	200 U	200 U	83 U	83 U	40 U	83 U	200 U	200 U	200 U	83 U	83 U	40 U	50 U
Bromodichloromethane	3	6	50000	100000	100 U	100 UJ	100 U	50 U	50 U	20 U	25 U	100 U	100 UJ	100 U	50 U	50 U	20 U	13 U
Bromoform	4	700	50000	100000	200 U	200 UJ	200 UJ	R	50 U	20 U	25 UJ	200 U	200 UJ	200 UJ	R	50 U	20 U	13 UJ
Bromomethane	10	7	800	8000	400 U	400 UJ	400 U	50 U	50 U	20 U	25 U	400 U	400 UJ	400 U	50 U	50 U	20 U	13 U
Carbon Disulfide	NE	NE	NE	NE	400 U	400 U	400 U	500 U	500 U	200 U	500 U	400 U	400 U	400 U	500 U	500 U	200 U	250 U
Carbon tetrachloride	5	2	5000	50000	200 U	200 UJ	200 U	50 U	50 U	20 U	25 U	200 U	200 UJ	200 U	50 U	50 U	20 U	13 U
Chlorobenzene	100	200	1000	10000	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Chloroethane	NE	NE	NE	NE	400 U	400 U	400 U	100 U	100 UJ	40 U	100 U	400 U	400 U	400 U	100 U	100 UJ	40 U	50 U
Chloroform	70	50	20000	100000	200 U	200 U	200 U	50 U	50 U	40 U	50 U	200 U	200 U	200 U	50 U	50 U	40 U	50 U
chloromethane	NE	NE	NE	NE	400 U	400 U	400 U	100 U	100 U	40 U	100 U	400 U	400 U	400 U	100 U	100 U	40 U	50 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**1080**	**1290**	**888**	**700**	**690**	**510**	**840**	**882**	**936**	**1190**	**1100**	**1000**	**510**	**1000**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 U	100 U	100 U	50 U	50 U	20 U	25 U	100 U	100 U	100 U	50 U	50 U	20 U	13 U
Cymene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Dibromochloromethane	2	20	50000	100000	100 U	100 UJ	100 U	50 UJ	50 U	20 U	25 UJ	100 U	100 UJ	100 U	50 UJ	50 U	20 U	13 UJ
Dibromomethane	NE	NE	NE	NE	200 U	200 U	200 U	50 U	50 U	20 U	25 U	200 U	200 U	200 U	50 U	50 U	20 U	13 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	400 U	400 U	100 U	100 U	40 U	100 U	400 U	400 U	400 U	100 U	100 U	40 U	50 U
Diethyl Ether	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 U	200 UJ	200 U	100 U	100 U	40 U	100 U	200 U	200 UJ	200 U	100 U	100 U	40 U	50 U
Ethylbenzene	700	20000	5000	100000	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	100 U	100 U	50 U	50 U	20 U	25 U	100 U	100 U	100 U	50 U	50 U	20 U	13 U
Isopropylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Methyl tert-butyl ether	70	50000	50000	100000	200 U	200 UJ	200 U	70 U	70 U	40 U	70 U	200 U	200 UJ	200 U	70 U	70 U	40 U	50 U
Methylene Chloride	5	2000	50000	100000	400 U	400 U	400 U	50 U	100 U	200 U	50 U	400 U	400 U	400 U	50 U	100 U	200 U	25 U
mp-xylene	10000	3000	5000	NE	400 U	400 U	400 U	100 U	100 U	40 U	100 U	400 U	400 U	400 U	100 U	100 U	40 U	50 U
Naphthalene	140	700	20000	100000	200 UJ	200 U	400 U	100 U	100 U	40 U	100 U	200 UJ	200 U	400 U	100 U	100 U	40 U	50 U
N-Butylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
N-Propylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
o-Xylene	10000	3000	5000	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Styrene	100	100	6000	60000	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**7170**	**6190 J**	**4700**	**4100**	**3200**	**4900 J+**	**4600**	**7620**	**7030 J**	**5960**	**5500**	**4700**	**5000 J+**	**5700**
Tetrahydrofuran	NE	NE	NE	NE	400 U	400 U	400 U	250 U	250 U	100 U	250 UJ	400 U	400 U	400 U	250 U	250 U	100 U	130 UJ
Toluene	**1000**	50000	40000	100000	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	200 U	200 U	80 U	80 U	40 U	80 U	200 U	200 U	200 U	80 U	80 U	40 U	50 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 U	100 U	100 U	50 U	50 U	20 U	25 UJ	100 U	100 U	100 U	50 U	50 U	20 U	13 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**13500**	**9660**	**8890**	**7400**	**6000**	**8000**	**7400**	**12800**	**9980**	**9710**	**9200**	**7600**	**6900**	**8300**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	40 U	100 U	200 U	200 U	200 U	100 U	100 U	40 U	50 U
Vinyl chloride	**2**	**2**	50000	100000	200 UJ	200 UJ	200 U	**100**	**150**	**59**	**100**	200 UJ	200 UJ	200 U	**190**	**270**	**64**	**130**
Xylenes (Total)	10000	3000	5000	NE	400 U	400 U	400 U	100 U	100 U	40 U	100 U	400 U	400 U	400 U	100 U	100 U	40 U	50 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE103R-7	AE103R-7	AE103R-7	AE103R-7	AE103R-7	AE103R-7	AE103R-7	AE104D	AE104D	AE104D	AE104D	AE104D	AE104D	AE104D
					Sample ID	6A-AE103R7-061516-	7A-AE103R7-100217-	8A-AE103R7-092518-	9A-AE103R7-091819-	0A-AE103R7-091020-	1A-AE103R7-090921-	2A-AE103R7-092822-	6A-AE104D-061316-	7A-AE104D-101017-	8A-AE104D-092618-	9A-AE104D-092019-	0A-AE104D-091620-	1A-AE104D-092221-	2A-AE104D-100322-	2A-AE104D-100322-2
					Sample Date	6/15/2016	10/2/2017	9/25/2018	9/18/2019	9/10/2020	9/9/2021	9/28/2022	6/13/2016	10/10/2017	9/26/2018	9/20/2019	9/16/2020	9/22/2021	10/3/2022	10/3/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD
					Depth Interval	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft	162.5 - 168 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	100 U	100 UJ	100 UJ	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	100 U	100 UJ	100 U	20 U	20 U	20 U	40 U	**1.0**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	50.0 U	50.0 U	50.0 U	10 U	10 U	10 U	10 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	100 U	100 U	100 U	**66**	**50**	**82**	**71**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	100 U	100 U	100 U	**17**	**10**	**29 J**	**18**	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	100 U	100 U	100 UJ	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.25 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	200 UJ	200 U	200 U	R	10 UJ	10 U	20 UJ	2.0 UJ	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	50.0 U	50.0 U	50.0 U	10 U	10 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	2000 U	2000 UJ	800 U	2000 U	2000 U	1600 U	NS	20.0 U	20.0 U	40 U	100 U	100 U	40 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	100 U	100 UJ	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	1000 U	200 U	200 U	R	100 U	100 U	80 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	1000 U	200 U	200 UJ	40 U	100 U	100 U	80 UJ	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	1000 U	200 U	200 UJ	100 U	100 U	100 U	200 UJ	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	1000 U	1000 U	1000 U	R	500 UJ	500 UJ	1000 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 U	25 U
Benzene	5	1000	10000	100000	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	100 U	100 UJ	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	50.0 U	50.0 UJ	50.0 U	10 U	10 U	10 U	10 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	100 U	100 UJ	100 UJ	R	10 U	10 U	10 UJ	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	200 U	200 UJ	200 U	10 U	10 UJ	10 U	10 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	200 U	200 U	200 U	100 U	100 U	100 U	200 U	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	100 U	100 UJ	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	200 U	200 U	200 U	20 U	20 UJ	20 U	40 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	200 U	200 U	200 U	20 U	20 U	20 U	40 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**286**	**341**	**381**	**390**	**400**	**280**	**310**	**1.2**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	50.0 U	10 U	10 U	10 U	10 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	50.0 U	50.0 UJ	50.0 U	10 UJ	10 U	10 U	10 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	100 U	100 U	100 U	10 U	10 U	10 U	10 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	200 U	200 U	200 U	20 U	20 U	20 UJ	40 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	100 U	100 UJ	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 UJ	40 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	50.0 U	50.0 U	50.0 U	10 U	10 U	10 U	10 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	100 U	100 UJ	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	200 U	200 U	200 U	10 U	20 UJ	100 U	20 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	200 U	200 U	200 U	20 U	20 U	20 U	40 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	100 UJ	100 U	200 U	20 U	20 U	20 U	40 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3590**	**3600 J**	**2690**	**2100**	**2000**	**3700 J+**	**3300**	**18.1**	**12.6**	**3.25**	1.0 U	1.0 U	**1.7 J+**	**1.2**	**1.1**
Tetrahydrofuran	NE	NE	NE	NE	200 U	200 U	200 U	50 U	50 U	50 U	100 UJ	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	100 U	100 U	100 U	20 U	20 U	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	100 U	100 U	100 U	20 U	**20**	20 U	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	50.0 U	50.0 U	50.0 U	10 U	10 U	10 U	10 UJ	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**5170**	**4710**	**4380**	**4000**	**3200**	**5200**	**5200**	**10.6**	**7.94**	**3.37**	**2.2**	**1.4**	**1.8**	**1.7**	**1.8**
Trichlorofluoromethane	NE	NE	NE	NE	100 U	100 U	100 U	20 U	20 U	20 UJ	40 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	100 UJ	100 UJ	100 U	**42**	**68**	**31**	**28**	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	200 U	200 U	200 U	20 U	20 U	20 U	40 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-1	AE104R-3	AE104R-3	AE104R-3	AE104R-3	AE104R-3	AE104R-3
					Sample ID	6A-AE104R1-061416-	7A-AE104R1-100317-	8A-AE104R1-092618-	9A-AE104R1-091819-	0A-AE104R1-091120-	1A-AE104R1-090221-	2A-AE104R1-092822-	6A-AE104R3-061416-	7A-AE104R3-100317-	8A-AE104R3-092618-	9A-AE104R3-091819-	0A-AE104R3-091120-	1A-AE104R3-090221-	2A-AE104R3-092822-
					Sample Date	6/14/2016	10/3/2017	9/26/2018	9/18/2019	9/11/2020	9/2/2021	9/28/2022	6/14/2016	10/3/2017	9/26/2018	9/18/2019	9/11/2020	9/2/2021	9/28/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	48 - 54 ft	48 - 54 ft	48 - 54 ft	48 - 54 ft	48 - 54 ft	48 - 54 ft	48 - 54 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft	97 - 102 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	10 U	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	1.0 U	50.0 U	50.0 U	50.0 U	R	2.5 U	5.0 U	5.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	10 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**36.8**	**38.6**	**39.4**	**26**	**27**	**49**	**38**	100 U	100 U	100 U	**49**	**45**	**49**	**45**
1,1-Dichloroethene	**7**	**80**	30000	100000	20.0 U	20.0 U	20.0 U	5.0 U	**5.1**	**10**	**6.7**	100 U	100 U	100 UJ	**12**	**12**	**12**	**11**
1,1-Dichloropropene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	10 U	5.0 U	7.0 UJ	7.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	2.5 U	2.5 U	2.5 U	0.50 U	100 U	100 U	100 U	10 U	2.5 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene	70	200	50000	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 UJ	20 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	40.0 UJ	40.0 U	40.0 U	R	2.5 U	2.5 U	1.0 UJ	200 U	200 U	200 U	R	2.5 U	5.0 U	10 UJ
1,2-Dibromoethane	0.02	2	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	0.50 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	5.0 U	5.0 U
1,2-Dichlorobenzene	600	8000	2000	80000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
1,2-Dichloroethane	5	5	20000	100000	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	1.2 U	100 U	100 U	100 U	10 U	3.0 U	5.0 U	5.0 U
1,2-Dichloropropane	5	3	50000	100000	20.0 U	20.0 U	20.0 U	3.0 U	3.0 U	3.0 U	2.0 U	100 U	100 U	100 U	10 U	3.0 U	5.0 U	5.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
1,3-Dichlorobenzene	100	6000	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
1,3-Dichloropropane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
1,4-Dichlorobenzene	5	60	8000	80000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	10 U	5.0 U	5.0 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	400 U	400 UJ	200 U	500 U	500 U	80 U	NS	2000 U	2000 U	800 U	500 U	1000 U	800 U
2,2-Dichloropropane	NE	NE	NE	NE	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 UJ	100 U	20 U	5.0 U	10 U	20 U
2-Butanone	4000	50000	50000	100000	200 U	40.0 U	40.0 U	R	25 U	25 U	10 UJ	1000 U	200 U	200 U	R	25 U	50 U	40 UJ
2-Chlorotoluene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
2-Hexanone	NE	NE	NE	NE	200 U	40.0 U	40.0 UJ	25 U	25 U	25 U	10 UJ	1000 U	200 U	200 U	R	25 U	50 U	40 UJ
2-Phenylbutane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 UJ	20 U
4-Chlorotoluene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
4-Methyl-2-pentanone	350	50000	50000	100000	200 U	40.0 U	40.0 UJ	25 U	25 U	25 U	10 UJ	1000 U	200 U	200 U	R	25 U	50 U	100 UJ
Acetone	6300	50000	50000	100000	200 U	200 U	200 U	R	130 U	130 UJ	50 UJ	1000 UJ	1000 U	1000 U	R	130 U	250 U	500 UJ
Benzene	5	1000	10000	100000	20.0 U	20.0 U	20.0 U	3.5 U	3.5 U	3.5 U	1.4 U	100 U	100 U	100 U	10 U	3.5 U	5.0 U	5.0 U
Bromobenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 UJ	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Bromochloromethane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Bromodichloromethane	3	6	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	1.0 U	50.0 U	50.0 U	50.0 UJ	10 U	2.5 U	5.0 U	5.0 U
Bromoform	4	700	50000	100000	20.0 U	20.0 U	20.0 UJ	R	4.0 U	4.0 U	2.0 UJ	100 U	100 U	100 U	10 U	4.0 U	5.0 U	5.0 UJ
Bromomethane	10	7	800	8000	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	2.0 U	200 UJ	200 U	200 UJ	R	5.0 U	7.0 U	7.0 U
Carbon Disulfide	NE	NE	NE	NE	40.0 U	40.0 UJ	40.0 U	25 U	25 U	25 U	10 U	200 U	200 UJ	200 UJ	100 U	25 U	50 U	100 U
Carbon tetrachloride	5	2	5000	50000	20.0 U	20.0 U	20.0 U	2.5 U	2.5 U	2.5 U	2.0 U	100 U	100 U	100 U	10 U	2.5 U	5.0 U	5.0 U
Chlorobenzene	100	200	1000	10000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Chloroethane	NE	NE	NE	NE	40.0 U	40.0 U	40.0 U	5.0 U	5.0 UJ	5.0 U	2.0 U	200 U	200 U	200 U	20 U	5.0 UJ	10 U	20 U
Chloroform	70	50	20000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
chloromethane	NE	NE	NE	NE	40.0 U	40.0 UJ	40.0 U	5.0 U	5.0 U	5.0 U	2.0 U	200 U	200 UJ	200 U	20 U	5.0 U	10 U	20 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**78.6**	**122**	**166**	**240**	**220**	**170**	**250**	**149**	**136**	**139**	**230**	**140**	**150**	**220**
cis-1,3-Dichloropropene	NE	NE	NE	NE	10.0 UJ	10.0 UJ	10.0 UJ	2.5 U	2.5 U	2.5 U	0.50 U	50.0 U	50.0 UJ	50.0 U	10 U	2.5 U	5.0 U	5.0 U
Cymene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 UJ	20 U
Dibromochloromethane	2	20	50000	100000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	1.0 UJ	50.0 U	50.0 U	50.0 U	10 U	2.5 U	5.0 U	5.0 UJ
Dibromomethane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	10 U	5.0 U	8.3 U	8.3 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	40.0 U	40.0 U	40.0 UJ	5.0 U	5.0 U	5.0 U	2.0 U	200 U	200 U	200 U	20 U	5.0 U	10 U	20 U
Diethyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Diisopropyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 UJ	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 UJ	100 U	20 U	5.0 U	10 U	20 U
Ethylbenzene	700	20000	5000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 UJ	20 U	5.0 U	10 U	20 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	10.0 U	10.0 U	10.0 U	2.5 U	2.5 U	2.5 U	0.60 U	50.0 U	50.0 U	50.0 U	10 U	2.5 U	5.0 U	5.0 U
Isopropylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 UJ	20 U
Methyl tert-butyl ether	70	50000	50000	100000	20.0 U	20.0 UJ	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 UJ	100 U	20 U	5.0 U	10 U	20 U
Methylene Chloride	5	2000	50000	100000	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	2.0 U	200 U	200 U	200 UJ	10 U	5.0 U	50 U	10 U
mp-xylene	10000	3000	5000	NE	40.0 U	40.0 U	40.0 U	5.0 U	5.0 U	5.0 U	2.0 U	200 U	200 U	200 U	20 U	5.0 U	10 U	20 U
Naphthalene	140	700	20000	100000	20.0 UJ	20.0 U	40.0 UJ	5.0 U	5.0 U	5.0 UJ	2.0 U	100 UJ	100 U	200 U	20 U	5.0 U	10 UJ	20 U
N-Butylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
N-Propylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
o-Xylene	10000	3000	5000	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Styrene	100	100	6000	60000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 UJ	20 U
Tert-Butylbenzene	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 UJ	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 UJ	20 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**469**	**477**	**315**	**130**	**220**	**410 J+**	**320**	**3850**	**3300**	**2410**	**1800**	**1300 J+**	**1600 J+**	**1300**
Tetrahydrofuran	NE	NE	NE	NE	40.0 U	40.0 U	40.0 U	13 U	13 U	13 U	5.0 UJ	200 U	200 U	200 U	R	13 U	25 U	50 UJ
Toluene	**1000**	50000	40000	100000	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	20.0 U	20.0 U	20.0 U	5.0 U	**6.0**	**6.1**	**11**	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	10.0 UJ	10.0 UJ	10.0 U	2.5 U	2.5 U	2.5 U	0.50 UJ	50.0 U	50.0 UJ	50.0 U	10 U	2.5 U	5.0 U	5.0 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**1320**	**1500**	**1280**	**540**	**700**	**1200**	**1100**	**5860**	**4790**	**4340**	**3500**	**2200**	**2800**	**2700**
Trichlorofluoromethane	NE	NE	NE	NE	20.0 U	20.0 U	20.0 U	5.0 U	5.0 U	5.0 U	2.0 U	100 U	100 U	100 U	20 U	5.0 U	10 U	20 U
Vinyl chloride	**2**	**2**	50000	100000	20.0 UJ	20.0 UJ	**26.2 J**	**29**	**34**	**18**	**40**	100 U	100 UJ	100 UJ	**16**	**11**	**6.3**	**14**
Xylenes (Total)	10000	3000	5000	NE	40 U	40 U	40 U	5.0 U	5.0 U	5 U	2 U	200 U	200 U	200 U	20 U	5.0 U	10 U	20 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE104R-5	AE104R-5	AE104R-5	AE104R-5	AE104R-5	AE104R-5	AE104R-5	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1
					Sample ID	6A-AE104R5-061416-	7A-AE104R5-100317-	8A-AE104R5-092618-	9A-AE104R5-091819-	0A-AE104R5-091120-	1A-AE104R5-090221-	2A-AE104R5-092822-	6A-AE108R1-061616-	6A-AE108R1-061616-	7A-AE108R1-100917-	8A-AE108R1-091918-	9A-AE108R1-092419-	0A-AE108R1-090920-	1A-AE108R1-090921-	2A-AE108R1-092822-
					Sample Date	6/14/2016	10/3/2017	9/26/2018	9/18/2019	9/11/2020	9/2/2021	9/28/2022	6/16/2016	6/16/2016	10/9/2017	9/19/2018	9/24/2019	9/9/2020	9/9/2021	9/28/2022
					Sample Type	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
					Depth Interval	156 - 162 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	156 - 162 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	100 U	50.0 U	50.0 U	R	10 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
1,1,2-Trichloroethane	**5**	900	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	200 U	100 U	100 U	**66**	**63**	**71**	**64**	**1.2**	1.0 U	**1.13**	**1.82**	**1.3**	**1.2**	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	200 U	100 U	100 UJ	25 U	**17**	**18**	**14**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	200 U	100 U	100 U	25 U	10 U	10 U	7.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	200 U	100 U	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	400 UJ	200 U	200 U	R	10 UJ	10 U	10 UJ	2.0 U	2.0 U	2.00 U	2.00 U	R	0.50 UJ	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	100 U	50.0 U	50.0 U	25 U	10 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	200 U	100 UJ	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	200 U	100 UJ	100 U	40 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	200 U	100 U	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	2000 U	2000 U	2000 U	2000 U	2000 U	2000 U	800 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	2000 U	200 U	200 U	R	100 U	100 U	40 UJ	10.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	2000 U	200 U	200 U	R	100 U	100 U	40 UJ	10.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	2000 U	200 U	200 U	R	100 U	100 U	100 UJ	10.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	2000 U	1000 U	1000 U	R	500 UJ	500 U	500 UJ	10.0 U	10.0 U	10.0 U	10.0 U	R	R	25 U	25 UJ
Benzene	5	1000	10000	100000	200 U	100 U	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	100 U	50.0 U	50.0 UJ	25 U	10 U	10 U	5.0 U	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	200 U	100 U	100 U	25 U	10 U	10 U	5.0 UJ	1.0 U	1.0 U	1.00 UJ	1.00 U	R	1.0 UJ	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	400 U	200 U	200 UJ	R	10 UJ	10 U	7.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Carbon Disulfide	NE	NE	NE	NE	400 U	200 U	200 UJ	250 U	100 U	100 U	100 U	2.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Carbon tetrachloride	5	2	5000	50000	200 U	100 U	100 U	25 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	400 U	200 U	200 U	50 U	20 UJ	20 U	20 U	2.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	400 U	200 U	200 U	50 U	20 U	20 U	20 U	2.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	200 U	**291**	**280**	**520**	**590**	**500**	**680**	**15.1**	**12.8**	**21.9**	**38.0**	**24**	**23**	1.0 U	**7.2**
cis-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	50.0 U	50.0 U	25 U	10 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	20 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	100 U	50.0 U	50.0 U	25 U	10 U	10 U	5.0 UJ	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	200 U	100 U	100 U	25 U	10 U	10 U	8.3 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	400 U	200 U	200 U	50 U	20 U	20 U	20 U	2.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	200 U	100 U	100 UJ	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	100 U	50.0 U	50.0 U	25 U	10 U	10 U	5.0 U	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	200 U	100 UJ	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	400 U	200 U	200 UJ	25 U	20 UJ	100 U	10 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	400 U	200 U	200 U	50 U	20 U	20 U	20 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	200 UJ	100 U	200 U	50 U	20 U	20 UJ	20 U	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	200 U	100 U	100 U	50 U	20 U	20 UJ	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 UJ	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	200 U	100 UJ	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3980**	**3890**	**2800**	**2400**	**2100**	**1300 J+**	**1700**	**1.4**	**1.3**	1.00 U	1.00 U	1.0 U	1.0 R	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	400 U	200 U	200 U	R	50 U	50 U	50 UJ	**2.9**	**3.6**	2.00 U	2.00 UJ	**3.1 J-**	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	200 U	100 U	100 U	50 U	20 U	20 U	20 U	**48.8 J**	**77.7 J**	**9.80**	**4.51**	**1.0**	**1.2**	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	200 U	100 U	100 U	50 U	**28**	20 U	**22**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	100 UJ	50.0 UJ	50.0 U	25 U	10 U	10 U	5.0 UJ	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**6390**	**5600**	**5440**	**4400**	**4200**	**2700**	**4200**	**7.6**	**6.5**	**5.12**	**6.55**	**4.9 J-**	**4.4**	1.0 U	**1.5**
Trichlorofluoromethane	NE	NE	NE	NE	200 U	100 U	100 U	50 U	20 U	20 U	20 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	200 UJ	100 U	100 UJ	**71**	**91**	**43**	**78**	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	400 U	200 U	200 U	50 U	20 U	20 U	20 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-3	AE108R-5	AE108R-5	AE108R-5	AE108R-5	AE108R-5	AE108R-5
					Sample ID	6A-AE108R3-061616-	7A-AE108R3-100917-	8A-AE108R3-091918-	8A-AE108R3-091918-	9A-AE108R3-092419-	0A-AE108R3-090920-	1A-AE108R3-090921-	2A-AE108R3-092822-	6A-AE108R5-061616-	7A-AE108R5-100917-	8A-AE108R5-091918-	9A-AE108R5-092419-	0A-AE108R5-090920-	1A-AE108R5-090921-	2A-AE108R5-092822-
					Sample Date	6/16/2016	10/9/2017	9/19/2018	9/19/2018	9/24/2019	9/9/2020	9/9/2021	9/28/2022	6/16/2016	10/9/2017	9/19/2018	9/24/2019	9/9/2020	9/9/2021	9/28/2022
					Sample Type	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	84 - 89 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft	163 - 168 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 UJ
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.3**	**1.63**	**2.93**	**2.5**	**2.7**	**3.0**	5.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	1.3 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	0.50 UJ	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	1.0 U	0.50 UJ	0.50 U	2.5 UJ	
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.3 U	
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	3.0 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	3.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	20.0 U	10 U	100 U	100 U	40 U	20.0 U	20.0 U	20.0 U	20.0 U	10 U	100 U	100 U	200 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	5.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	25 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	25 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	25 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	10.0 U	25 U	R	25 U	25 UJ	10.0 U	10.0 U	10.0 U	25 U	R	25 U	130 UJ	
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	3.5 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	
Bromoform	4	700	50000	100000	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 UJ	1.0 U	4.0 UJ	
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	5.0 U	
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 UJ	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 UJ	25 U	
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U
Chloroethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	5.0 U	
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**2.3**	**2.89**	**8.44**	**8.28**	**7.6**	**9.4**	**7.5**	**12**	**10.5**	**14.2**	**25.8**	**23**	**27**	**35**	**36**	
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	1.3 U	
Cymene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	2.0 UJ	
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	1.3 U	
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	5.0 U	
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 UJ	5.0 U	
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Tetrachloroethene	**5**	**50**	**30000**	100000	**14.8**	**21.5**	**37.3**	**36.9**	**35**	**49 J+**	**41 J+**	**30**	**8.9**	**9.33**	**15.2**	**24**	**19 J+**	**21 J+**	**13**	
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	2.00 UJ	2.5 U	2.5 U	2.5 U	2.5 UJ	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.5 U	13 UJ	
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.2**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 UJ	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	1.3 UJ	
Trichloroethene	**5**	**5**	**5000**	**50000**	**9.4**	**12.7**	**29.2**	**28.8**	**23**	**30**	**24**	**23**	**14.1**	**21.5**	**47.8 J+**	**54**	**51**	**51**	**32**	
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	5.0 U	
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	2.0 U	
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	5 U	

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Location Group					Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
Location ID					AE109D	AE109D	AE109D	AE109D	AE109D	AE109D	AE109D	AE109D	AE109R-1	AE109R-1	AE109R-1	AE109R-1	AE109R-1	AE109R-1
Sample ID					16A-AE109D-062116-	16A-AE109D-062116-D	17A-AE109D-101317-	18A-AE109D-092618-	19A-AE109D-092019-	20A-AE109D-091620-	21A-AE109D-090721-	22A-AE109D-100622-	16A-AE109R1-061616-	17A-AE109R1-101017-	18A-AE109R1-100218-	19A-AE109R1-091819-	20A-AE109R1-091620-	21A-AE109R1-090221-	22A-AE109R1-100422-
Sample Date					6/21/2016	6/21/2016	10/13/2017	9/26/2018	9/20/2019	9/16/2020	9/7/2021	10/6/2022	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	9/2/2021	10/4/2022
Sample Type					N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval					18 - 23 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	18 - 23 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft	38 - 43 ft
Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U	2.0 U	2.00 UJ	2.00 U	R	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	NS	20.0 U	20.0 U	40 U	100 U	100 U	50 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 UJ	10.0 UJ	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	**10.6**	**3.24**	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	25 U	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.0 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	**2.9**	**3.66**	**2.80**	**3.1**	**2.6**	**2.4**	**3.1**	
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	**3.2**	1.00 U	1.00 U	1.0 U	R	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 U	**5.8**	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**30.5**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.0**	**1.1**	**1.36**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**6.1**	**3.68**	**1.76**	**1.5**	**1.2**	**1.1**	**1.0**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE109R-2	AE109R-2	AE109R-2	AE109R-2	AE109R-2	AE109R-2	AE109R-2	AE109R-2	AE109R-4	AE109R-4	AE109R-4	AE109R-4	AE109R-4	AE109R-4
					Sample ID	6A-AE109R2-061616-	7A-AE109R2-101017-	8A-AE109R2-100218-	9A-AE109R2-091819-	0A-AE109R2-091620-	1A-AE109R2-090221-	1A-AE109R2-090221-	2A-AE109R2-100422-	6A-AE109R4-061616-	7A-AE109R4-101017-	8A-AE109R4-100218-	9A-AE109R4-091819-	0A-AE109R4-091620-	1A-AE109R4-090221-	2A-AE109R4-100422-
					Sample Date	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	9/2/2021	9/2/2021	10/4/2022	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	9/2/2021	10/4/2022
					Sample Type	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N
					Depth Interval	66 - 76 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft	66 - 76 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft	174 - 180.5 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	5.00 U	1.0 U	0.50 U	0.50 U	1.0 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**7.8**	**16.2**	10.0 U	**3.5**	**3.3**	**2.5**	**3.1**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 UJ	2.0 U	1.0 U	1.0 U	2.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	5.0 U	5.00 U	10.0 U	1.0 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	R	0.50 U	0.50 U	0.50 U	0.50 UJ	10.0 U	10.0 UJ	20.0 U	R	0.50 U	0.50 U	1.0 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	2.5 U	2.50 U	5.00 U	1.0 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	5.0 U	5.00 U	10.0 U	1.2 U	0.60 U	0.60 U	1.2 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	40 U	100 U	100 U	200 U	80 U	100 U	100 U	80 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 UJ	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
2-Butanone	4000	50000	50000	100000	**17.1**	**5.00**	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 U	20.0 U	R	5.0 U	5.0 U	10 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 U	20.0 U	10 U	5.0 U	5.0 U	10 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 U	20.0 U	10 U	5.0 U	5.0 U	10 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 U	25 UJ	50.0 U	50.0 U	100 U	R	25 U	25 U	50 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	5.0 U	5.00 U	10.0 U	1.4 U	0.70 U	0.70 U	1.4 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 UJ	5.00 U	1.0 U	0.50 U	0.50 U	1.0 U
Bromoform	4	700	50000	100000	1.0 U	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 UJ	10.0 U	R	1.0 U	1.0 U	2.0 UJ
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	1.0 U	2.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	20.0 U	10 U	5.0 U	5.0 U	10 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Chloroethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	20.0 U	2.0 U	1.0 UJ	1.0 U	2.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	20.0 U	2.0 U	1.0 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**2.0**	**2.01**	**2.07**	**2.3**	**2.7**	**3.6**	**3.8**	**3.2**	**36.0**	**439**	**299**	**200**	**170**	**140**	**180**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	1.0 U	0.40 U	0.40 U	0.50 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 UJ	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 UJ	2.5 U	2.50 UJ	5.00 U	1.0 UJ	0.50 U	0.50 U	1.0 UJ
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	5.00 U	1.0 U	0.40 U	0.40 U	0.60 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 UJ	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	1.0 U	2.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	20.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.0 U	5.00 U	20.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 UJ	2.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**3.2**	1.00 U	1.00 U	1.0 U	R	1.0 UJ	1.0 UJ	1.0 U	**159**	**112**	10.0 U	2.0 U	**2.1 J+**	1.0 UJ	**2.9**
Tetrahydrofuran	NE	NE	NE	NE	**6.9**	2.00 U	2.00 U	**2.9**	2.5 U	2.5 U	2.5 U	2.5 UJ	**13.3**	10.0 U	20.0 U	5.0 U	2.5 U	2.5 U	5.0 UJ
Toluene	**1000**	50000	40000	100000	**62.8**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**22.7**	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	**7.35**	10.0 U	**3.5**	**3.6**	**2.3**	**2.3**
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 UJ	2.5 U	2.50 UJ	5.00 U	1.0 U	0.40 U	0.40 U	0.50 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**6.0**	**2.87**	**1.53**	**1.4**	**1.2**	**1.3**	**1.2**	1.0 U	**366**	**453**	**75.9**	**20**	**21**	**10**	**27**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	2.0 U	1.0 U	1.0 U	2.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	1 U	10 U	10 U	20 U	2.0 U	1.0 U	1 U	2 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
				Location ID	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-6	AE109R-8	AE109R-8	AE109R-8	AE109R-8	AE109R-8	AE109R-8	AE109R-8
				Sample ID	6A-AE109R6-061616-	7A-AE109R6-101017-	8A-AE109R6-100218-	9A-AE109R6-091819-	0A-AE109R6-091620-	1A-AE109R6-090221-	2A-AE109R6-100422-	6A-AE109R8-061616-	7A-AE109R8-101017-	8A-AE109R8-100218-	9A-AE109R8-091819-	0A-AE109R8-091620-	1A-AE109R8-090221-	2A-AE109R8-100422-
				Sample Date	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	9/2/2021	10/4/2022	6/16/2016	10/10/2017	10/2/2018	9/18/2019	9/16/2020	9/2/2021	10/4/2022
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	196 - 201 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	196 - 201 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft	245 - 250 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.5 U	2.50 U	5.00 U	2.5 U	0.50 U	0.50 U	1.0 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**6.4**	**8.75**	10.0 U	**6.5**	**6.7**	**6.1**	**5.3**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	5.0 U	5.00 U	10.0 UJ	5.0 U	**1.6**	**1.4**	2.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	2.5 U	0.50 U	0.50 U	0.50 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	10.0 U	10.0 UJ	20.0 U	R	0.50 U	0.50 U	1.0 UJ	2.0 U	2.00 UJ	2.00 U	R	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	2.5 U	2.50 U	5.00 U	2.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	5.0 U	5.00 U	10.0 U	3.0 U	0.60 U	0.60 U	1.2 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	5.0 U	5.00 U	10.0 U	3.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	100 U	200 U	200 U	100 U	100 U	80 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 UJ	1.0 U	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	50.0 U	10.0 U	20.0 U	R	5.0 U	5.0 U	10 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	50.0 U	10.0 U	20.0 U	25 U	5.0 U	5.0 U	10 UJ	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	50.0 U	10.0 U	20.0 U	25 U	5.0 U	5.0 U	10 UJ	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	50.0 U	50.0 U	100 U	R	25 U	25 UJ	50 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 U	25 UJ
Benzene	5	1000	10000	100000	5.0 U	5.00 U	10.0 U	3.5 U	0.70 U	0.70 U	1.4 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	2.5 U	2.50 UJ	5.00 U	2.5 U	0.50 U	0.50 U	1.0 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	5.0 U	5.00 UJ	10.0 U	R	1.0 U	1.0 U	2.0 UJ	1.0 U	1.00 UJ	1.00 U	R	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	10.0 UJ	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	2.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	10.0 U	10.0 U	20.0 U	25 U	5.0 U	5.0 U	10 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	5.0 U	5.00 UJ	10.0 U	2.5 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	10.0 U	10.0 U	20.0 U	5.0 U	1.0 UJ	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**26.8**	**121**	**159**	**180**	**170**	**170**	**180**	**2.8**	**2.22**	**3.75**	**4.7**	**4.6**	**4.9**	**6.0**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	2.50 U	5.00 U	2.5 U	0.40 U	0.40 U	0.50 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	2.5 U	2.50 UJ	5.00 U	2.5 U	0.50 U	0.50 U	1.0 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	2.5 U	2.50 U	5.00 U	2.5 U	0.40 U	0.40 U	0.60 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	10.0 U	10.0 U	20.0 U	5.0 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	5.0 UJ	5.00 U	20.0 U	5.0 U	1.0 U	1.0 UJ	2.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 UJ	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.0 U	5.00 UJ	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**97.6**	**58.0**	**20.0**	**18**	**12 J+**	**6.1 J+**	**7.0**	**10.6**	**2.36**	**1.04**	1.0 U	R	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	10.0 U	10.0 U	20.0 U	13 U	2.5 U	2.5 U	5.0 UJ	5.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	**26.3**	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	**3.4**	**1.48**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.0 U	5.00 U	10.0 U	5.0 U	**3.4**	**3.3**	**3.0**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	2.50 UJ	5.00 U	2.5 U	0.40 U	0.40 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**342**	**377**	**237**	**200**	**180**	**110**	**120**	**30.4**	**11.4**	**6.88**	**5.0**	**2.9**	**1.9**	**1.6**
Trichlorofluoromethane	NE	NE	NE	NE	5.0 U	5.00 U	10.0 U	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	5.0 U	5.00 U	10.0 U	2.5 U	**3.7**	**6.2**	**3.9**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	10 U	10 U	20 U	5.0 U	1.0 U	1 U	2 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-1	AE110R-2	AE110R-2	AE110R-2	AE110R-2	AE110R-2	AE110R-2	AE110R-2
					Sample ID	6A-AE110R1-061716-	7A-AE110R1-101117-	8A-AE110R1-092518-	9A-AE110R1-091319-	0A-AE110R1-091620-	1A-AE110R1-090221-	2A-AE110R1-100522-	6A-AE110R2-061716-	7A-AE110R2-101117-	8A-AE110R2-092518-	9A-AE110R2-091319-	0A-AE110R2-091620-	1A-AE110R2-090221-	2A-AE110R2-100522-
					Sample Date	6/17/2016	10/11/2017	9/25/2018	9/13/2019	9/16/2020	9/2/2021	10/5/2022	6/17/2016	10/11/2017	9/25/2018	9/13/2019	9/16/2020	9/2/2021	10/5/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	34 - 44 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	34 - 44 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft	70 - 80 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	40 U	20.0 U	20.0 U	**67.3 J**	40 U	100 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	**26.9**	**8.88**	**3.43**	R	5.0 U	5.0 U	5.0 UJ	**97.1**	**12.9**	**16.7**	R	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	**50.0**	R	25 U	25 U	25 U	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	**0.8**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**0.5**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	**5.1**	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000	**1.9**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.3**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	**0.7**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**0.6**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	**15**	2.5 U	2.5 U	2.5 UJ	**3.4**	**2.07**	2.00 U	**30**	2.5 U	2.5 U	**4.3 J+**	
Toluene	**1000**	50000	40000	100000	**238**	**1.13**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**204**	1.00 U	**3.57**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE110R-5	AE110R-5	AE110R-5	AE110R-5	AE110R-7	AE110R-7	AE110R-7	AE110R-7	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D	EMW-10D
					Sample ID	6A-AE110R5-061716-	7A-AE110R5-101117-	1A-AE110R5-090221-	2A-AE110R5-100522-	6A-AE110R7-061716-	6A-AE110R7-061716-	7A-AE110R7-101117-	1A-AE110R7-090221-	2A-AE110R7-100522-	6A-EMW10D-061316-	7A-EMW10D-101117-	7A-EMW10D-101117-	8A-EMW10D-092018-	9A-EMW10D-093019-	0A-EMW10D-091120-	1A-EMW10D-090821-	2A-EMW10D-100422-
					Sample Date	6/17/2016	10/11/2017	9/2/2021	10/5/2022	6/17/2016	6/17/2016	10/11/2017	9/2/2021	10/5/2022	6/13/2016	10/11/2017	10/11/2017	9/20/2018	9/30/2019	9/11/2020	9/8/2021	10/4/2022
					Sample Type	N	N	N	N	N	FD	N	N	N	N	N	FD	N	N	N	N	N
					Depth Interval	171 - 182 ft	171 - 182 ft	171 - 182 ft	171 - 182 ft	224 - 234 ft	224 - 234 ft	224 - 234 ft	224 - 234 ft	224 - 234 ft	19 - 29 ft	18.49 - 28.49 ft	18.49 - 28.49 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft	19 - 29 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	**1.4**	**1.4**	**1.4**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	0.50 U	0.25 U	1.0 U	1.0 U	1.00 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	0.50 U	0.50 UJ	2.0 U	2.0 U	2.00 U	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	2.00 UJ	R	0.50 UJ	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.25 U	0.5 U	0.5 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	0.60 U	0.60 U	1.0 U	1.0 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	100 U	40 U	NS	NS	20.0 U	100 U	40 U	20.0 U	20.0 U	20.0 U	20.0 UJ	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	**12.0**	**2.20**	5.0 U	5.0 UJ	**25.2**	**24.4**	**9.35**	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	5.0 U	5.0 UJ	10.0 U	10.0 U	2.00 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	5.0 U	5.0 UJ	10.0 U	10.0 U	2.00 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	25 U	25 UJ	10.0 U	10.0 U	10.0 U	25 U	25 UJ	10.0 U	10.0 U	10.0 U	10.0 UJ	R	R	25 U	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	0.70 U	0.70 U	1.0 U	1.0 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	**0.7**	**0.5**	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.0 U	2.00 UJ	1.0 U	1.0 UJ	2.0 U	2.0 U	2.00 UJ	1.0 U	1.0 UJ	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	5.0 U	5.0 U	2.0 U	2.0 U	2.00 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.0 U	1.0 U	**1.0**	**1.1**	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.0 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	**1.6**	**1.9**	1.0 U	1.0 U	1.00 U	**1.7**	**1.9**	**9.8**	**17.9**	**18.5**	**15.0**	**16**	**21**	**19**	**22**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	**0.6**	**0.5**	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.40 U	0.40 U	0.5 U	0.5 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 UJ	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	**1.1**	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	**9.5**	**71.4**	**71.2**	**76.1**	**99**	**110 J+**	**130 J+**	**99**
Tetrahydrofuran	NE	NE	NE	NE	**7.1**	2.00 U	2.5 U	2.5 UJ	**6.6**	**8.2**	2.00 U	2.5 U	2.5 UJ	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	**30.8**	1.00 U	1.0 U	1.0 U	**146**	**142**	**5.04**	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 UJ	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	**12.5**	**42.3**	**42.6**	**34.8**	**28**	**36**	**33**	**41**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.78**	**1.70**	**1.75**	**2.1**	**5.7**	**2.9**	**3.2**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
					Location ID	AE105D	AE105D	AE105D	AE105D	AE105D	AE105D	AE105D	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2
					Sample ID	16A-AE105D-062216-	17A-AE105D-101217-	18A-AE105D-100318-	19A-AE105D-091619-	20A-AE105D-091720-	21A-AE105D-091721-	22A-AE105D-092922-	16A-AE105R2-062016-	17A-AE105R2-101217-	18A-AE105R2-100318-	19A-AE105R2-091619-	20A-AE105R2-091720-	21A-AE105R2-092922-
					Sample Date	6/22/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/17/2021	9/29/2022	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000		0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000		**1.0**	1.00 U	**1.27**	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	**5.00**	5.00 U	**3.9**	**3.7**	**4.2**
1,1-Dichloroethene	**7**	**80**	30000	100000		**1.1**	1.00 U	**1.07 J**	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	**2.8**	**2.7**	**3.1**
1,1-Dichloropropene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	5.0 U	5.00 U	5.00 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE		2.0 UJ	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	10.0 U	10.0 U	10.0 U	R	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000		0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000		1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000		NS	20.0 U	20.0 U	40 U	100 U	100 U	40 U	100 U	100 U	100 U	40 U	100 U	100 U
2,2-Dichloropropane	NE	NE	NE	NE		1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000		10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE		10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000		10.0 UJ	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000		10.0 UJ	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	50.0 U	50.0 U	50.0 U	R	25 U	25 UJ
Benzene	5	1000	10000	100000		1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000		0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000		1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 U	1.0 UJ	5.0 U	5.00 U	5.00 U	R	1.0 U	1.0 U
Bromomethane	10	7	800	8000		2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE		2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE		2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE		2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000		**50.1 J-**	**32.1**	**40.9**	**29**	**18**	**16**	**23**	**15.3**	**25.1**	**20.8**	**30**	**28**	**35**
cis-1,3-Dichloropropene	NE	NE	NE	NE		0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000		0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE		2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 UJ	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE		1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000		0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000		1.0 UJ	**1.83**	**1.81**	**2.6**	**2.4**	**2.7**	**2.4**	5.0 UJ	5.00 U	5.00 U	**2.3**	**2.4**	**2.6**
Methylene Chloride	5	2000	50000	100000		2.0 U	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE		2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000		1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	10.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000		1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	1.0 U	**46.0**	**70.5**	**28.0**	**52**	**41 J+**	**45 J+**
Tetrahydrofuran	NE	NE	NE	NE		2.0 U	2.00 U	2.00 U	2.5 U	2.5 U	2.5 U	2.5 UJ	**10.0**	10.0 U	10.0 U	2.5 UJ	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE		0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 UJ	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**		**5.4**	**8.61**	**27.6**	**12**	**6.8**	1.0 U	**21**	**130**	**246**	**120**	**170**	**130**	**140**
Trichlorofluoromethane	NE	NE	NE	NE		1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000		1.0 U	1.00 U	**1.23**	1.0 U	1.0 U	**4.6 J+**	1.0 U	5.0 U	5.00 U	5.00 U	1.0 U	**1.4**	**2.0**
Xylenes (Total)	10000	3000	5000	NE		2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	10 U	10 U	10 U	1.0 U	1.0 U	1 U

Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
Location ID	AE105D	AE105D	AE105D	AE105D	AE105D	AE105D	AE105D	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2
Sample ID	16A-AE105D-062216-	17A-AE105D-101217-	18A-AE105D-100318-	19A-AE105D-091619-	20A-AE105D-091720-	21A-AE105D-091721-	22A-AE105D-092922-	16A-AE105R2-062016-	17A-AE105R2-101217-	18A-AE105R2-100318-	19A-AE105R2-091619-	20A-AE105R2-091720-	21A-AE105R2-092922-
Sample Date	6/22/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/17/2021	9/29/2022	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	73 - 78 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
				Location ID	AE105R-3	AE105R-3	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-4	AE105R-5	AE105R-5	AE105R-5	AE105R-5	AE105R-5
				Sample ID	1A-AE105R3-091321-	2A-AE105R3-092922-	6A-AE105R4-062016-	7A-AE105R4-101217-	8A-AE105R4-100318-	9A-AE105R4-091619-	0A-AE105R4-091720-	1A-AE105R4-091321-	2A-AE105R4-092922-	7A-AE105R5-101217-	8A-AE105R5-100318-	9A-AE105R5-091619-	0A-AE105R5-091720-	1A-AE105R5-091321-	2A-AE105R5-092922-
				Sample Date	9/13/2021	9/29/2022	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	9/29/2022	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	9/29/2022
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	107.5 - 112.5 ft	107.5 - 112.5 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	125 - 130 ft	143 - 148 ft	143 - 148 ft	143 - 148 ft	143 - 148 ft	143 - 148 ft	143 - 148 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**4.6**	**5.3**	5.0 U	5.00 U	5.00 U	**3.9**	**3.9**	**4.4**	**4.6**	5.00 U	**2.07**	**3.7**	**3.5**	**4.1**	**3.8**
1,1-Dichloroethene	**7**	**80**	30000	100000	**3.6**	**3.5**	5.0 U	5.00 U	5.00 U	**2.7**	**3.2**	**3.5**	**3.3**	5.00 U	**1.36**	**3.0**	**2.7**	**3.4**	**2.9**
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.25 U	5.0 U	5.00 U	5.00 U	1.0 U	0.50 U	0.50 U	0.25 U	5.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	0.50 UJ	10.0 U	10.0 U	10.0 U	R	0.50 U	0.50 UJ	0.50 UJ	10.0 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.25 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	0.25 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	5.0 U	5.00 U	5.00 U	1.2 U	0.60 U	0.60 U	0.60 U	5.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	40 U	100 U	100 U	100 U	80 U	100 U	100 U	40 U	100 U	20.0 UJ	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 UJ	5.00 U	5.00 U	2.0 U	1.0 UJ	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 UJ	50.0 U	10.0 U	10.0 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 UJ	50.0 U	10.0 U	10.0 U	10 U	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 U	50.0 U	10.0 U	10.0 U	10 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 UJ	25 UJ	50.0 U	50.0 U	50.0 U	R	25 U	25 UJ	25 UJ	50.0 U	10.0 U	R	25 U	25 UJ	25 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	5.0 U	5.00 U	5.00 U	1.4 U	0.70 U	0.70 U	0.70 U	5.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	R	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	R	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 UJ	10.0 U	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	1.0 UJ	10.0 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	10.0 U	10.0 U	10.0 U	10 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 U	10.0 UJ	10.0 U	10.0 U	2.0 U	1.0 UJ	1.0 UJ	1.0 U	10.0 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	10.0 UJ	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	1.0 U	10.0 U	**3.45**	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**38**	**43**	**20.0**	**24.0**	**32.0**	**37**	**36**	**44**	**40**	**18.8**	**18.4**	**41**	**37**	**45**	**43**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U	0.40 U	0.40 U	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 U	2.5 U	2.50 U	2.50 U	1.0 U	0.50 U	0.50 U	0.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	1.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 UJ	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U	0.40 U	0.40 U	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	**3.2**	**3.3**	5.0 UJ	5.00 U	5.00 U	**2.5**	**2.4**	**2.8**	**2.5**	5.00 U	1.00 U	**1.9**	**1.7**	**2.2**	**1.7**
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	10.0 U	10.0 UJ	10.0 U	2.0 U	1.0 U	1.0 U	1.0 U	10.0 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	10.0 U	10.0 U	10.0 U	2.0 U	1.0 U	1.0 U	1.0 U	10.0 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**53 J+**	**52 J+**	**58.2**	**67.2**	**47.2**	**55**	**52 J+**	**51 J+**	**46 J+**	**56.2**	**18.3**	**50**	**43 J+**	**46 J+**	**31 J+**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	5.0 UJ	2.5 U	2.5 U	2.5 U	10.0 U	2.00 U	2.5 UJ	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	2.5 U	2.50 U	2.50 U	1.0 U	0.40 U	0.40 U	0.40 U	2.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**150**	**150 J**	**166**	**230**	**187**	**190**	**150**	**170**	**150 J**	**193**	**88.3**	**150**	**120**	**150**	**120 J**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	5.0 U	5.00 U	5.00 U	2.0 U	1.0 U	1.0 U	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	**1.9**	**1.3**	5.0 U	5.00 U	5.00 U	2.0 U	**1.2**	**1.6**	1.0 U	5.00 U	1.00 U	1.0 U	1.0 U	**1.1**	1.0 U
Xylenes (Total)	10000	3000	5000	NE	1 U	1 U	10 U	10 U	10 U	2.0 U	1.0 U	1 U	1 U	10 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
				Location ID	AE106M	AE106M	AE106M	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-1	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3
				Sample ID	21A-AE106M-091321-	22A-AE106M-092922-	22A-AE106M-092922-	6A-AE106R1-062016-	7A-AE106R1-101217-	8A-AE106R1-100318-	9A-AE106R1-091619-	0A-AE106R1-091720-	1A-AE106R1-091321-	2A-AE106R1-092922-	6A-AE106R3-062016-	7A-AE106R3-101217-	8A-AE106R3-100318-	9A-AE106R3-091619-	0A-AE106R3-091720-	1A-AE106R3-091321-	2A-AE106R3-092922-
				Sample Date	9/13/2021	9/29/2022	9/29/2022	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	9/29/2022	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	9/29/2022
				Sample Type	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	22.5 - 27.5 ft	22.5 - 27.5 ft	22.5 - 27.5 ft	47 - 52 ft	47 - 52 ft	47 - 52 ft	47 - 52 ft	47 - 52 ft	47 - 52 ft	47 - 52 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 UJ	0.50 UJ	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	**1.28**	**1.3**	**1.1**	**1.3**	**1.3**	**1.2**	**1.26**	**1.74**	**1.4**	**1.3**	**1.5**	**1.6**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.50 U	0.25 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 UJ	0.50 UJ	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 U	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.50 U	0.25 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	40 U	40 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	50 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	5.0 U	5.0 UJ	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	5.0 U	5.0 UJ	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	5.0 U	5.0 UJ	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	25 UJ	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ
Benzene	5	1000	10000	100000	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	R	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	R	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**9.2**	**8.0**	**8.7**	**5.5**	**4.98**	**18.0**	**28**	**14**	**18**	**15**	**13.9**	**14.2**	**41.8**	**33**	**19**	**23**	**17**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.50 U	0.50 UJ	0.50 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**26 J+**	**27**	**28**	**11.6**	**9.40**	**10.0**	**2.9**	**2.3 J+**	**1.8 J+**	**2.1 J+**	**24.5**	**25.3**	**7.77**	**2.3**	**2.5 J+**	**2.2 J+**	**3.8**
Tetrahydrofuran	NE	NE	NE	NE	2.5 U	2.5 UJ	2.5 UJ	2.6 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.0 U	1.0 U	**8.6**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**8.9**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.40 U	0.40 UJ	0.40 UJ	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**35**	**33**	**33**	**11.6**	**9.01**	**13.6**	**4.6**	**4.9**	**5.3**	**5.9 J**	**27.0**	**34.3**	**19.0**	**4.8**	**5.5**	**8.6**	**14**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	**1.25**	1.0 U	1.0 U	1.0 U	1.0 U	**1.7**	**1.54**	**1.32**	**1.6**	**1.6**	**1.1**	**1.0**
Xylenes (Total)	10000	3000	5000	NE	1 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
					Location ID	AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE106R-5	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-1	AE111R-1
					Sample ID	7A-AE106R5-101217-	8A-AE106R5-100318-	9A-AE106R5-091619-	0A-AE106R5-091720-	1A-AE106R5-091321-	2A-AE106R5-092922-	6B-AE111R1-061716-	7A-AE111R1-100517-	7A-AE111R1-100517-	8A-AE111R1-100218-	9A-AE111R1-092519-	0A-AE111R1-091620-	1A-AE111R1-090721-	1A-AE111R1-090721-	2A-AE111R1-100622-
					Sample Date	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	9/29/2022	6/17/2016	10/5/2017	10/5/2017	10/2/2018	9/25/2019	9/16/2020	9/7/2021	9/7/2021	10/6/2022
					Sample Type	N	N	N	N	N	N	N	N	FD	N	N	N	N	FD	N
					Depth Interval	164 - 169 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	164 - 169 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft	44 - 54 ft
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000		0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000		**1.81**	**1.86**	**1.4**	**1.3**	**1.6**	**1.6**	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000		1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE		1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE		2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	2.0 U	2.00 UJ	2.00 UJ	2.00 U	R	0.50 U	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000		1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000		20.0 U	20.0 U	40 U	100 U	100 U	40 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000		2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE		2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
4-Chlorotoluene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000		2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000		10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	25 UJ	25 UJ
Benzene	5	1000	10000	100000		1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000		2.00 U	2.00 UJ	R	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE		2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	**2.2**	**2.3**	**1.5**
Chloroethane	NE	NE	NE	NE		2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE		2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000		**10.7**	**11.9**	**15**	**17**	**13**	**19**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE		0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE		2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000		0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000		2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE		2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000		1.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000		**5.79**	**3.02**	**1.6**	R	**1.8 J+**	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE		2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	**9.9**	2.00 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**65.6**	**1.30**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE		0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**		**60.8**	**57.7**	**36**	**26**	**40**	**30**	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000		1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE		2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
					Location ID	AE111R-2	AE111R-2	AE111R-2	AE111R-2	AE111R-2	AE111R-6	AE111R-6	AE111R-6	AE111R-6	AE111R-6	AE111R-6	TRC-301R-1	TRC-301R-1	TRC-301R-1	TRC-301R-1
					Sample ID	6B-AE111R2-061716	6B-AE111R2-061716	7A-AE111R2-100517	1A-AE111R2-090721	2A-AE111R2-100622	6B-AE111R6-061716	7A-AE111R6-100517	8A-AE111R6-100218	9A-AE111R6-092519	0A-AE111R6-091620	1A-AE111R6-090721	2A-AE111R6-100622	A-TRC301R1-062216	A-TRC301R1-102317	A-TRC301R1-091321	A-TRC301R1-092922
					Sample Date	6/17/2016	6/17/2016	10/5/2017	9/7/2021	10/6/2022	6/17/2016	10/5/2017	10/2/2018	9/25/2019	9/16/2020	9/7/2021	10/6/2022	6/22/2016	10/23/2017	9/13/2021	9/29/2022
					Sample Type	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	66 - 74 ft	66 - 74 ft	66 - 74 ft	66 - 74 ft	66 - 74 ft	168 - 173 ft	168 - 173 ft	168 - 173 ft	168 - 173 ft	168 - 173 ft	168 - 173 ft	168 - 173 ft	96.5 - 100.5 ft	96.5 - 100.5 ft	96.5 - 100.5 ft	96.5 - 100.5 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																
Volatile Organic Compounds (ug/l)																				
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 UJ	1.0 UJ	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 UJ	1.0 UJ	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.0**	**1.89**	**2.0**	**1.9**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	**1.6**	**1.50**	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.00 U	1.0 UJ	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 UJ	0.50 U	0.50 UJ	2.0 U	2.00 UJ	2.00 U	R	0.50 U	0.50 U	0.50 UJ	2.0 U	2.00 U	0.50 UJ	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.0 U	1.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	100 U	50 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U	20.0 U	20.0 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 UJ	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	10.0 U	2.00 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 UJ	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	10.0 U	2.00 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	25 UJ	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.0 U	1.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.0 U	2.00 UJ	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 UJ	1.0 UJ	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.0 U	1.00 U	**2.5**	**1.7**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**17.3**	**19.0**	**17**	**18**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.5 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.0 U	2.00 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.5 U	0.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 UJ	1.0 UJ	1.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.9 J**	**2.38**	**1.2**	**1.2**
Methylene Chloride	5	2000	50000	100000	2.0 U	2.0 U	2.00 UJ	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.0 U	2.00 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.00 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.0 U	1.00 U	1.0 UJ	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	**33.4**	**28.7 J**	**16 J+**	**12**
Tetrahydrofuran	NE	NE	NE	NE	**9.7**	**7.9**	2.00 U	2.5 U	2.5 U	**4.2**	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 UJ	2.0 U	2.00 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	**5.5 J**	**8.6 J**	**6.14**	**1.9**	1.0 U	**8.2**	1.00 U	1.00 U	**1.5**	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.5 UJ	0.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	**1.10**	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**63.5**	**68.7**	**61**	**52 J**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 U	1.0 U	1.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.4**	**1.29**	**1.7**	**2.0**
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
					Location ID	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-2	TRC-301R-3	TRC-301R-3	TRC-301R-3	TRC-301R-3	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4
					Sample ID	A-TRC301R2-062216	A-TRC301R2-102317	A-TRC301R2-092718	A-TRC301R2-091719	A-TRC301R2-091520	A-TRC301R2-091321	A-TRC301R2-092922	A-TRC301R3-062216	A-TRC301R3-102317	A-TRC301R3-091321	A-TRC301R3-092922	A-TRC301R4-062216	A-TRC301R4-102317	A-TRC301R4-092718	A-TRC301R4-091719	A-TRC301R4-091520
					Sample Date	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020	9/13/2021	9/29/2022	6/22/2016	10/23/2017	9/13/2021	9/29/2022	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	81.5 - 85.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
1,1,2-Trichloroethane	**5**	900	50000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	5.0 U	5.00 U	5.00 U	**2.9**	**3.0**	**3.5**	**3.4**	5.0 U	5.00 U	**3.2**	**3.4**	**1.5**	**1.56**	**1.65**	**1.2**	**1.2**	**1.4**
1,1-Dichloroethene	**7**	**80**	30000	100000	5.0 U	5.00 U	5.00 U	**1.6**	**1.9**	**2.1**	**1.7**	5.0 U	5.00 U	**1.7**	**1.7**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	0.50 U	0.50 U	0.50 U	0.25 U	5.0 U	5.00 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	5.0 U	10.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	10.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	10.0 U	10.0 U	10.0 U	R	0.50 U	0.50 UJ	0.50 UJ	10.0 U	10.0 U	0.50 UJ	0.50 UJ	2.0 UJ	2.00 U	2.00 U	R	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.25 U	2.5 U	2.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	5.0 U	5.00 U	5.00 U	0.60 U	0.60 U	0.60 U	0.60 U	5.0 U	5.00 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	100 U	100 U	100 U	40 U	100 U	100 U	40 U	100 U	100 U	40 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	50.0 U	10.0 UJ	10.0 UJ	R	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 UJ	5.0 U	5.0 UJ	10.0 U	2.00 UJ	2.00 UJ	R	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	50.0 U	10.0 U	10.0 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ	50.0 U	10.0 U	5.0 U	5.0 UJ	10.0 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	50.0 U	10.0 U	10.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	50.0 U	10.0 U	5.0 U	5.0 U	10.0 UJ	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	50.0 U	50.0 U	50.0 UJ	R	25 U	25 UJ	25 UJ	50.0 U	50.0 U	25 UJ	25 UJ	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ
Benzene	5	1000	10000	100000	5.0 U	5.00 U	5.00 U	0.70 U	0.70 U	0.70 U	0.70 U	5.0 U	5.00 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	5.0 U	5.00 U	5.00 U	R	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	R	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	10.0 U	10.0 U	1.0 U	1.0 UJ	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	10.0 U	10.0 UJ	10.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	10.0 UJ	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	10.0 U	10.0 U	10.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 UJ
Chloroform	70	50	20000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	10.0 UJ	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 UJ	10.0 U	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**22.2**	**26.0**	**18.8**	**17**	**18**	**20**	**18**	**26.0**	**26.2**	**18**	**19**	**17.3**	**21.7**	**19.2**	**14**	**17**	**20**
cis-1,3-Dichloropropene	NE	NE	NE	NE	2.5 U	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	2.5 U	2.50 U	2.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	2.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 UJ
Dibromomethane	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 UJ	**1.0**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	2.5 U	2.50 UJ	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	2.5 U	2.50 UJ	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	5.0 UJ	**6.50**	5.00 U	**5.6**	**6.1**	**6.3**	**5.8**	5.0 UJ	**7.25**	**5.8**	**6.1**	**4.8 J**	**5.36**	**5.10**	**5.8**	**5.7**	**6.2**
Methylene Chloride	5	2000	50000	100000	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	10.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10.0 U	10.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	5.0 U	10.0 U	10.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	10.0 U	1.0 U	1.0 U	1.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	5.0 UJ	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**50.6**	**56.2 J**	**41.2**	**43**	**37**	**41 J+**	**28 J+**	**59.9**	**57.6 J**	**40 J+**	**29 J+**	**15.6**	**12.9 J**	**14.1**	**13**	**10**	**8.7 J+**
Tetrahydrofuran	NE	NE	NE	NE	10.0 U	10.0 U	10.0 UJ	2.5 U	2.5 U	2.5 U	2.5 U	10.0 U	10.0 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 UJ	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	5.0 U	5.00 U	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	2.5 UJ	2.50 U	2.50 U	0.40 U	0.40 U	0.40 U	0.40 U	2.5 UJ	2.50 U	0.40 U	0.40 U	0.5 UJ	0.50 U	0.50 U	0.40 U	0.40 U	0.40 UJ
Trichloroethene	**5**	**5**	**5000**	**50000**	**102**	**144**	**101**	**110**	**87**	**97**	**87 J**	**118**	**139**	**100**	**84 J**	**35.1**	**35.5**	**36.3**	**27**	**27**	**27**
Trichlorofluoromethane	NE	NE	NE	NE	5.0 U	5.00 UJ	5.00 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	5.00 UJ	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	5.0 U	5.00 U	5.00 U	**1.9**	**2.3**	**1.9**	**1.5**	5.0 U	5.00 U	**1.8**	**1.7**	**5.9**	**9.11**	**6.75**	**7.9**	**8.8**	**10**
Xylenes (Total)	10000	3000	5000	NE	10 U	10 U	10 U	1.0 U	1.0 U	1 U	1 U	10 U	10 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U

					Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
					Location ID	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-5	TRC-301R-5	TRC-301R-5	TRC-301R-5	TRC-301R-5	TRC-301R-5	TRC-301R-5	TRC-301R-5	TRC-301R-5
					Sample ID	A-TRC301R4-091321	A-TRC301R4-092922	A-TRC301R4-062216	A-TRC301R4-102317	A-TRC301R4-092718	A-TRC301R4-091719	A-TRC301R4-091520	A-TRC301R5-062216	A-TRC301R5-102317	A-TRC301R5-092718	A-TRC301R5-091719	A-TRC301R5-091520	A-TRC301R5-091321	A-TRC301R5-092922	A-TRC301R5-062216	A-TRC301R5-102317
					Sample Date	9/13/2021	9/29/2022	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020	9/13/2021	9/29/2022	6/22/2016	10/23/2017
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	**1.2**	**1.4**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	0.25 U	0.50 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.00 U	1.00 U	0.50 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	2.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.00 U	1.00 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	0.50 U	0.50 UJ	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	2.00 U	2.00 U	R
1,2-Dibromoethane	0.02	2	50000	100000	0.25 U	0.25 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	0.60 U	0.60 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.00 U	1.00 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2
					Location ID	AE112D	AE112D	AE112D	AE112D	AE112D	AE112D	AE112D	AE112R-1	AE112R-1	AE112R-1	AE112R-1	AE112R-1	AE112R-1
					Sample ID	16B-AE112D-062716-	17A-AE112D-101717-	18A-AE112D-092618-	19A-AE112D-091319-	20A-AE112D-091120-	21A-AE112D-091021-	22A-AE112D-100622-	16B-AE112R1-062116-	17A-AE112R1-101717-	8A-AE112R1-092618-	9A-AE112R1-091319-	0A-AE112R1-091120-	1A-AE112R1-091621-	2A-AE112R1-100622-
					Sample Date	6/27/2016	10/17/2017	9/26/2018	9/13/2019	9/11/2020	9/10/2021	10/6/2022	6/21/2016	10/17/2017	9/26/2018	9/13/2019	9/11/2020	9/16/2021	10/6/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	24.5 - 29.5 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft	41 - 51 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**															
Volatile Organic Compounds (ug/l)																			
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 UJ	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	0.50 U	
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	40 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	50 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 UJ	R	R	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	R	R	25 UJ	25 U	
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	R	1.0 UJ	1.0 U	1.0 UJ	
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 UJ	
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 UJ	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Diethyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Diisopropyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Styrene	100	100	6000	60000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	**1.5 J+**	**1.0 J+**	**1.1**	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	1.0 U	
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 UJ	2.0 U	2.00 U	2.00 U	**6.6**	2.5 U	2.5 U	2.5 U	
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	**5.0**	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Trichlorofluoromethane	NE	NE	NE	NE	1.0 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

					Location Group	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2
					Location ID	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-3	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-5	AE112R-5
					Sample ID	6B-AE112R3-062116-	7A-AE112R3-101717-	8A-AE112R3-092618-	9A-AE112R3-091319-	0A-AE112R3-091120-	1A-AE112R3-091621-	2A-AE112R3-100622-	6B-AE112R5-062116-	7A-AE112R5-101717-	7A-AE112R5-101717-	8A-AE112R5-092618-	9A-AE112R5-091319-	0A-AE112R5-091120-	1A-AE112R5-091621-	1A-AE112R5-091621-	2A-AE112R5-100622-
					Sample Date	6/21/2016	10/17/2017	9/26/2018	9/13/2019	9/11/2020	9/16/2021	10/6/2022	6/21/2016	10/17/2017	10/17/2017	9/26/2018	9/13/2019	9/11/2020	9/16/2021	9/16/2021	10/6/2022
					Sample Type	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	FD	N
					Depth Interval	91 - 101 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	91 - 101 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft	136 - 146 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**																	
Volatile Organic Compounds (ug/l)																					
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.25 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	0.50 UJ	2.0 U	2.00 U	2.00 U	2.00 U	R	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 UJ	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	50 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	50 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	10.0 U	2.00 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	R	25 UJ	25 UJ	10.0 U	10.0 U	10.0 U	10.0 U	R	R	25 UJ	25 UJ	25 UJ	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	R	1.0 UJ	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	R	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 UJ	2.00 UJ	2.00 UJ	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	**1.9**	**2.3**	**3.8**	**4.4**	1.0 U	**3.57**	**3.31**	**11.6**	**14**	**13**	**11**	**12**	**9.5**	
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 UJ	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.0 U	R	1.0 UJ	1.0 UJ	**16.8**	**6.50**	**6.52**	1.00 U	1.0 U	R	1.0 UJ	1.0 UJ	1.0 UJ	
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	**4.4**	2.5 U	2.5 U	2.5 U	2.0 U	2.00 U	2.00 U	2.00 U	**3.5**	2.5 U	2.5 U	2.5 U	2.5 U	
Toluene	**1000**	50000	40000	100000	**11.8**	**1.13**	**1.55**	1.0 U	1.0 U	1.0 U	1.0 U	**1.8**	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	**1.32**	**1.5**	1.0 U	**1.2**	1.0 U	**2.4**	**8.08**	**7.81**	**3.62**	**3.9**	**2.1**	**5.6**	**5.5**	**1.1**	
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	1 U	

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C
				Location ID	STM-8D	STM-8D	STM-8D	STM-8D	STM-8D	STM-8D	STM-8D	STM-8R	STM-8R	STM-8R	STM-8R	STM-8R	STM-8R	STM-8R
				Sample ID	16A-STM8D-063016-1	17A-STM8D-101117-1	18A-STM8D-092818-1	19A-STM8D-092619-1	20A-STM8D-092320-1	21A-STM8D-090821-1	22A-STM8D-100622-1	16A-STM8R-063016-1	17A-STM8R-101117-1	18A-STM8R-092818-1	19A-STM8R-092619-1	20A-STM8R-092320-1	21A-STM8R-090821-1	22A-STM8R-100622-1
				Sample Date	6/30/2016	10/11/2017	9/28/2018	9/26/2019	9/23/2020	9/8/2021	10/6/2022	6/30/2016	10/11/2017	9/28/2018	9/26/2019	9/23/2020	9/8/2021	10/6/2022
				Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	34.7 - 39.7 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft	46.5 - 51.5 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**														
Volatile Organic Compounds (ug/l)																		
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	0.50 UJ	R	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.25 U	1.0 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 UJ	2.0 U	2.00 U	2.00 U	R	0.50 U	0.50 U	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	1.0 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	20.0 U	40 U	100 U	100 U	40 U	NS	20.0 U	20.0 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ	10.0 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	R	25 U	25 UJ	25 UJ	10.0 U	10.0 U	10.0 UJ	R	25 U	25 U	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	1.0 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.0 UJ	2.00 UJ	2.00 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	2.0 UJ	2.00 UJ	2.00 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.00 U	2.00 U	5.0 U	5.0 U	5.0 UJ	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.00 U	2.00 UJ	1.0 U	1.0 UJ	1.0 U	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	**17.9**	**15.7**	**15.4**	**10**	**4.9**	**3.9**	**6.9**	**7.5**	**6.61**	**5.06**	1.0 U	1.0 U	**6.6**	**10**
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	**4.0**	**4.14**	**3.40**	**2.9**	**1.3**	**1.2**	**1.8**	**1.3**	**1.28**	1.00 U	1.0 U	1.0 U	**1.4**	**1.5**
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	**1.7**	**1.71**	**1.50**	**1.3**	R	1.0 UJ	1.0 U	**3.1**	**3.29**	1.00 U	1.0 U	R	**2.0 J+**	**2.8**
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 UJ	2.0 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.5 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.7**	**1.54**	**1.59**	**1.3**	1.0 U	1.0 U	1.0 U	**14.1**	**13.7**	**6.69**	1.0 U	1.0 U	**8.9**	**12**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

Analyte	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):								
Location Group					Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C
Location ID					STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1
Sample ID					16A-STM8R1-062816-	17A-STM8R1-101717-	17A-STM8R1-101717-	18A-STM8R1-100218-	19A-STM8R1-092619-	20A-STM8R1-092320-	21A-STM8R1-091621-	21A-STM8R1-091621-	22A-STM8R1-100622-
Sample Date					6/28/2016	10/17/2017	10/17/2017	10/2/2018	9/26/2019	9/23/2020	9/16/2021	9/16/2021	10/6/2022
Sample Type					N	N	FD	N	N	N	N	FD	N
Depth Interval					85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft
Volatile Organic Compounds (ug/l)													
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 UJ	0.50 U	0.50 U	0.50 U	R	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	R	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	NS	20.0 U	20.0 U	20.0 U	40 U	100 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	2.00 U	2.00 UJ	R	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	2.00 U	2.00 U	R	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	10.0 U	10.0 UJ	R	25 U	25 UJ	25 UJ	25 UJ
Benzene	5	1000	10000	100000	1.0 U	1.00 U	1.00 U	1.00 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ
Bromomethane	10	7	800	8000	2.0 U	2.00 U	2.00 U	2.00 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 UJ	2.00 UJ	2.00 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 UJ	2.00 U	2.00 U	2.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 UJ	1.00 UJ	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 UJ	0.50 UJ	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 UJ	2.00 UJ	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	2.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	1.00 U	2.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 R	1.0 UJ	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	2.00 U	2.00 U	R	2.5 U	2.5 U	2.5 U	2.5 UJ
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 U	0.50 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	**1.8**	**2.29**	**2.26**	**2.02**	**1.9**	**1.7**	**1.8**	**1.9**	**2.1**
Trichlorofluoromethane	NE	NE	NE	NE	1.0 UJ	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	1.00 U	1.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-6
Summary of 2016 - 2022 Groundwater Analytical Results for Volatile Organic Compounds

				Location Group	Upgradient	Upgradient	Upgradient	Upgradient	Upgradient	Upgradient	Upgradient
				Location ID	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12
				Sample ID	16A-GZA12-061416-1	17A-GZA12-101017-1	18A-GZA12-100118-1	19A-GZA12-092619-1	20A-GZA12-092420-1	21A-GZA12-091421-1	22A-GZA12-100422-1
				Sample Date	6/14/2016	10/10/2017	10/1/2018	9/26/2019	9/24/2020	9/14/2021	10/4/2022
				Sample Type	N	N	N	N	N	N	N
				Depth Interval	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft
Analyte	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**							
Volatile Organic Compounds (ug/l)											
1,1,1,2-Tetrachloroethane	5	10	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	**200**	4000	20000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	2	9	50000	100000	0.5 U	0.50 U	3.50 U	R	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	**5**	900	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	**70**	2000	20000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	**7**	**80**	30000	100000	1.0 U	1.00 U	7.00 UJ	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	0.50 U	0.50 U	0.25 U
1,2,4-Trichlorobenzene	70	200	50000	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	NE	NE	NE	NE	2.0 UJ	2.00 U	14.0 U	R	0.50 U	0.50 UJ	0.50 U
1,2-Dibromoethane	0.02	2	50000	100000	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	0.50 U	0.25 U
1,2-Dichlorobenzene	600	8000	2000	80000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	5	5	20000	100000	1.0 U	1.00 U	7.00 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	5	3	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	100	6000	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	5	60	8000	80000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	**0.3**	6000	50000	100000	20.0 U	20.0 U	140 U	40 U	100 U	100 U	40 U
2,2-Dichloropropane	NE	NE	NE	NE	1.0 U	1.00 UJ	7.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	4000	50000	50000	100000	10.0 U	2.00 U	14.0 U	R	5.0 U	5.0 U	5.0 U
2-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	NE	NE	NE	NE	10.0 U	2.00 U	14.0 U	R	5.0 U	5.0 U	5.0 U
2-Phenylbutane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	350	50000	50000	100000	10.0 U	2.00 U	14.0 U	R	5.0 U	5.0 U	5.0 U
Acetone	6300	50000	50000	100000	10.0 U	10.0 U	70.0 U	R	25 U	25 UJ	25 U
Benzene	5	1000	10000	100000	1.0 U	1.00 U	7.00 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromochloromethane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	3	6	50000	100000	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	**0.52**	0.50 U
Bromoform	4	700	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	10	7	800	8000	2.0 U	2.00 U	14.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ
Carbon Disulfide	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	5	2	5000	50000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	100	200	1000	10000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloroform	70	50	20000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	**70**	**20**	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	3.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	2	20	50000	100000	0.5 U	0.50 U	3.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Ethyl Tertiary-Butyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	700	20000	5000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	0.6	50	3000	30000	0.5 U	0.50 U	3.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	70	50000	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	2000	50000	100000	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	10000	3000	5000	NE	2.0 U	2.00 U	14.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	140	700	20000	100000	1.0 UJ	1.00 U	14.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	10000	3000	5000	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	100	100	6000	60000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	**5**	**50**	**30000**	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 R	1.0 UJ	1.0 U
Tetrahydrofuran	NE	NE	NE	NE	2.0 U	2.00 U	14.0 U	R	2.5 U	2.5 U	2.5 U
Toluene	**1000**	50000	40000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	**100**	**80**	50000	100000	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	NE	NE	NE	NE	0.5 UJ	0.50 U	3.50 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	**5**	**5**	**5000**	**50000**	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	NE	NE	NE	NE	1.0 U	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	**2**	**2**	50000	100000	1.0 UJ	1.00 U	7.00 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	10000	3000	5000	NE	2.0 U	2.0 U	14 U	1.0 U	1.0 U	1 U	1 U

Notes:
ft = feet
ug/l = micrograms per liter
NE = not established

U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high, J- = biased low, R =
Detects are bolded
Criteria exceedances are highlighted

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE100R-2	cis-1,2-Dichloroethene	6	6	9	9	7	Upward Trend	9	Upward Trend
AE100R-2	Tetrachloroethene	6	6	7	7	7	Upward Trend	9	Not Significant
AE100R-2	Toluene	6	3	-1	-1	7	Not Significant	9	Not Significant
AE100R-2	Trichloroethene	6	6	7	7	7	Upward Trend	9	Not Significant
AE100R-2	Vinyl Chloride	6	5	7	7	7	Upward Trend	9	Not Significant
AE100R-3	cis-1,2-Dichloroethene	9	5	20	20	10	Upward Trend	14	Upward Trend
AE100R-3	Tetrachloroethene	9	9	18	18	10	Upward Trend	14	Upward Trend
AE100R-3	Trichloroethene	9	9	15	15	10	Upward Trend	14	Upward Trend
AE100R-3	1,4-Dioxane	8	8	6	6	8	Not Significant	12	Not Significant
AE100R-4	cis-1,2-Dichloroethene	9	6	30	30	10	Upward Trend	14	Upward Trend
AE100R-4	Tetrachloroethene	9	9	24	24	10	Upward Trend	14	Upward Trend
AE100R-4	Trichloroethene	9	9	24	24	10	Upward Trend	14	Upward Trend
AE100R-4	1,4-Dioxane	7	7	1	1	7	Not Significant	11	Not Significant
AE100R-5	cis-1,2-Dichloroethene	9	9	32	32	10	Upward Trend	14	Upward Trend
AE100R-5	Tetrachloroethene	9	9	9	9	10	Not Significant	14	Not Significant
AE100R-5	Trichloroethene	9	9	4	4	10	Not Significant	14	Not Significant
AE100R-5	Vinyl Chloride	9	5	17	17	10	Upward Trend	14	Upward Trend
AE101D	cis-1,2-Dichloroethene	9	9	11	11	10	Upward Trend	14	Not Significant
AE101D	Tetrachloroethene	9	7	1	1	10	Not Significant	14	Not Significant
AE101D	Trichloroethene	9	9	4	4	10	Not Significant	14	Not Significant
AE101D	Vinyl Chloride	9	5	13	13	10	Upward Trend	14	Not Significant
AE101D	1,4-Dioxane	8	3	8	8	8	Upward Trend	12	Not Significant
AE101R-2	cis-1,2-Dichloroethene	9	9	-6	-6	10	Not Significant	14	Not Significant
AE101R-2	Tetrachloroethene	9	9	-4	-4	10	Not Significant	14	Not Significant
AE101R-2	Trichloroethene	9	9	2	2	10	Not Significant	14	Not Significant
AE101R-2	Vinyl Chloride	9	7	19	19	10	Upward Trend	14	Upward Trend
AE101R-2	1,4-Dioxane	8	8	-2	-2	8	Not Significant	12	Not Significant
AE101R-4	cis-1,2-Dichloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE101R-4	Tetrachloroethene	4	4	-4	-4	4	Downward Trend	6	Not Significant
AE101R-4	Trichloroethene	4	4	-5	-5	4	Downward Trend	6	Not Significant
AE101R-6	cis-1,2-Dichloroethene	9	9	19	19	10	Upward Trend	14	Upward Trend
AE101R-6	Tetrachloroethene	9	9	-10	-10	10	Downward Trend	14	Not Significant
AE101R-6	Trichloroethene	9	9	6	6	10	Not Significant	14	Not Significant
AE101R-6	Vinyl Chloride	9	6	28	28	10	Upward Trend	14	Upward Trend
AE101R-6	1,4-Dioxane	8	8	20	20	8	Upward Trend	12	Upward Trend
AE102M	cis-1,2-Dichloroethene	9	9	10	10	10	Upward Trend	14	Not Significant
AE102M	Tetrachloroethene	9	9	-17	-17	10	Downward Trend	14	Downward Trend
AE102M	Trichloroethene	9	9	-1	-1	10	Not Significant	14	Not Significant
AE102M	Vinyl Chloride	9	8	11	11	10	Upward Trend	14	Not Significant
AE102M	1,4-Dioxane	7	6	0	0		No Trend		No Trend
AE102RR-1	cis-1,2-Dichloroethene	4	4	6	6	4	Upward Trend	6	Upward Trend

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE102RR-1	Tetrachloroethene	4	4	-2	-2	4	Not Significant	6	Not Significant
AE102RR-1	Trichloroethene	4	4	0	0		No Trend		No Trend
AE102RR-2	cis-1,2-Dichloroethene	9	9	16	16	10	Upward Trend	14	Upward Trend
AE102RR-2	Tetrachloroethene	9	9	-1	-1	10	Not Significant	14	Not Significant
AE102RR-2	Trichloroethene	9	9	6	6	10	Not Significant	14	Not Significant
AE102RR-2	Vinyl Chloride	9	6	25	25	10	Upward Trend	14	Upward Trend
AE102RR-2	1,4-Dioxane	8	8	2	2	8	Not Significant	12	Not Significant
AE102RR-4	cis-1,2-Dichloroethene	9	9	12	12	10	Upward Trend	14	Not Significant
AE102RR-4	Tetrachloroethene	9	9	-12	-12	10	Downward Trend	14	Not Significant
AE102RR-4	Trichloroethene	9	9	-12	-12	10	Downward Trend	14	Not Significant
AE102RR-5	cis-1,2-Dichloroethene	9	9	23	23	10	Upward Trend	14	Upward Trend
AE102RR-5	Tetrachloroethene	9	9	19	19	10	Upward Trend	14	Upward Trend
AE102RR-5	Trichloroethene	9	9	7	7	10	Not Significant	14	Not Significant
AE102RR-6	cis-1,2-Dichloroethene	9	8	-5	-5	10	Not Significant	14	Not Significant
AE102RR-6	Tetrachloroethene	9	9	16	16	10	Upward Trend	14	Upward Trend
AE102RR-6	Trichloroethene	9	9	5	5	10	Not Significant	14	Not Significant
AE102RR-6	1,4-Dioxane	8	8	9	9	8	Upward Trend	12	Not Significant
AE103D	cis-1,2-Dichloroethene	9	9	-11	-11	10	Downward Trend	14	Not Significant
AE103D	Tetrachloroethene	9	9	-4	-4	10	Not Significant	14	Not Significant
AE103D	Trichloroethene	9	9	-8	-8	10	Not Significant	14	Not Significant
AE103D	1,4-Dioxane	8	7	-15	-15	8	Downward Trend	12	Downward Trend
AE103R-2	cis-1,2-Dichloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
AE103R-2	Tetrachloroethene	6	6	-7	-7	7	Downward Trend	9	Not Significant
AE103R-2	Trichloroethene	6	6	-9	-9	7	Downward Trend	9	Downward Trend
AE103R-3	cis-1,2-Dichloroethene	9	9	-12	-12	10	Downward Trend	14	Not Significant
AE103R-3	Tetrachloroethene	9	9	-8	-8	10	Not Significant	14	Not Significant
AE103R-3	Trichloroethene	9	9	-18	-18	10	Downward Trend	14	Downward Trend
AE103R-3	Vinyl Chloride	9	7	-9	-9	10	Not Significant	14	Not Significant
AE103R-4	cis-1,2-Dichloroethene	9	9	2	2	10	Not Significant	14	Not Significant
AE103R-4	Tetrachloroethene	9	9	-10	-10	10	Downward Trend	14	Not Significant
AE103R-4	Trichloroethene	9	9	-15	-15	10	Downward Trend	14	Downward Trend
AE103R-4	Vinyl Chloride	9	4	-4	-4	10	Not Significant	14	Not Significant
AE103R-4	1,4-Dioxane	8	8	-4	-4	8	Not Significant	12	Not Significant
AE103R-5	cis-1,2-Dichloroethene	9	9	15	15	10	Upward Trend	14	Upward Trend
AE103R-5	Tetrachloroethene	9	9	0	0		No Trend		No Trend
AE103R-5	Trichloroethene	9	9	-14	-14	10	Downward Trend	14	Downward Trend
AE103R-5	Vinyl Chloride	9	4	3	3	10	Not Significant	14	Not Significant
AE103R-5	1,4-Dioxane	8	8	2	2	8	Not Significant	12	Not Significant
AE103R-7	cis-1,2-Dichloroethene	9	9	12	12	10	Upward Trend	14	Not Significant
AE103R-7	Tetrachloroethene	9	9	0	0		No Trend		No Trend
AE103R-7	Trichloroethene	9	9	-13	-13	10	Downward Trend	14	Not Significant

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE103R-7	Vinyl Chloride	9	4	-20	-20	10	Downward Trend	14	Downward Trend
AE104D	cis-1,2-Dichloroethene	9	3	-19	-19	10	Downward Trend	14	Downward Trend
AE104D	Tetrachloroethene	9	7	-25	-25	10	Downward Trend	14	Downward Trend
AE104D	Trichloroethene	9	9	-29	-29	10	Downward Trend	14	Downward Trend
AE104D	1,4-Dioxane	8	6	4	4	8	Not Significant	12	Not Significant
AE104R-1	cis-1,2-Dichloroethene	9	9	30	30	10	Upward Trend	14	Upward Trend
AE104R-1	Tetrachloroethene	9	9	0	0		No Trend		No Trend
AE104R-1	Trichloroethene	9	9	2	2	10	Not Significant	14	Not Significant
AE104R-1	Vinyl Chloride	9	5	23	23	10	Upward Trend	14	Upward Trend
AE104R-1	1,4-Dioxane	8	8	10	10	8	Upward Trend	12	Not Significant
AE104R-3	cis-1,2-Dichloroethene	9	8	6	6	10	Not Significant	14	Not Significant
AE104R-3	Tetrachloroethene	9	9	-29	-29	10	Downward Trend	14	Downward Trend
AE104R-3	Trichloroethene	9	9	-30	-30	10	Downward Trend	14	Downward Trend
AE104R-3	Vinyl Chloride	9	5	-15	-15	10	Downward Trend	14	Downward Trend
AE104R-3	1,4-Dioxane	8	8	-14	-14	8	Downward Trend	12	Downward Trend
AE104R-5	cis-1,2-Dichloroethene	9	8	30	30	10	Upward Trend	14	Upward Trend
AE104R-5	Tetrachloroethene	9	9	-14	-14	10	Downward Trend	14	Downward Trend
AE104R-5	Trichloroethene	9	9	-17	-17	10	Downward Trend	14	Downward Trend
AE104R-5	Vinyl Chloride	9	5	-1	-1	10	Not Significant	14	Not Significant
AE104R-5	1,4-Dioxane	4	4	0	0		No Trend		No Trend
AE105D	cis-1,2-Dichloroethene	9	9	-16	-16	10	Downward Trend	14	Downward Trend
AE105D	Trichloroethene	9	8	-14	-14	10	Downward Trend	14	Downward Trend
AE105D	1,4-Dioxane	7	7	-10	-10	7	Downward Trend	11	Not Significant
AE105R-2	cis-1,2-Dichloroethene	9	9	22	22	10	Upward Trend	14	Upward Trend
AE105R-2	Tetrachloroethene	9	9	-4	-4	10	Not Significant	14	Not Significant
AE105R-2	Trichloroethene	9	9	-8	-8	10	Not Significant	14	Not Significant
AE105R-2	1,4-Dioxane	7	7	-5	-5	7	Not Significant	11	Not Significant
AE105R-3	cis-1,2-Dichloroethene	4	4	6	6	4	Upward Trend	6	Upward Trend
AE105R-3	Tetrachloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE105R-3	Trichloroethene	4	4	-3	-3	4	Not Significant	6	Not Significant
AE105R-4	cis-1,2-Dichloroethene	9	9	28	28	10	Upward Trend	14	Upward Trend
AE105R-4	Tetrachloroethene	9	9	0	0		No Trend		No Trend
AE105R-4	Trichloroethene	9	9	-5	-5	10	Not Significant	14	Not Significant
AE105R-4	1,4-Dioxane	6	6	-8	-8	7	Downward Trend	9	Not Significant
AE105R-5	cis-1,2-Dichloroethene	8	8	19	19	8	Upward Trend	12	Upward Trend
AE105R-5	Tetrachloroethene	8	8	6	6	8	Not Significant	12	Not Significant
AE105R-5	Trichloroethene	8	8	0	0		No Trend		No Trend
AE106M	cis-1,2-Dichloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE106M	Tetrachloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE106M	Trichloroethene	4	4	4	4	4	Upward Trend	6	Not Significant
AE106R-1	cis-1,2-Dichloroethene	9	9	15	15	10	Upward Trend	14	Upward Trend

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE106R-1	Tetrachloroethene	9	9	-20	-20	10	Downward Trend	14	Downward Trend
AE106R-1	Toluene	9	3	-21	-21	10	Downward Trend	14	Downward Trend
AE106R-1	Trichloroethene	9	9	-12	-12	10	Downward Trend	14	Not Significant
AE106R-3	cis-1,2-Dichloroethene	9	9	14	14	10	Upward Trend	14	Upward Trend
AE106R-3	Tetrachloroethene	9	9	-16	-16	10	Downward Trend	14	Downward Trend
AE106R-3	Toluene	9	3	-17	-17	10	Downward Trend	14	Downward Trend
AE106R-3	Trichloroethene	9	9	-14	-14	10	Downward Trend	14	Downward Trend
AE106R-3	Vinyl Chloride	9	9	-9	-9	10	Not Significant	14	Not Significant
AE106R-5	cis-1,2-Dichloroethene	8	8	24	24	8	Upward Trend	12	Upward Trend
AE106R-5	Tetrachloroethene	7	6	-13	-13	7	Downward Trend	11	Downward Trend
AE106R-5	Trichloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
AE106R-5	1,4-Dioxane	7	5	1	1	7	Not Significant	11	Not Significant
AE108R-1	cis-1,2-Dichloroethene	9	8	6	6	10	Not Significant	14	Not Significant
AE108R-1	Tetrachloroethene	8	3	-18	-18	8	Downward Trend	12	Downward Trend
AE108R-1	Toluene	9	7	-29	-29	10	Downward Trend	14	Downward Trend
AE108R-1	Trichloroethene	9	8	-24	-24	10	Downward Trend	14	Downward Trend
AE108R-3	cis-1,2-Dichloroethene	9	9	26	26	10	Upward Trend	14	Upward Trend
AE108R-3	Tetrachloroethene	9	9	22	22	10	Upward Trend	14	Upward Trend
AE108R-3	Trichloroethene	9	9	15	15	10	Upward Trend	14	Upward Trend
AE108R-5	cis-1,2-Dichloroethene	9	9	32	32	10	Upward Trend	14	Upward Trend
AE108R-5	Tetrachloroethene	9	9	18	18	10	Upward Trend	14	Upward Trend
AE108R-5	Toluene	9	3	-10	-10	10	Downward Trend	14	Not Significant
AE108R-5	Tetrachloroethene	9	9	18	18	10	Upward Trend	14	Upward Trend
AE108R-5	Toluene	9	3	-10	-10	10	Downward Trend	14	Not Significant
AE108R-5	Trichloroethene	9	9	13	13	10	Upward Trend	14	Not Significant
AE109D	1,4-Dioxane	7	6	11	11	7	Upward Trend	11	Upward Trend
AE109R-1	cis-1,2-Dichloroethene	7	7	-6	-6	7	Not Significant	11	Not Significant
AE109R-1	Trichloroethene	7	7	-21	-21	7	Downward Trend	11	Downward Trend
AE109R-2	cis-1,2-Dichloroethene	7	7	19	19	7	Upward Trend	11	Upward Trend
AE109R-2	Trichloroethene	7	6	-19	-19	7	Downward Trend	11	Downward Trend
AE109R-2	1,4-Dioxane	5	5	4	4	6	Not Significant	8	Not Significant
AE109R-4	cis-1,2-Dichloroethene	7	7	-5	-5	7	Not Significant	11	Not Significant
AE109R-4	Tetrachloroethene	7	4	-13	-13	7	Downward Trend	11	Downward Trend
AE109R-4	Trichloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE109R-6	cis-1,2-Dichloroethene	7	7	15	15	7	Upward Trend	11	Upward Trend
AE109R-6	Tetrachloroethene	7	7	-19	-19	7	Downward Trend	11	Downward Trend
AE109R-6	Trichloroethene	7	7	-17	-17	7	Downward Trend	11	Downward Trend
AE109R-6	Vinyl Chloride	7	3	-2	-2	7	Not Significant	11	Not Significant
AE109R-8	cis-1,2-Dichloroethene	7	7	17	17	7	Upward Trend	11	Upward Trend
AE109R-8	Tetrachloroethene	6	3	-12	-12	7	Downward Trend	9	Downward Trend
AE109R-8	Trichloroethene	7	7	-21	-21	7	Downward Trend	11	Downward Trend
AE111R-1	Toluene	8	3	-16	-16	8	Downward Trend	12	Downward Trend
AE111R-2	Toluene	5	4	-10	-10	6	Downward Trend	8	Downward Trend

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE111R-6	Toluene	8	3	-12	-12	8	Downward Trend	12	Downward Trend
AE112D	Tetrachloroethene	8	3	9	9	8	Upward Trend	12	Not Significant
AE112R-3	cis-1,2-Dichloroethene	8	4	22	22	8	Upward Trend	12	Upward Trend
AE112R-3	Toluene	8	4	-20	-20	8	Downward Trend	12	Downward Trend
AE112R-3	Trichloroethene	8	3	4	4	8	Not Significant	12	Not Significant
AE112R-5	cis-1,2-Dichloroethene	8	6	13	13	8	Upward Trend	12	Upward Trend
AE112R-5	Tetrachloroethene	7	3	-13	-13	7	Downward Trend	11	Downward Trend
AE112R-5	Trichloroethene	8	8	-4	-4	8	Not Significant	12	Not Significant
AE23R	Tetrachloroethene	11	11	11	0.7785	0.8416	Not Significant	1.282	Not Significant
AE23R	Toluene	11	9	13	0.9399	0.8416	Upward Trend	1.282	Not Significant
AE23R	Trichloroethene	11	11	17	1.246	0.8416	Upward Trend	1.282	Not Significant
AE23R	1,4-Dioxane	11	10	-12	-0.8590	0.8416	Downward Trend	1.282	Not Significant
AE23S	cis-1,2-Dichloroethene	7	7	-11	-11	7	Downward Trend	11	Downward Trend
AE23S	Tetrachloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE23S	Trichloroethene	7	7	-1	-1	7	Not Significant	11	Not Significant
AE24	Tetrachloroethene	10	10	-7	-7	11	Not Significant	17	Not Significant
AE24	1,4-Dioxane	7	3	-7	-7	7	Downward Trend	11	Not Significant
AE26R-1	cis-1,2-Dichloroethene	8	8	4	4	8	Not Significant	12	Not Significant
AE26R-1	Tetrachloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
AE26R-1	Trichloroethene	8	8	12	12	8	Upward Trend	12	Upward Trend
AE26R-1	Vinyl Chloride	8	3	1	1	8	Not Significant	12	Not Significant
AE26R-1	1,4-Dioxane	8	8	-4	-4	8	Not Significant	12	Not Significant
AE26R-3	cis-1,2-Dichloroethene	5	5	8	8	6	Upward Trend	8	Upward Trend
AE26R-3	Tetrachloroethene	5	4	-2	-2	6	Not Significant	8	Not Significant
AE26R-3	Trichloroethene	5	5	0	0		No Trend		No Trend
AE26R-4	cis-1,2-Dichloroethene	5	5	8	8	6	Upward Trend	8	Upward Trend
AE26R-4	Tetrachloroethene	5	5	-2	-2	6	Not Significant	8	Not Significant
AE26R-4	Trichloroethene	5	5	4	4	6	Not Significant	8	Not Significant
AE26R-5	cis-1,2-Dichloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
AE26R-5	Tetrachloroethene	8	8	5	5	8	Not Significant	12	Not Significant
AE26R-5	Trichloroethene	8	8	10	10	8	Upward Trend	12	Not Significant
AE26R-5	1,4-Dioxane	8	8	0	0		No Trend		No Trend
AE26S	cis-1,2-Dichloroethene	9	9	-24	-24	10	Downward Trend	14	Downward Trend
AE26S	Tetrachloroethene	9	9	-24	-24	10	Downward Trend	14	Downward Trend
AE26S	Trichloroethene	9	9	-20	-20	10	Downward Trend	14	Downward Trend
AE27R	cis-1,2-Dichloroethene	5	3	4	4	6	Not Significant	8	Not Significant
AE27R	Tetrachloroethene	5	4	-6	-6	6	Downward Trend	8	Not Significant
AE27R	Trichloroethene	5	5	-6	-6	6	Downward Trend	8	Not Significant
AE28R-1	cis-1,2-Dichloroethene	8	6	24	24	8	Upward Trend	12	Upward Trend
AE28R-1	Tetrachloroethene	8	8	2	2	8	Not Significant	12	Not Significant
AE28R-1	Trichloroethene	8	8	12	12	8	Upward Trend	12	Upward Trend

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
AE28R-1	Vinyl Chloride	8	4	23	23	8	Upward Trend	12	Upward Trend
AE28R-2	cis-1,2-Dichloroethene	8	5	25	25	8	Upward Trend	12	Upward Trend
AE28R-2	Tetrachloroethene	8	8	8	8	8	Upward Trend	12	Not Significant
AE28R-2	Trichloroethene	8	8	17	17	8	Upward Trend	12	Upward Trend
AE28R-2	Vinyl Chloride	8	4	-4	-4	8	Not Significant	12	Not Significant
AE28R-2	1,4-Dioxane	8	8	0	0		No Trend		No Trend
AE28R-4	cis-1,2-Dichloroethene	8	7	28	28	8	Upward Trend	12	Upward Trend
AE28R-4	Tetrachloroethene	8	8	-3	-3	8	Not Significant	12	Not Significant
AE28R-4	Trichloroethene	8	8	20	20	8	Upward Trend	12	Upward Trend
AE28R-4	Vinyl Chloride	8	3	5	5	8	Not Significant	12	Not Significant
AE29R-1	Trichloroethene	8	7	-14	-14	8	Downward Trend	12	Downward Trend
AE29R-3	cis-1,2-Dichloroethene	8	8	-9	-9	8	Downward Trend	12	Not Significant
AE29R-3	Trichloroethene	8	8	-16	-16	8	Downward Trend	12	Downward Trend
AE29R-5	cis-1,2-Dichloroethene	8	8	4	4	8	Not Significant	12	Not Significant
AE29R-5	Trichloroethene	8	8	8	8	8	Upward Trend	12	Not Significant
AE29R-6	cis-1,2-Dichloroethene	9	9	13	13	10	Upward Trend	14	Not Significant
AE29R-6	Toluene	9	4	-20	-20	10	Downward Trend	14	Downward Trend
AE29R-6	Trichloroethene	9	9	-19	-19	10	Downward Trend	14	Downward Trend
AE29R-6	Vinyl Chloride	9	4	12	12	10	Upward Trend	14	Not Significant
AE29R-6	1,4-Dioxane	8	8	9	9	8	Upward Trend	12	Not Significant
AE2R	Tetrachloroethene	6	6	-7	-7	7	Downward Trend	9	Not Significant
EMW-10D	cis-1,2-Dichloroethene	22	21	-20	-0.5364	0.8416	Not Significant	1.282	Not Significant
EMW-10D	Tetrachloroethene	22	21	65	1.806	0.8416	Upward Trend	1.282	Upward Trend
EMW-10D	Trichloroethene	22	21	31	0.8482	0.8416	Upward Trend	1.282	Not Significant
EMW-10D	Vinyl Chloride	22	14	76	2.143	0.8416	Upward Trend	1.282	Upward Trend
GZA-101R	cis-1,2-Dichloroethene	30	11	-40	-0.7032	0.8416	Not Significant	1.282	Not Significant
GZA-101R	Tetrachloroethene	34	34	-41	-0.5932	0.8416	Not Significant	1.282	Not Significant
GZA-101R	Toluene	24	8	-164	-4.081	0.8416	Downward Trend	1.282	Downward Trend
GZA-101R	Trichloroethene	34	34	-213	-3.143	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	cis-1,2-Dichloroethene	18	11	-73	-2.735	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Tetrachloroethene	23	16	-151	-3.964	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Trichloroethene	23	14	-147	-3.896	0.8416	Downward Trend	1.282	Downward Trend
GZA-102S	Vinyl Chloride	23	10	-143	-3.771	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	cis-1,2-Dichloroethene	26	24	-49	-1.059	0.8416	Downward Trend	1.282	Not Significant
GZA-105D	Tetrachloroethene	27	25	-81	-1.668	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	Trichloroethene	27	26	-60	-1.231	0.8416	Downward Trend	1.282	Not Significant
GZA-105D	Vinyl Chloride	27	26	-179	-3.712	0.8416	Downward Trend	1.282	Downward Trend
GZA-105D	1,4-Dioxane	9	9	-22	-22	10	Downward Trend	14	Downward Trend
GZA-105R	cis-1,2-Dichloroethene	26	21	74	1.610	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Tetrachloroethene	34	34	183	2.699	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Toluene	33	3	-24	-0.3602	0.8416	Not Significant	1.282	Not Significant

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
GZA-105R	Trichloroethene	34	34	160	2.357	0.8416	Upward Trend	1.282	Upward Trend
GZA-105R	Vinyl Chloride	36	13	-60	-0.8065	0.8416	Not Significant	1.282	Not Significant
IP-01R2	cis-1,2-Dichloroethene	14	11	-41	-2.196	0.8416	Downward Trend	1.282	Downward Trend
IP-01R2	Tetrachloroethene	14	14	11	0.5474	0.8416	Not Significant	1.282	Not Significant
IP-01R2	Trichloroethene	14	14	-15	-0.7664	0.8416	Not Significant	1.282	Not Significant
MW-4A	cis-1,2-Dichloroethene	9	7	-4	-4	10	Not Significant	14	Not Significant
MW-4A	Tetrachloroethene	11	5	11	0.8585	0.8416	Upward Trend	1.282	Not Significant
MW-4A	Trichloroethene	10	6	2	2	11	Not Significant	17	Not Significant
MW-4A	Vinyl Chloride	12	3	-1	0	0.8416	Not Significant	1.282	Not Significant
MW-4A	1,4-Dioxane	4	4	-4	-4	4	Downward Trend	6	Not Significant
MW-5	cis-1,2-Dichloroethene	9	9	16	16	10	Upward Trend	14	Upward Trend
MW-7	cis-1,2-Dichloroethene	10	10	13	13	11	Upward Trend	17	Not Significant
MW-7	Trichloroethene	10	10	17	17	11	Upward Trend	17	Upward Trend
MW-7	Vinyl Chloride	17	9	56	2.330	0.8416	Upward Trend	1.282	Upward Trend
PS-1D	cis-1,2-Dichloroethene	18	18	-27	-0.9862	0.8416	Downward Trend	1.282	Not Significant
PS-1D	Tetrachloroethene	18	17	-105	-3.945	0.8416	Downward Trend	1.282	Downward Trend
PS-1D	Trichloroethene	18	18	-133	-5.014	0.8416	Downward Trend	1.282	Downward Trend
PS-1D	Vinyl Chloride	23	9	-49	-1.311	0.8416	Downward Trend	1.282	Downward Trend
PS-1M	cis-1,2-Dichloroethene	9	3	-7	-7	10	Not Significant	14	Not Significant
PS-1M	Tetrachloroethene	6	6	1	1	7	Not Significant	9	Not Significant
PS-1M	Trichloroethene	7	6	-3	-3	7	Not Significant	11	Not Significant
PS-5D	cis-1,2-Dichloroethene	13	11	23	1.350	0.8416	Upward Trend	1.282	Upward Trend
PS-5D	Vinyl Chloride	16	10	-20	-0.8572	0.8416	Downward Trend	1.282	Not Significant
STM-8D	cis-1,2-Dichloroethene	17	13	24	0.9512	0.8416	Upward Trend	1.282	Not Significant
STM-8D	Tetrachloroethene	12	10	-33	-2.210	0.8416	Downward Trend	1.282	Downward Trend
STM-8D	Trichloroethene	14	10	-57	-3.087	0.8416	Downward Trend	1.282	Downward Trend
STM-8D	1,4-Dioxane	7	7	-9	-9	7	Downward Trend	11	Not Significant
STM-8R	cis-1,2-Dichloroethene	19	14	21	0.7026	0.8416	Not Significant	1.282	Not Significant
STM-8R	Tetrachloroethene	18	13	-54	-2.020	0.8416	Downward Trend	1.282	Downward Trend
STM-8R	Trichloroethene	19	17	-66	-2.279	0.8416	Downward Trend	1.282	Downward Trend
STM-8R	1,4-Dioxane	7	5	-2	-2	7	Not Significant	11	Not Significant
STM-8R1	Trichloroethene	9	9	-15	-15	10	Downward Trend	14	Downward Trend
STM-8R1	1,4-Dioxane	7	6	6	6	7	Not Significant	11	Not Significant
TRC-102	cis-1,2-Dichloroethene	8	4	-12	-12	8	Downward Trend	12	Downward Trend
TRC-201R	cis-1,2-Dichloroethene	11	11	24	1.796	0.8416	Upward Trend	1.282	Upward Trend
TRC-201R	Tetrachloroethene	10	3	-14	-14	11	Downward Trend	17	Not Significant
TRC-201R	Trichloroethene	11	11	-24	-1.796	0.8416	Downward Trend	1.282	Downward Trend
TRC-201R	Vinyl Chloride	11	5	17	1.274	0.8416	Upward Trend	1.282	Not Significant
TRC-301R-1	cis-1,2-Dichloroethene	6	6	-7	-7	7	Downward Trend	9	Not Significant
TRC-301R-1	Tetrachloroethene	6	6	-7	-7	7	Downward Trend	9	Not Significant
TRC-301R-1	Trichloroethene	6	6	-11	-11	7	Downward Trend	9	Downward Trend

Table 4-7
Groundwater Mann Kendall Trend Tests for Chlorinated Volatile Organic Compounds
Former GE Facility - Wilmington, MA

Well	Parameter	Sample Size	Number Detects	S-Statistics	Test Statistic*	80% Confidence		90% Confidence	
						Critical Value	Conclusion	Critical Value	Conclusion
TRC-301R-1	Vinyl Chloride	6	6	-1	-1	7	Not Significant	9	Not Significant
TRC-301R-2	cis-1,2-Dichloroethene	9	9	-7	-7	10	Not Significant	14	Not Significant
TRC-301R-2	Tetrachloroethene	9	9	-2	-2	10	Not Significant	14	Not Significant
TRC-301R-2	Trichloroethene	9	9	1	1	10	Not Significant	14	Not Significant
TRC-301R-2	Vinyl Chloride	9	6	-22	-22	10	Downward Trend	14	Downward Trend
TRC-301R-3	cis-1,2-Dichloroethene	6	6	-3	-3	7	Not Significant	9	Not Significant
TRC-301R-3	Tetrachloroethene	6	6	1	1	7	Not Significant	9	Not Significant
TRC-301R-3	Trichloroethene	6	6	2	2	7	Not Significant	9	Not Significant
TRC-301R-3	Vinyl Chloride	6	4	-8	-8	7	Downward Trend	9	Not Significant
TRC-301R-4	cis-1,2-Dichloroethene	9	9	-2	-2	10	Not Significant	14	Not Significant
TRC-301R-4	Tetrachloroethene	9	9	0	0		No Trend		No Trend
TRC-301R-4	Trichloroethene	9	9	-17	-17	10	Downward Trend	14	Downward Trend
TRC-301R-4	Vinyl Chloride	9	9	-6	-6	10	Not Significant	14	Not Significant

Notes:
Datasets presented for wells that were included in the sampling program in September 2022.
Field duplicates assigned the maximum value for the purposes of the trend test.
The detection limit was used for non-detect concentrations for the purposes of the trend test.
Trend test results were interpreted using a confidence level of 80% and 90%. If the absolute value of the statistic is equal to or greater than the critical value, a significant trend is concluded. The direction of the trend is determined by the sign of the statistic with positive statistics indicating an upward trend and negative statistics indicating a downward trend
* When sample size > 10, the normal approximation is used and calculated per box 4-9 in Data Quality Assessment: Statistical Methods for Practitioners, EPA QA/G-9S. When the normal approximation is used, the critical value is the standard normal distribution.
When S is 0, no critical value is calculated and a conclusion of no trend is made.
NA = The Mann-Kendall trend test was not performed because there were less than 4 samples.
ND = The Mann-Kendall trend test was not performed because there were less than 3 detected concentrations
- Analyte results not available for location.

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
Location ID	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE26R-1	AE27R	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2
Sample ID	16A-AE26R1-062316-1	17A-AE26R1-100417-1	18A-AE26R1-091818-1	19A-AE26R1-092319-1	20A-AE26R1-091420-1	22A-AE26R1-100522-1	22A-AE27R-100522-1	16B-AE28R2-062316-1	17A-AE28R2-100417-1	18A-AE28R2-091818-1	19A-AE28R2-092319-1	20A-AE28R2-091420-1	21A-AE28R2-090121-1	22A-AE28R2-100522-1
Sample Date	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	10/5/2022	10/5/2022	6/23/2016	10/4/2017	9/18/2018	9/23/2019	9/14/2020	9/1/2021	10/5/2022
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50 - 56 ft	50.5 - 60.5 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft
Analyte														
Conventional (ug/l)														
Chloride	**121000**	**122000**	**127000**	**133000**	**126000**	**155000**	**967000**	**326000**	**354000**	**373000 J-**	**422000**	**405000**	**458000**	**39000**
Nitrate	100 U	100 U	100 U	50 U	50 U	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50 U	50 U
Nitrite as N	100 U	100 U	100 U	4 U	20 U	20 U	100 U	1300 U	100 U	200 U	40 U	40 U	40 U	10 U
Sulfate	**9970**	**15300**	**15700**	**17500**	**15700**	**16400**	**21100**	**33800**	**37600**	**34500**	**39400**	**35300**	**37000**	**19400**
Sulfide	100 U	100 U	100 U	**170**	**230**	**170**	**700**	100 U	100 U	100 U	**300**	**650**	**420**	**270**
Total Organic Carbon	**10800**	**2290**	5000 U	1000 U	1000 U	**1100**	**6500**	**1600**	**1200**	10000 U	1000 U	1000 U	**1700**	**1200**
Dissolved Gases (ug/l)														
Acetylene	**0.44 J**	**0.29 J**	**0.17 J**	**0.25 J**	0.11 U	0.13 U	0.13 U	**15**	**0.99**	**1.1**	**0.90**	0.11 U	0.13 U	**0.46 J**
Ethane	**2.2**	**1.1**	**1.4**	**1.0**	**1.6**	**0.88 J-**	**1.7 J-**	**11**	**11**	**10**	**7.7**	**6.1**	**6.2**	**5.1 J-**
Ethene	**3.4**	**1.6**	**1.3**	**1.3**	**1.1**	**12 J-**	**10 J-**	**23**	**17**	**13**	**11**	**10**	**10**	**10 J-**
Hydrogen (nM)	**230**	**42**	**28**	**20**	**67**	NS	NS	**2.8**	**7.3**	**240**	**220**	**1.8 J**	**6.1**	**16**
Methane	**65**	**250**	**160**	**190 J-**	**160**	**170 J**	**150 J**	**67**	**160**	**200**	**190 J-**	**130**	**120**	**120 J**
Propane	**0.23**	**0.16**	**0.19**	**0.11**	**0.18**	0.29 U	**0.31 J+**	**0.87**	**1.1**	**1.0**	**0.74**	**0.57**	**0.63 J**	**0.48 J+**
Dissolved Metals (ug/l)														
Iron	15.0 U	**131**	250 U	**58**	**106**	**118**	**70**	**1510**	**1140**	**931**	**823**	**876**	**1090**	**1040**
Manganese	**16.4**	**518**	**524 J**	**636**	**772**	**728**	**1070**	**1710**	**1810**	**1800**	**1870**	**1750**	**2110**	**2110**
Total Metals (ug/l)														
Iron	**195**	**265**	250 U	**243**	**345**	**227**	**69**	**1550**	**1110**	**907**	**892**	**939**	**1040**	**1080**
Manganese	**331**	**451**	**357 J**	**667**	**801**	**748**	**1010**	**1750**	**1750**	**1800**	**1920**	**1920**	**2210**	**2220**
Field Parameters														
Dissolved Oxygen (mg/L)	**0.3**	**0.23**	**0.39**	**0.4**	**2.65**	**0.04**	NS	**0.09**	**0.19**	**4.57**	**2.6**	**0.68**	**0.21**	**0.07**
Oxidation Reduction Potential (ORP) (mV)	**-124.4**	**-225.7**	**-253**	**-75.4**	**-357.1**	**-192.9**	NS	**-67.3**	**-213.6**	**-218.9**	**-288.7**	**347.2**	**-257.4**	**-123.5**
Specific Conductance (uS/cm)	**1377**	**685**	**561**	**679**	**655**	**611**	NS	**1241**	**1317**	**1452**	**1613**	**1539**	**1689**	**1772**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	EPL	EPL	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm
Location ID	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	AE29R-6	GZA-102S	GZA-102S	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE100R-5
Sample ID	16B-AE29R6-062816-	17A-AE29R6-101717-	18A-AE29R6-091818-	19A-AE29R6-092419-	20A-AE29R6-092220-	21A-AE29R6-091421-	22A-AE29R6-100422-	12A-GZA102S-100322-	2A-GZA102S-100322-	6A-AE100R5-061516-	7A-AE100R5-100417-	8A-AE100R5-091918-	9A-AE100R5-092319-	0A-AE100R5-091020-	1A-AE100R5-090921-	2A-AE100R5-100422-
Sample Date	6/28/2016	10/17/2017	9/18/2018	9/24/2019	9/22/2020	9/14/2021	10/4/2022	10/3/2022	10/3/2022	6/15/2016	10/4/2017	9/19/2018	9/23/2019	9/10/2020	9/9/2021	10/4/2022
Sample Type	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
Depth Interval	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	2.5 - 11.5 ft	2.5 - 11.5 ft	88 - 93 ft	88.68 - 93.68 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft	88 - 93 ft
Analyte																
Conventional (ug/l)																
Chloride	**1220000**	**442000**	**420000**	**424000**	**461000**	**423000**	**443000**	**212000**	**218000**	**269000 J+**	**316000**	**325000**	**368000**	**389000**	**389000**	**427000**
Nitrate	**3020**	100 U	100 U	50 U	50 U	50 U	250 U	**270**	**280**	**191**	**402**	**464**	**680**	**690**	**840**	**720**
Nitrite as N	600 U	200 U	200 U	40 U	40 U	40 U	50 U	20 U	20 U	100 U	100 U	1300 U	40 U	20 U	40 U	50 U
Sulfate	**49200**	**49200**	**45200**	**46300**	**43900**	**43800**	**35200**	**11800**	**11600**	**27600 J-**	**29600**	**28200**	**31000**	**29300**	**30000**	**29600**
Sulfide	100 U	100 U	100 U	50 U	**70**	50 U	**90**	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50 U	50 U
Total Organic Carbon	**1000**	**1490 J+**	10000 U	1000 U	**1200**	1000 U	**1200**	**6800**	**6800**	NS	NS	NS	NS	NS	**1200**	**1400**
Dissolved Gases (ug/l)																
Acetylene	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	0.13 U	0.13 U	0.13 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	0.13 U
Ethane	**0.80**	**0.88**	**0.86**	**0.26**	**0.42 J**	**0.61 J**	**0.65 J-**	0.17 UJ	0.17 UJ	**2.3**	**2.3**	**2.7**	**2.4**	**1.8**	**2.0**	**1.7 J-**
Ethene	**0.64**	**1.2**	**1.4**	**0.90**	**1.2**	**1.1**	**1.5 J-**	0.24 UJ	0.24 UJ	**88**	**8.2**	**4.2**	**5.4**	**7.3**	**2.4**	**5.9 J-**
Hydrogen (nM)	**2300**	**320**	**100**	**180**	**15**	**11**	**9.2**	NS	NS	**30**	**2.9**	**3.8**	**2.4**	NS	**5.6**	**1.3 J**
Methane	**7.1**	**580**	**1300**	**1100 J-**	**900**	2.0 U	**610 J**	**61 J**	**70 J**	**920 J**	**320**	**170**	**99 J-**	**69**	**42**	**110 J**
Propane	**0.29**	**0.31**	**0.34**	**0.14**	**0.13**	0.29 U	0.29 U	0.29 U	0.29 U	**0.060 J**	**0.19**	**0.23**	**0.19**	0.014 U	0.29 U	0.29 U
Dissolved Metals (ug/l)																
Iron	**1030**	**1340**	**1080**	**1280**	**1390**	**1120**	**1010**	**563**	**570**	335 U	40.0 U	250 U	**76**	**30**	**3300 J**	**19**
Manganese	**4190**	**847**	**876**	**974**	**1030**	**849**	**821**	**406**	**410**	**1210 J-**	**120**	**720**	**675**	**656**	**1770 J**	**674**
Total Metals (ug/l)																
Iron	**1040**	**1370**	**1120**	**1210**	**1190**	**1180**	**1090**	**584**	**567**	**377**	**150**	250 U	**76**	**60**	**18 J**	**30**
Manganese	**4270**	**860**	**874**	**886**	**890**	**872**	**879**	**405**	**399**	**1220**	**383**	**765**	**642**	**717**	**664 J**	**762**
Field Parameters																
Dissolved Oxygen (mg/L)	**0.4**	**0.26**	**0.93**	**0.15**	**0.61**	**0.2**	**0.17**	**0**	NS	**0.01**	**3.7**	**0.38**	**0.85**	**0.12**	**0.27**	**0.09**
Oxidation Reduction Potential (ORP) (mV)	**0.7**	**-275.6**	**-104.1**	**-262.1**	**174.2**	**-176.5**	**-138.9**	**-3**	NS	**-158.2**	**-47**	**41.9**	**30**	**81.6**	**68.2**	**47.3**
Specific Conductance (uS/cm)	**4567**	**1908**	**1845**	**1782**	**2457**	**1676**	**1638**	**920**	NS	**1222**	**1107**	**1104**	**1355**	**1438**	**1323**	**1532**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
Location ID	AE101R-4	AE101R-6	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102M	AE102RR-1
Sample ID	2A-AE101R4-100322-	2A-AE101R6-100322-	16A-AE102M-061316-	17A-AE102M-100217-	18A-AE102M-100118-	19A-AE102M-092519-	19A-AE102M-092519-	20A-AE102M-090920-	20A-AE102M-090920-	21A-AE102M-091521-	21A-AE102M-092221-	22A-AE102M-100322-	2A-AE102RR1-092822
Sample Date	10/3/2022	10/3/2022	6/13/2016	10/2/2017	10/1/2018	9/25/2019	9/25/2019	9/9/2020	9/9/2020	9/15/2021	9/22/2021	10/3/2022	9/28/2022
Sample Type	N	N	N	N	N	N	FD	N	FD	N	N	N	N
Depth Interval	153 - 158 ft	227 - 232 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	23 - 28 ft	43 - 48 ft
Analyte													
Conventional (ug/l)													
Chloride	**41700**	**78600**	**499000**	**641000**	**526000**	**530000**	**532000**	**603000**	**611000**	**689000**	NS	**828000**	**105000**
Nitrate	50 U	50 U	100 U	100 U	100 U	50 U	50 U	50 U	50 U	50 UJ	NS	50 U	50 U
Nitrite as N	10 U	10 U	100 U	100 U	300 U	40 U	40 U	40 U	40 U	40 U	NS	100 U	10 U
Sulfate	**30600**	**75600**	**22600**	**18700**	**13400**	**7600**	**7500**	**5900**	**5600**	**7700**	NS	**7900**	**12500**
Sulfide	**80**	**90**	100 U	100 U	100 U	50 U	50 U	50 U	50 U	**60**	NS	50 U	**70**
Total Organic Carbon	**2100**	**7800**	**1000**	**3160**	**2730**	**1600**	**1600**	**2600**	**2500**	**2200**	NS	**2400**	1000 U
Dissolved Gases (ug/l)													
Acetylene	0.13 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.11 U	NS	0.13 U	0.13 U	0.13 U
Ethane	**0.36 J-**	**2.1 J-**	**1.8**	**2.0**	**2.9**	**6.3**	**6.3**	**6.9**	**6.5**	NS	0.17 U	**6.5 J-**	**0.55 J**
Ethene	**4.5 J-**	**38 J-**	**3.2**	**2.5**	**0.47**	**1.4**	**1.4**	**1.2**	**1.2**	NS	0.24 U	**0.52 J-**	**30**
Hydrogen (nM)	NS	NS	**0.85**	**2.8**	**29**	**2.3**	NS	**2.3 J**	**1.9 J**	**3.8**	NS	NS	**0.77 J**
Methane	**56 J**	**56 J**	**140**	**910**	**490**	**260 J-**	**260 J-**	**160**	**160**	NS	2.0 U	**36 J**	**110**
Propane	0.29 U	**0.90 J+**	**0.066 J**	**0.090 J**	**0.095 J**	**0.052 J**	**0.052 J**	**0.057 J**	**0.050 J**	NS	0.29 U	0.29 U	0.29 U
Dissolved Metals (ug/l)													
Iron	**1090**	**2730**	**3190**	**3550**	**824**	**1810**	NS	**2610**	NS	**2410**	NS	**3650**	**231**
Manganese	**965**	**574**	**11500**	**17600**	**10900**	**10800**	NS	**11100**	NS	**13200**	NS	**15600**	**734**
Total Metals (ug/l)													
Iron	**1150**	**3020**	**3340**	**3710**	**906**	**1870**	NS	**2930**	NS	**2270**	NS	**3260**	**440**
Manganese	**941**	**577**	**11700**	**17900**	**10800**	**11100**	NS	**12000**	NS	**13900**	NS	**17000**	**746**
Field Parameters													
Dissolved Oxygen (mg/L)	**0.84**	**0.37**	**0.66**	**0.16**	**0.59**	**0.36**	NS	**1.6**	NS	**0.08**	NS	**0.26**	**0.42**
Oxidation Reduction Potential (ORP) (mV)	**-63.1**	**-147.1**	**25.9**	**-82.3**	**69.9**	**41.4**	NS	**56.9**	NS	**213**	NS	**65.9**	**-149.2**
Specific Conductance (uS/cm)	**3185**	**632**	**2045**	**2299**	**2042**	**2069**	NS	**2153**	NS	**2414**	NS	**2734**	**464.4**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
Location ID	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE102RR-6	AE103D	AE103D	AE103D	AE103D	AE103D	AE103D	AE103D	AE103D	AE103D
Sample ID	6A-AE102RR6-061416	7A-AE102RR6-100317	8A-AE102RR6-091918	9A-AE102RR6-092419	0A-AE102RR6-090920	2A-AE102RR6-092822	16A-AE103D-061316-1	17A-AE103D-100317-1	18A-AE103D-092418-1	18A-AE103D-092418-2	19A-AE103D-091919-1	20A-AE103D-091020-1	21A-AE103D-091421-1	21A-AE103D-092221-1	22A-AE103D-100322-1
Sample Date	6/14/2016	10/3/2017	9/19/2018	9/24/2019	9/9/2020	9/28/2022	6/13/2016	10/3/2017	9/24/2018	9/24/2018	9/19/2019	9/10/2020	9/14/2021	9/22/2021	10/3/2022
Sample Type	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N
Depth Interval	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	153 - 158 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft
Analyte															
Conventional (ug/l)															
Chloride	**115000**	**128000 J-**	**140000**	**163000**	**150000**	**139000**	**818000**	**842000 J-**	**818000**	**816000**	**42000**	**773000**	**848000**	NS	**909000**
Nitrate	100 U	100 U	100 U	50 U	50 U	50 U	**3280**	**3980**	**3840**	**4250**	50 U	**3950**	**5090**	NS	**4410**
Nitrite as N	100 U	100 U	600 U	4 U	8 U	20 U	3300 U	100 U	3200 UJ	3200 UJ	4 U	100 U	100 U	NS	100 U
Sulfate	**23600**	**25900**	**24400**	**26600**	**24700**	**26400**	**31600**	**33400**	**30100**	**30300**	**7600**	**36300**	**36200**	NS	**39200**
Sulfide	100 U	100 U	100 U	50 U	50 U	50 U	100 U	100 U	100 U	100 U	50 U	50 U	50 U	NS	50 U
Total Organic Carbon	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**1630**	**1750**	**1840**	**1400**	**1500**	**1200**	NS	**1600**
Dissolved Gases (ug/l)															
Acetylene	**0.076 J**	**0.035 J**	0.50 U	**0.073 J**	0.11 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**34**	NS	R	0.13 U
Ethane	**1.5**	**0.86**	**0.83**	**0.81**	**0.83 J**	**0.62 J**	**2.3**	**1.3**	**0.49**	**0.55**	**0.54**	**0.15 J**	NS	R	0.17 UJ
Ethene	**3.3**	**1.8**	**3.5**	**7.5**	**6.5**	**6.0**	**0.78**	**0.050 J**	**0.066 J**	**0.078 J**	**0.044 J**	0.12 U	NS	R	0.24 UJ
Hydrogen (nM)	**2.3**	**2.7**	**3.3**	**3.7**	0.98 U	NS	**3.3**	**2.4**	**2.1**	NS	**2.1**	**2.7 J**	**3.8**	NS	NS
Methane	**65**	**52**	**58**	**55 J-**	**51**	**36**	**150**	**130 J+**	**36**	**42**	**25**	**6.0**	NS	R	**7.2 J**
Propane	**0.14**	**0.066 J**	**0.073 J**	**0.052 J**	**0.059 J**	0.29 U	**0.27**	**0.16**	**0.083 J**	**0.085 J**	**0.16**	0.014 U	NS	R	0.29 U
Dissolved Metals (ug/l)															
Iron	**423**	**546**	**7940 J**	**645**	**640**	**611**	**1080**	**411**	125 U	125 U	11 U	11 U	**64**	NS	11 U
Manganese	**453**	**546**	**576**	**636**	**612**	**608**	**3420**	**3240**	**2550**	**2570**	**1990**	**2010**	**1940**	NS	**2150**
Total Metals (ug/l)															
Iron	**422**	**556**	**4490 J**	**594**	**681**	**674**	**1550**	**420**	125 U	125 U	**165**	**105**	**56**	NS	**38**
Manganese	**538**	**611**	**588**	**595**	**623**	**647**	**3390**	**3250**	**2520**	**2480**	**1900**	**2330**	**1940**	NS	**2170**
Field Parameters															
Dissolved Oxygen (mg/L)	**0.19**	**0.71**	**0.09**	**0.38**	**0**	**0.32**	**0.19**	**0.06**	NS	**3.89**	**0.51**	**0.43**	**0.36**	NS	**0.11**
Oxidation Reduction Potential (ORP) (mV)	**-135.5**	**-155.2**	**-119.1**	**-78.5**	**-95.4**	**-92.5**	**120.8**	**26.6**	NS	**38.5**	**125.8**	**214.7**	**132**	NS	**220.9**
Specific Conductance (uS/cm)	**573**	**606**	**680**	**384**	**725**	**813**	**2614**	**2742**	NS	**2851**	**2807**	**2735**	**2489**	NS	**3224**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
Location ID	AE103R-2	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE103R-5	AE104R-5	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE108R-1	AE109R-6
Sample ID	2A-AE103R2-092822-	7A-AE103R5-100217-	8A-AE103R5-092518-	9A-AE103R5-091819-	0A-AE103R5-091020-	1A-AE103R5-090921-	2A-AE103R5-092822-	2A-AE104R5-092822-	6A-AE108R1-061616-	6A-AE108R1-061616-	7A-AE108R1-100917-	8A-AE108R1-091918-	9A-AE108R1-092419-	0A-AE108R1-090920-	1A-AE108R1-090921-	2A-AE108R1-092822-	2A-AE109R6-100422-
Sample Date	9/28/2022	10/2/2017	9/25/2018	9/18/2019	9/10/2020	9/9/2021	9/28/2022	9/28/2022	6/16/2016	6/16/2016	10/9/2017	9/19/2018	9/24/2019	9/9/2020	9/9/2021	9/28/2022	10/4/2022
Sample Type	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
Depth Interval	62 - 67 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	156 - 162 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	36.5 - 43.5 ft	196 - 201 ft
Analyte																	
Conventional (ug/l)																	
Chloride	**763000**	**184000**	**201000**	**233000**	**285000**	**244000**	**279000**	**248000**	**274000**	**275000**	**234000**	**929000**	**1330000**	**939000**	**54200**	**799000**	**45500**
Nitrate	**3960**	100 U	100 U	50 U	50 U	**260**	50 U	**50**	100 U	100 U	100 U	**238**	**60**	50 U	50 U	50 U	50 U
Nitrite as N	100 U	100 U	100 U	20 U	20 U	20 U	50 U	20 U	100 U	100 U	100 U	3600 U	4 U	100 U	4 U	100 U	10 U
Sulfate	**36400**	**36900**	**34400**	**35800**	**35600**	**35500**	**36600**	**23600**	**11000**	**10900**	**10300**	**16200**	**11200**	**9300**	5000 U	5000 U	**7900**
Sulfide	50 U	100 U	100 U	50 U	50 U	50 U	50 U	**160**	100 U	100 U	100 U	100 U	50 U	**70**	50 U	50 U	**100**
Total Organic Carbon	1000 U	1000 U	**1080**	1000 U	**1300**	1000 U	1000 U	**2400**	**5000 J**	**7000 J**	**5560**	**6540**	**4600**	**4900**	**2500**	**5000**	**1200**
Dissolved Gases (ug/l)																	
Acetylene	0.13 U	**0.051 J**	0.50 U	**0.057 J**	**17**	0.13 U	0.13 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	0.13 U	0.13 U
Ethane	**0.19 J**	**1.5**	**1.4**	**1.6**	**0.81 J**	**0.49 J**	**0.64 J**	**0.73 J**	**0.91**	**0.84**	**0.94**	**0.65**	**0.32**	**0.82 J**	0.17 U	**0.45 J**	**0.72 J-**
Ethene	**2.1**	**39**	**67**	**120**	**150**	**29**	**50**	**77**	**0.21**	**0.17**	**0.11**	**0.23**	**0.48**	**1.0**	0.24 U	**0.32 J**	**10 J-**
Hydrogen (nM)	NS	**2.7**	**2.7**	**1.7**	**3.2 J**	**3.9**	**0.52 J**	NS	**12**	NS	**12**	**3.8**	**2.6**	0.98 U	**3.7**	NS	NS
Methane	**18**	**120**	**130**	**150**	**98**	**60**	**71**	**180**	**190**	**180**	**500**	**640**	**2200 J-**	**2800**	2.0 U	**2900**	**810 J**
Propane	0.29 U	**0.095 J**	**0.077 J**	**0.13**	**0.10**	0.29 U	0.29 U	0.29 U	**0.26**	**0.24**	**0.30**	**0.21**	**0.19**	**0.20**	0.29 U	0.29 U	0.29 U
Dissolved Metals (ug/l)																	
Iron	11 U	**391**	**373**	**430**	**222**	**295**	**205**	**147**	**686 J**	**316 J**	**485**	**485**	**5300**	**7250 J**	**482**	**515**	**141**
Manganese	**2530**	**578**	**665**	**813**	**1010**	**894**	**989**	**275**	**883 J**	**855**	**794**	**3550 J**	**2450**	**3020 J**	**45**	**428**	**222**
Total Metals (ug/l)																	
Iron	**17**	**463**	**433**	**458**	**225**	**370**	**225**	**156**	**1020**	**1340**	**1340**	**581**	**6880**	**5050 J**	**3810**	**1420**	**154**
Manganese	**2490**	**511**	**678**	**822**	**1060**	**872**	**899**	**270**	**768 J**	**875**	**860**	**2460 J**	**2910**	**2010 J**	**112**	**771**	**237**
Field Parameters																	
Dissolved Oxygen (mg/L)	**0**	**0.28**	**0.19**	**0.11**	**6.12**	**2.76**	**0**	**0.08**	**0.42**	NS	**0.58**	**19.84**	**0.36**	**2.57**	**0.09**	**0.28**	**0.15**
Oxidation Reduction Potential (ORP) (mV)	**140.9**	**-142**	**18**	**-84.8**	**-20.4**	**47.6**	**-18.7**	**-98.8**	**-241.4**	NS	**-185.8**	**-150.7**	**-49.9**	**-278.5**	**-43**	**145.2**	**-22.1**
Specific Conductance (uS/cm)	**2565**	**794**	**879**	**924**	**713**	**1084**	**1067**	**931**	**1132**	NS	**1082**	**2910**	**4828**	**2916**	**171**	**2294**	**251.8**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
Location ID	AE105D	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE106M	AE106M
Sample ID	22A-AE105D-092922-16	A-AE105R2-062016-	7A-AE105R2-101217-	8A-AE105R2-100318-	9A-AE105R2-091619-	0A-AE105R2-091720-	2A-AE105R2-092822-	2A-AE105R2-092922-	22A-AE106M-092922-	22A-AE106M-092922-2
Sample Date	9/29/2022	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/28/2022	9/29/2022	9/29/2022	9/29/2022
Sample Type	N	N	N	N	N	N	N	N	N	FD
Depth Interval	73 - 78 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	22.5 - 27.5 ft	22.5 - 27.5 ft
Analyte										
Conventional (ug/l)										
Chloride	**175000**	**41200**	**45600**	**52700 J-**	**51900**	**56900**	NS	**79200**	**616000**	**735000**
Nitrate	50 U	100 U	100 U	R	50 U	50 U	NS	50 U	**1550**	**1520**
Nitrite as N	**640**	100 U	100 U	R	4 U	4 U	NS	10 U	100 U	100 U
Sulfate	**18000**	**14700**	**17200**	**17500**	**15300**	**15500**	NS	**17300**	**27700**	**27400**
Sulfide	50 U	100 U	100 U	100 U	50 U	50 U	NS	50 U	50 U	50 U
Total Organic Carbon	**1000**	1000 U	1000 U	1000 U	1000 U	1000 U	NS	1000 U	**1100**	**1000**
Dissolved Gases (ug/l)										
Acetylene	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	NS	0.13 U	0.13 U
Ethane	0.17 U	**0.19**	**0.29**	**0.30**	**0.32**	**0.32 J**	**0.33 J**	NS	**0.32 J**	**0.34 J**
Ethene	**0.78 J**	**0.41**	**0.090 J**	**0.088 J**	**0.072 J**	**0.60 J**	**1.5**	NS	0.24 U	0.24 U
Hydrogen (nM)	NS	**1.3**	**6.7**	**30**	**1.0**	**2.6**	0.49 U	NS	NS	NS
Methane	**87**	**94**	**120**	**120**	**140**	**120**	**180**	NS	**12**	**8.7**
Propane	0.29 U	**0.082 J**	**0.13**	**0.16**	**0.14**	**0.11**	0.29 U	NS	0.29 U	0.29 U
Dissolved Metals (ug/l)										
Iron	**35900**	**87.6**	**48.0**	125 U	**53**	**82 J**	NS	**186**	**24**	**18**
Manganese	**3210**	**164**	**121**	**107**	**121**	**300 J**	NS	**81**	**1470**	**1480**
Total Metals (ug/l)										
Iron	**35700**	**66.2**	**57.6**	125 U	**52**	**44 J**	NS	**216**	**75 J**	**40 J**
Manganese	**3090**	**191**	**132**	**126**	**129**	**107 J**	NS	**87**	**1450**	**1450**
Field Parameters										
Dissolved Oxygen (mg/L)	**0.18**	**1.14**	**0.19**	**0.14**	**0.13**	**0.19**	NS	**5.02**	**0.17**	NS
Oxidation Reduction Potential (ORP) (mV)	**-179.6**	**65.5**	**-63.7**	**-69**	**-18.1**	**-278.9**	NS	**10.7**	**218.1**	NS
Specific Conductance (uS/cm)	**1037**	**241**	**327**	**291**	**351**	**362**	NS	**411.5**	**2389**	NS

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
Location ID	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE106R-3	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4
Sample ID	6A-AE106R3-062016-	7A-AE106R3-101217-	8A-AE106R3-100318-	9A-AE106R3-091619-	0A-AE106R3-091720-	1A-AE106R3-091321-	2A-AE106R3-092922-	5A-TRC301R4-062216	7A-TRC301R4-102317	8A-TRC301R4-092718	9A-TRC301R4-091719	0A-TRC301R4-091520	2A-TRC301R4-092922
Sample Date	6/20/2016	10/12/2017	10/3/2018	9/16/2019	9/17/2020	9/13/2021	9/29/2022	6/22/2016	10/23/2017	9/27/2018	9/17/2019	9/15/2020	9/29/2022
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Interval	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft
Analyte													
Conventional (ug/l)													
Chloride	**391000**	**418000**	**139000**	**112000**	**126000**	**90500**	**146000**	**112000**	**121000**	**129000**	**137000**	**153000**	**281000**
Nitrate	**1050**	**1120**	**303**	**130**	**140**	**100**	**210**	100 U	500 U	100 U	50 U	50 U	**60**
Nitrite as N	200 U	1700 U	100 U	4 U	4 U	4 U	20 U	100 U	500 U	100 UJ	4 U	8 U	50 U
Sulfate	**23300**	**25300**	**13000**	**11900**	**12600**	**11900**	**15000**	**17100**	**17300**	**16400**	**15200**	**18600**	**153000**
Sulfide	100 U	100 U	100 U	50 U	NS	**70**	50 U	100 U	100 U	100 U	**130**	**190**	**150**
Total Organic Carbon	1000 U	**1010**	**1230**	1000 U	**1300**	1000 U	**1000**	**1100**	**1380**	**1840**	**1300**	**1600**	**1300**
Dissolved Gases (ug/l)													
Acetylene	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.11 U	0.13 U
Ethane	**0.77**	**0.54**	**0.25**	**0.16**	**0.16 J**	0.17 U	0.17 U	**0.61**	**1.0**	**1.1**	**1.3**	**1.2**	**1.3**
Ethene	**0.32**	**0.24**	**0.36**	**2.7**	**3.9**	**1.5**	**1.2**	**1.3**	**2.2**	**1.8**	**2.0**	**1.6**	**1.0**
Hydrogen (nM)	**1.8**	**2.7**	**3.0**	**2.2**	**0.71 J**	**4.4**	**0.91 J**	**11**	**7.2**	**6.1**	**3.9**	**3.0**	**4.2**
Methane	**3.1**	**50**	**400**	**560**	**630**	**300**	**470**	**140**	**270**	**250**	**390**	**270**	**320**
Propane	**0.15**	**0.096 J**	**0.072 J**	**0.048 J**	**0.028 J**	0.29 U	0.29 U	**0.34**	**0.76**	**0.95**	**1.2**	**1.1**	**1.2**
Dissolved Metals (ug/l)													
Iron	20.0 U	15.0 U	125 U	**81**	**95**	**81**	**113**	**4750 J**	**4280**	**5670**	**6870**	**7690**	**10100**
Manganese	**78.6**	**77.2**	**72.4**	**139**	**171**	**158**	**195**	**1250**	**1250**	**1500**	**1610**	**1600**	**2010**
Total Metals (ug/l)													
Iron	20.0 U	15.0 U	**136**	**91**	**106**	**86**	**120 J+**	**4210 J**	**4330**	**5500**	**7030**	**8180**	**9900**
Manganese	**85.5**	**79.5**	**77.3**	**147**	**175**	**168**	**209**	**1230**	**1230**	**1440**	**1650**	**1720**	**1970**
Field Parameters													
Dissolved Oxygen (mg/L)	**0.2**	**0.14**	**1.82**	**0.42**	**0.32**	**0.37**	**0.07**	**0.3**	**0.46**	**0.85**	**1.57**	**0.32**	**0.23**
Oxidation Reduction Potential (ORP) (mV)	**-115.9**	**-41**	**-43.6**	**-17.9**	**-52.5**	**-19.6**	**81.1**	**-137.8**	**-212.4**	**-123.5**	**-122.5**	**-161**	**-145.6**
Specific Conductance (uS/cm)	**1474**	**1726**	**564**	**504**	**588.3**	**377.9**	**633**	**572**	**676**	**590**	**670**	**712**	**848**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Transect B 1/2	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C	Transect C
Location ID	AE112R-5	STM-8R	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1	STM-8R1
Sample ID	2A-AE112R5-100622-	22A-STM8R-100622-1	16A-STM8R1-062816-	17A-STM8R1-101717-	17A-STM8R1-101717-	18A-STM8R1-100218-	19A-STM8R1-092619-	20A-STM8R1-092320-	21A-STM8R1-091621-	21A-STM8R1-091621-	21A-STM8RI-092221-	21A-STM8RI-092221-	22A-STM8R1-100622-
Sample Date	10/6/2022	10/6/2022	6/28/2016	10/17/2017	10/17/2017	10/2/2018	9/26/2019	9/23/2020	9/16/2021	9/16/2021	9/22/2021	9/22/2021	10/6/2022
Sample Type	N	N	N	N	FD	N	N	N	N	FD	N	FD	N
Depth Interval	136 - 146 ft	46.5 - 51.5 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft	85 - 90 ft
Analyte													
Conventional (ug/l)													
Chloride	**225000**	**119000**	**62100**	**68500**	**67200**	**73400**	**78600**	**79800**	**81900**	**81000**	NS	NS	**109000**
Nitrate	50 U	**1310**	**138**	100 U	100 U	100 U	**180**	**70**	50 U	**80**	NS	NS	50 U
Nitrite as N	50 U	10 U	100 U	100 U	100 U	100 U	4 U	4 U	4 U	4 U	NS	NS	10 U
Sulfate	**13400**	**23500**	**49700**	**50600**	**50500**	**48600**	**40600**	**51200**	**22000**	**23100**	NS	NS	**25400**
Sulfide	50 U	**110**	100 U	100 U	100 U	100 U	50 U	50 U	50 U	50 U	NS	NS	**70**
Total Organic Carbon	1000 U	**1700**	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	NS	NS	**1300**
Dissolved Gases (ug/l)													
Acetylene	0.26 U	0.13 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	NS	NS	0.13 U	0.13 U	0.13 U
Ethane	0.34 UJ	**0.57 J-**	**0.0099 J**	**0.014 J**	**0.013 J**	**0.0097 J**	0.10 U	1.0 U	NS	NS	0.17 U	0.17 U	0.17 UJ
Ethene	0.48 UJ	0.24 UJ	**0.11**	**0.27**	**0.27**	**0.050 J**	0.10 U	1.0 U	NS	NS	**0.31 J**	**0.25 J**	**0.42 J-**
Hydrogen (nM)	**1.6 J**	NS	**2.2**	**4.7**	NS	**3.5**	**7.9**	**2.6**	**3.7**	NS	NS	NS	**1.4 J**
Methane	**160 J**	**61 J**	**0.74**	**0.96**	**0.96**	**0.79**	**0.51 J-**	**14**	NS	NS	2.0 U	2.0 U	2.0 UJ
Propane	0.58 U	0.29 U	0.10 U	**0.012 J**	**0.013 J**	**0.019 J**	0.10 U	0.10 U	NS	NS	0.29 U	0.29 U	0.29 U
Dissolved Metals (ug/l)													
Iron	**3440**	**113**	15.0 U	**30.4**	**20.7**	125 U	**12**	**30**	11 U	**13**	NS	NS	11 U
Manganese	**1430**	**566**	**314**	**259**	**258**	**187**	**140**	**138**	**162**	**163**	NS	NS	**198**
Total Metals (ug/l)													
Iron	**3750**	**260**	**79.3 J+**	**153 J**	**87.2 J**	125 U	**69**	**340**	**90 J**	**164 J**	NS	NS	**49**
Manganese	**1390**	**554**	**314**	**355**	**338**	**205**	**156**	**182**	**188**	**210**	NS	NS	**208**
Field Parameters													
Dissolved Oxygen (mg/L)	**0.01**	**0.22**	**1.66**	**2.74**	NS	**3.67**	**0.79**	**NM**	**3.89**	NS	NS	NS	**2.51**
Oxidation Reduction Potential (ORP) (mV)	**-118**	**-45.1**	**25.1**	**56.4**	NS	**109.7**	**-38.3**	**NM**	**93**	NS	NS	NS	**80.3**
Specific Conductance (uS/cm)	**889**	**517**	**509**	**531**	NS	**527**	**491**	**NM**	**317.8**	NS	NS	NS	**494**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-8
Summary of 2016 - 2022 Groundwater Analytical Results for Monitored Natural Attenuation Parameters

Location Group	Upgradient	Upgradient	Upgradient	Upgradient	Upgradient	Upgradient	Upgradient	Upgradient
Location ID	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12	GZA-12
Sample ID	16A-GZA12-061416-1	17A-GZA12-101017-1	18A-GZA12-100118-1	19A-GZA12-092619-1	20A-GZA12-092420-1	21A-GZA12-091421-1	21A-GZA12-092221-1	22A-GZA12-100422-1
Sample Date	6/14/2016	10/10/2017	10/1/2018	9/26/2019	9/24/2020	9/14/2021	9/22/2021	10/4/2022
Sample Type	N	N	N	N	N	N	N	N
Depth Interval	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft	9.5 - 24.5 ft
Analyte								
Conventional (ug/l)								
Chloride	**1190000**	**1220000**	**1190000**	**1140000**	**1050000**	**623000**	NS	**727000**
Nitrate	**9910**	**10900 J**	**10900**	**9290**	**6910**	**9170 J-**	NS	**8420**
Nitrite as N	600 U	R	500 U	20 U	4 U	40 U	NS	100 U
Sulfate	**33900**	**36500**	**33200**	**36800**	**30100**	**31000**	NS	**32200**
Sulfide	100 U	100 U	100 U	50 U	50 U	50 U	NS	50 U
Total Organic Carbon	1000 U	**1080**	**1690**	**1400**	**1500**	**1300**	NS	**1100**
Dissolved Gases (ug/l)								
Acetylene	0.50 U	0.50 U	0.50 U	0.50 U	0.74 U	NS	0.13 U	0.13 U
Ethane	**0.0091 J**	**0.0065 J**	0.10 U	0.10 U	1.0 U	NS	0.17 U	0.17 UJ
Ethene	**0.014 J**	**0.010 J**	**0.0071 J**	0.10 U	1.0 U	NS	0.24 U	0.24 UJ
Hydrogen (nM)	**1.2**	**4.1**	**2.8**	**1.8**	**28**	**4.2**	NS	NS
Methane	**0.69**	**0.46 J**	**0.28 J**	**0.30 J-**	5.0 U	NS	2.0 U	2.0 UJ
Propane	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	0.29 U	0.29 U
Dissolved Metals (ug/l)								
Iron	30.0 U	**50.8**	125 U	11 U	**19**	**15**	NS	11 U
Manganese	**2410**	**2080**	**1540**	**1340**	**1150**	**325**	NS	**436**
Total Metals (ug/l)								
Iron	**96.4**	**21.8**	125 U	**56**	**164**	**58**	NS	**55**
Manganese	**2620**	**2170**	**1770**	**1320**	**1290**	**316**	NS	**473**
Field Parameters								
Dissolved Oxygen (mg/L)	**1.03**	**0.35**	**4.65**	**1.09**	**0.73**	**0.86**	NS	**0.96**
Oxidation Reduction Potential (ORP) (mV)	**218.5**	**206**	**61.7**	**199.3**	**-154**	**211.6**	NS	**142.8**
Specific Conductance (uS/cm)	**4194**	**3719**	**3615**	**4079**	**3744**	**2132**	NS	**2588**

Notes:
U - Non-detect at laboratory detection limit
J = Estimated Value, J+ = biased high,
J- = biased low, R = rejected
ft = feet
mg/l = miligrams per liter
ug/l = micrograms per liter
mv = millivolts
uS/cm = microsiemens/centimeter
NS = not sampled
Detects are bolded

Table 4-9
2016, 2017, 2021 and 2022 Compound Specific Isotope Analytical Results Summary

			2016 CSIA (‰ VPDB)				2017 CSIA (‰ VPDB)				2021 CSIA (‰ VPDB)				2022 CSIA (‰ VPDB)			
cv	**Location ID:**	**Depth Interval:**	**PCE**	**TCE**	**c-DCE**	**VC**	**PCE**	**TCE**	**c-DCE**	**VC**	**PCE**	**TCE**	**c-DCE**	**VC**	**PCE**	**TCE**	**c-DCE**	**VC**
Source Area ***Building 1 Tank F***	AE26R-1	50 - 56 ft	-23.91	-22.61	-33.86		-21.37	-18.71	-29.52									
	AE26R-2	72 - 78 ft										-3.6	-27.6	-13.1				
	AE28R-2	75 - 85 ft	-25.67	-23.58	-36.84		-21.49	-21.84	-37.09		-24	-25.4	-32		-24.2	-26.6	-28.3	
	AE29R-6	140 - 146 ft		-0.27	-32.19		-	2.13	-25.7			5.7	-25.7			2	-25.8	-28.1
	GZA-101R	36.5 - 38 ft	-22.01	-38.69	-42.72		-18.62	-35.31	-37.5									
Eastern Parking Lot (EPL)	GZA-105D	16 - 26 ft									-21.5	-18.2	-25.7					
	GZA-105R	34.5 - 36.5 ft									-23.1	-25.7						
Former Tank Farm	AE100R-1	18 - 24 ft									-25.6	-26.5	-21.7					
	AE100R-5	88 - 93 ft	-23.95	-23.53	-15.32	-8.42	-21.19	-21.48	-23.66	-18.45	-24.4	-25	-22.6		-24.3	-24.9	-22.7	ND
Transect A	AE102M	23 - 28 ft	-25.05	-22.46	-16.14	-25.36	-21.98	-19.53	-13.44	-17.67	-20.5	-16.2	-15.8					
	AE-102RR1	43 - 48 ft														-3.4	-20.5	ND
	AE103R-5	122 - 128 ft					-20.1	-22.19	-24.08	-26.49	-22.1	-25.6	-21.9		-22.9	-25.5	-21.8	
	AE104R-6	168 - 174 ft	-22.51	-24.09	-34.9	-38.31												
	AE108R-1	36.5 - 43.5 ft	-31.22	-8.79	-23.57			-4.58	-19.3									
	EMW-10R	42 - 52 ft									-11.2	-2.9	-18.6					
	EMW-11R2	104 - 114 ft	-22.64	-24.87	-31.22	-35.84	-18.72	-22.16	-26.63	-29.62		-26.5	-28.9					
Transect B	AE105R-1	90.5 - 95.5 ft									-23.8	-23.3	-26.5					
	AE105R-2	98 - 103 ft	-25.72	-24.01	-27.58		-22.54	-21.26	-23.93						-25.8	-24.3	-26.4	
	AE105S	35 - 40 ft			-25.43				-21.92									
	AE106D	34 - 39 ft	-26.83	-22.78	-21.37		-21.67	-18.08	-19.14		-19.1	-19.7						
	AE106R-3	84 - 88 ft	-25.17	-21.84	-23.32	-23.22	-21.19	-17.91	-19.7	-18.81		-11.6	-17.9		-15.2	-17.1	-19.3	
	TRC-301R-3	75.5 - 79.5 ft									-24.2	-23.4	-24					
	TRC-301R-4	65.5 - 69.5 ft	-25.31	-21.93	-24.23	-23.56	-20.92	-18.34	-18.63	-18.97					-24.5	-21.8	-22.9	-24.4
Transect B 1/2	AE112R-6	153 - 163 ft	-23.77	-34.51			-16.43	-22.57	-32.6				-31.3					
	AE-112R-5	136 - 146 ft														-0.2	-31.4	
Transect C	STM-8D	34.7 - 39.7 ft	-28.59	-24.22	-24.83		-22.33	-20.2	-20.11				-22.1					
	STM-8R1	85 - 90 ft										-21.1			-21.2	-26.7	ND	

Table 4-10
2016, 2017, 2021, and 2022 Microbial Insights Quantarray Chlor Analytical Results Summary

Location Group:		Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area	Source Area
Location ID:		GZA-105D	GZA-105D	GZA-105D	GZA-105S	GZA-105S	GZA-105S	AE100R-1	AE100R-1	AE100R-1	AE100R-5	AE100R-5	AE100R-5	AE100R-5	AE26R-1	AE26R-1	AE26R-2	AE28R-2	AE28R-2	AE28R-2	AE28R-2	AE29R-6	AE29R-6	AE29R-6	AE29R-6
Sample Date:		2016	2017	2021	2016	2017	2021	2016	2017	2021	2016	2017	2021	2022	2016	2017	2021	2016	2017	2021	2022	2016	2017	2021	2022
Depth Interval:		16 - 26 ft	16 - 26 ft	16 - 26 ft	4 - 14 ft	4 - 14 ft	4 - 14 ft	18 - 24 ft	18 - 24 ft	18 - 24 ft	88.68 - 93.68 ft	88.68 - 93.68 ft	88 - 93 ft	88 - 93 ft	50 - 56 ft	50 - 56 ft	72 - 78 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	75 - 85 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft	140 - 146 ft
Analyte	Units:																								
Reductive Dechlorination																									
Dehalococcoides (DHC)	cells/mL	**-**	**-**	**2.61E+02**	**8.90E+02**	**3.56E+02**	**-**	**-**	**-**	**5.14E+03**	**5.64E+03**	**5.26E+01**	**8.59E+03**	**4.22E+02**	**5.98E+02**	**2.26E+03**	**8.53E+01**	**1.12E+04**	**1.49E+04**	**2.00E+04**	**5.20E+04**	**1.82E+02**	**6.23E+01**	**-**	**1.64E+03**
tceA Reductase (TCE)	cells/mL	-	-	5.00E+00	<0.3	8.00E-01	-	-	-	0.5 <	**<5.00E-01**	**3.30E+00**	**2.00E-01**	**1.20E+00**	**<5.00E-01**	**8.00E-01**	**2.00E-01**	1.00E-01	0.25 U	**9.60E+01**	**1.12E+03**	<5.00E-01	0.5 U	-	**2.94E+02**
bvcA Reductase	cells/mL	**-**	**-**	**3.70E+00**	**3.00E+00**	**1.70E+00**	**-**	**-**	**-**	**3.00E-01**	**<5.00E-01**	**5.70E-02**	**3.90E+00**	**1.00E+00**	<5.00E-01	4.00E-01	0.5 <	<0.4	**2.50E-01**	0.5 <	<5.00E-01	<5.00E-01	**5.00E-01**	-	<5.00E-01
Vinyl Chloride Reductase (VCR)	cells/mL	**-**	**-**	**4.90E+00**	**3.93E+01**	**1.04E+02**	**-**	**-**	**-**	**3.36E+02**	**5.65E+02**	**6.53E+01**	**6.55E+02**	**7.35E+01**		**5.00E-01**	0.5 <	<0.4	0.25 U	0.5 <	<5.00E-01	<5.00E-01	0.5 U	-	<5.00E-01
Dehalobacter spp. (DHBt)	cells/mL	-	-	5 <	**1.87E+01**	7.08E+02	**-**	**-**	**-**	**1.31E+03**	**5.78E+02**	**3.00E+03**	5 <	<5.00E+00	**2.93E+02**	**6.28E+03**	**2.30E+02**	**2.39E+02**	**4.93E+03**	**1.35E+03**	**4.87E+03**	**1.02E+02**	**2.83E+03**	**-**	**1.35E+03**
Dehalobacter DCM (DCM)	cells/mL	-	-	5 <	5 ND	5 ND	-	-	-	5 <	<5.00E+00	2.5 ND	5 <	<5.00E+00	<5.00E+00	**2.46E+02**	5 <	<4.2	2.50E+00	5 <	<5.00E-01	<5.00E+00	5.00E+00	-	**1.00E+01**
Dehalogenimonas spp. (DHG)	cells/mL	**-**	**-**	**1.92E+03**	**1.35E+04**	**2.18E+03**	**-**	**-**	**-**	**2.72E+03**	**6.28E+03**	**1.25E+03**	**7.00E+03**	**1.38E+03**	**9.90E+03**	**1.34E+05**	**9.70E+03**	**8.81E+03**	**1.06E+05**	**2.85E+04**	**9.36E+04**	**7.65E+03**	**4.02E+04**	**-**	**7.02E+04**
CER	cells/mL	-	-	5 <	-	-	-	-	-	5 <	-	-	5 <	<5.00E+00	-	-	5 <	-	-	5 <	<5.00E-01	-	-	-	<5.00E-01
TDR	cells/mL	-	-	5 <	-	-	-	-	-	5 <	-	-	5 <	<5.00E+00	-	-	5 <	-	-	5 <	<5.00E-01	-	-	-	<5.00E-01
Desulfitobacterium spp. (DSB)	cells/mL	**-**	**-**	**1.91E+04**	**8.90E+02**	**6.93E+03**	**-**	**-**	**-**	**8.62E+03**	**1.45E+03**	**8.19E+03**	**1.06E+05**		**1.58E+03**	**4.38E+03**	5 <	**1.76E+03**	**5.91E+03**	**1.16E+03**	**5.76E+03**	**4.52E+02**	**4.50E+03**	**-**	**2.99E+03**
Dehalobium chlorocoercia (DECO)	cells/mL	**-**	**-**	**2.22E+03**	**4.30E+03**	**1.82E+04**	**-**	**-**	**-**	**5.94E+03**	**1.48E+03**	**6.34E+02**	**2.77E+03**		**9.39E+01**	**1.44E+03**	**4.00E+01**	**5.37E+01**	**1.15E+03**	5 <	**2.59E+03**	**1.39E+02**	**6.47E+02**	**-**	**1.70E+03**
Desulfuromonas spp. (DSM)	cells/mL	-	-	5 <	4.54E+01	5 U	-	**-**	**-**	**4.59E+02**	4.63E+02	2.5 U	5 <	<5.00E+00	<5.00E+00	**5.05E+01**	5 <	<4.2	**3.13E+03**	**3.93E+01**	**4.14E+03**	2.97E+02	5 U	-	<5.00E-01
PCE-1	cells/mL	-	-	5 <			-	-	-	5 <	-	-	**3.46E+01**	<5.00E+00	-	-	5 <	-	-	5 <	<5.00E-01	-	-	-	<5.00E-01
PCE-2	cells/mL	-	-	5 <			-	-	-	5 <	-	-	5 <	<5.00E+00	-	-	5 <	-	-	5 <	<5.00E-01	-	-	-	<5.00E-01
Chloroform Reductase (CFR)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	<5.00E+00	**4.00E+00**	5 <	1.74E+01	2.5 U	5 <	<5.00E-01	<5.00E+00	5 U	-	<5.00E-01
1,1 DCA Reductase (DCA)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E-01	<5.00E+00	5 U	-	<5.00E-01
1,2 DCA Reductase (DCAR)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	<5.00E+00	**4 U**	5 <	<4.2	2.5 U	5 <	<5.00E-01	<5.00E+00	5 U	-	<5.00E-01
Aerobic (Co)Metabolic																									
Solublemethanemonooxygenase (SMMO)	cells/mL	-	-	5 <	**1.63E+04**	**1.16E+04**	**-**	-	-	5 <	**1.14E+02**	**1.18E+02**	**4.96E+01**	<5.00E+00	**5.87E+01**	**5.45E+01**	5 <	**5.76E+01**	**2.71E+01**	5 <	<5.00E-01	**1.14E+02**	**3.83E+01**	**-**	<5.00E-01
Toluene Dioxygenase (TOD)	cells/mL	-	-	5 <	3.80E+00	5 U	-	-	-	5 <	**3.80E+00**	**2.44E+02**	5 <	<5.00E+00	7.70E+00	4 U	**8.80E+00**	6.40E+00	2.5 U	5 <	<5.00E-01	3.14E+01	5 U	-	<5.00E-01
Phenol Hydroxylase (PHE)	cells/mL	**-**	**-**	**1.60E+01**	**6.03E+02**	**7.82E+01**	**-**	**-**	**-**	**2.26E+01**	**6.03E+02**	**4.50E+02**	**7.35E+02**	<5.00E+00	1.17E+02	4 U	5 <	4.26E+01	2.5 U	5 <	**6.20E+00**	**7.20E+03**	**2.32E+01**	**-**	<5.00E-01
Trichlorobenzene Dioxygenase (TCBO)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E-01	<5.00E+00	5 U	-	<5.00E-01
Toluene Monooxygenase 2 (RDEG)	cells/mL	-	-	5 <	5 U	**6.23E+02**	**-**	**-**	**-**	**1.12E+02**	**<5.00E+00**	**2.86E+02**	**1.97E+02**	<5.00E+00	1.12E+02	4 U	5 <	<4.2	2.5 U	5 <	<5.00E-01	1.39E+03	5 U	-	<5.00E-01
Toluene Monooxygenase (RMO)	cells/mL	-	-	5 <	**4.38E+02**	**2.31E+01**	**-**	-	-	5 <	**4.38E+02**	**1.57E+03**	**1.14E+02**	<5.00E+00	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E-01	7.34E+02	5 U	-	<5.00E-01
Ethene Monooxygenase (EtnC)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	**9.60E+01**	<5.00E+00	5 U	-	<5.00E-01
Epoxyalkane Transferase (EtnE)	cells/mL	**-**	**-**	**2.26E+01**	5 U	5 U	-	-	-	5 <	**<5.00E+00**	**1.39E+01**	**3.39E+01**	<5.00E+00	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	**4.09E+02**	<5.00E+00	5 U	-	<5.00E-01
Dichloromethane Dehalogenase (DCMA)	cells/mL	-	-	5 <	5 U	5 U	-	-	-	5 <	<5.00E+00	2.5 U	5 <	<5.00E+00	<5.00E+00	4 U	5 <	<4.2	2.5 U	5 <	<5.00E-01	<5.00E+00	5 U	-	<5.00E-01
Particulate Methane Monooxygenase (PMMO)	cells/mL	-	-		**2.14E+02**	**2.00E-01**	**-**	-	-		**2.14E+02**	**2.30E+00**		NA	3.19E+01	4 U		1.06E+01	2.5 U		NA	**1.65E+02**	**2.40E+00**	**-**	NA
Other																									
Total Eubacteria (EBAC)	cells/mL	**-**	**-**	**5.33E+06**	**1160000 ND**	**1.16E+06**	**-**	**-**	**-**	**9.22E+05**	**4.46E+05**	**3.74E+05**	**1.55E+06**	**5.36E+05**	**3.34E+05**	**9.46E+05**	**3.07E+04**	**2.79E+05**	**2.59E+04**	**2.72E+05**	**1.31E+06**	**3.96E+05**	**1.92E+04**	**-**	**6.38E+05**
Sulfate Reducing Bacteria (APS)	cells/mL	**-**	**-**	**3.32E+05**	**24300 ND**	**2.43E+04**	**-**	**-**	**-**	**2.44E+04**	**3.68E+05**	**5.89E+04**	**1.03E+05**	**4.62E+04**	**1.50E+04**	**5.38E+04**	**4.72E+03**	**4.73E+04**	**3.39E+04**	**4.72E+04**	**2.79E+05**	**3.24E+05**	**6.66E+04**	**-**	**7.56E+04**
Methanogens (MGN)	cells/mL	**-**	**-**	**1.73E+01**	**3350 ND**	**3.35E+03**	**-**	**-**	**-**	**1.47E+04**	**1.03E+02**	**3.30E+02**	**2.59E+03**	**<5.00E+00**	**2.32E+02**	**2.38E+02**	**6.84E+01**	**2.64E+01**	**2.12E+02**	**9.00E+00**	<5.00E-01	**2.12E+01**	**1.86E+03**	**-**	<5.00E-01

Table 4-10
2016, 2017, 2021, and 2022 Microbial Insights Quantarray Chlor Analytical Results Summary

Location Group:		Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
Location ID:		AE102M	AE102M	AE102M	AE-102RR-1	AE103R-5	AE103R-5	AE103R-5	AE103R-5	EMW-11R2	EMW-11R2	EMW-11R2
Sample Date:		2016	2017	2021	2022	2016	2017	2021	2022	2016	2017	2021
Depth Interval:		23 - 28 ft	23 - 28 ft	23 - 28 ft		122 - 128 ft	122 - 128 ft	122 - 128 ft	122 - 128 ft	102 - 112 ft	102 - 112 ft	102 - 112 ft
Analyte	Units:											
Reductive Dechlorination												
Dehalococcoides (DHC)	cells/mL	**3.74E+03**	**1.28E+02**	**1.19E+02**	**1.18E+04**	-	**4.14E+02**	**1.14E+03**	**5.07E+02**	**4.44E+03**	**3.82E+02**	-
tceA Reductase (TCE)	cells/mL	1.00E-01	<0.5	<0.5	<5.00E-01	-	<0.5	<0.5	<5.00E-01	<0.3	<0.5	-
bvcA Reductase	cells/mL	**2.13E+01**	**8.70E+00**	**1.00E-01**	**1.02E+03**	-	**9.10E+00**	0.5 <	**2.00E-01**	**6.08E+01**	**1.55E+01**	-
Vinyl Chloride Reductase (VCR)	cells/mL	**1.96E+02**	**8.72E+01**	**5.50E+00**	**1.32E+02**	-	**3.56E+02**	**7.77E+01**	**4.53E+01**	**3.19E+01**	**3.36E+01**	-
Dehalobacter spp. (DHBt)	cells/mL	**2.78E+02**	**2.79E+03**	**1.31E+03**	**1.88E+03**	-	**7.11E+02**	**2.08E+02**	**2.08E+02**	**1.05E+01**	**7.91E+01**	-
Dehalobacter DCM (DCM)	cells/mL	<2.5	<5	<5	<5.00E-01	-	<5	<5	<5.00E-01	1.26E+03	<5	-
Dehalogenimonas spp. (DHG)	cells/mL	**7.62E+03**	**3.32E+03**	**1.14E+05**	**3.16E+04**	-	**4.47E+04**	**1.21E+04**	**1.33E+04**	**1.02E+04**	**7.25E+03**	-
CER	cells/mL			5 <	<5.00E-01	-	-	<5	<5.00E-01	-	-	-
TDR	cells/mL			5 <	<5.00E-01	-	-	<5	<5.00E-01	-	-	-
Desulfitobacterium spp. (DSB)	cells/mL	**1.30E+03**	**6.64E+03**	**4.49E+03**	**1.20E+03**	-	**8.94E+02**	**8.94E+03**	**1.87E+04**	**5.02E+01**	**4.50E+02**	-
Dehalobium chlorocoercia (DECO)	cells/mL	**4.18E+02**	**1.87E+03**	**3.03E+03**	**1.49E+03**	-	**4.00E+01**	<5	**1.40E+02**	**4.38E+02**	**3.79E+02**	-
Desulfuromonas spp. (DSM)	cells/mL	**3.68E+01**	**<2.5**	**7.80E+00**	**<5.00E-01**	-	<5	<5	<5.00E-01	**1.48E+03**	**2.59E+02**	-
PCE-1	cells/mL			<5	<5.00E-01	-	-	**1.27E+02**	**1.25E+02**	-	-	-
PCE-2	cells/mL			**6.60E+01**	**<5.00E-01**	-	-	<5	<5.00E-01	-	-	-
Chloroform Reductase (CFR)	cells/mL	<2.5	<2.5	<5	<5.00E-01	-	<5	<5	<5.00E-01	<0.3	<5	-
1,1 DCA Reductase (DCA)	cells/mL	<2.5	<2.5	<5	<5.00E-01	-	<5	<5	<5.00E-01	<0.3	<5	-
1,2 DCA Reductase (DCAR)	cells/mL	<2.5	<2.5	<5	<5.00E-01	-	<5	<5	<5.00E-01	<0.3	<5	-
Aerobic (Co)Metabolic												
Solublemethanemonooxygenase (SMMO)	cells/mL	**1.10E+04**	**8.09E+03**	**2.36E+02**	**<5.00E-01**	-	**7.70E+01**	<5	<5.00E-01	9.82E+01	<5	-
Toluene Dioxygenase (TOD)	cells/mL	**4.93E+01**	**7.62E+02**	<5	**2.10E+00 J**	-	<5	<5	**1.80E+00 J**	**9.00E-01**	**2.78E+01**	-
Phenol Hydroxylase (PHE)	cells/mL	**1.71E+01**	**2.09E+01**	**9.30E+00**	**<5.00E-01**	-	<5	**2.45E+02**	**3.28E+01**	1.08E+02	<5	-
Trichlorobenzene Dioxygenase (TCBO)	cells/mL	<2.5	<2.5	<5	<5.00E-01	-	<5	<5	<5.00E-01	<0.3	<5	-
Toluene Monooxygenase 2 (RDEG)	cells/mL	**8.86E+01**	**1.21E+02**	**3.73E+03**	**2.03E+01**	-	<5	<5	**3.70E+02**	<0.3	<5	-
Toluene Monooxygenase (RMO)	cells/mL	<2.5	<2.5	<5	**5.35E+01**	-	<5	**3.34E+02**	**1.18E+01**	3.10E+00	<5	-
Ethene Monooxygenase (EtnC)	cells/mL	**1.09E+01**	**6.95E+01**	**1.39E+02**	**<5.00E-01**	-	<5	<5	<5.00E-01	<0.3	<5	-
Epoxyalkane Transferase (EtnE)	cells/mL	**<2.5**	**5.88E+02**	**1.17E+02**	**<5.00E-01**	-	<5	<5	<5.00E-01	<0.3	<5	-
Dichloromethane Dehalogenase (DCMA)	cells/mL	<2.5	<2.5	<5	<5.00E-01	-	<5	<5	<5.00E-01	<0.3	<5	-
Particulate Methane Monooxygenase (PMMO)	cells/mL	**2.36E+02**	**6.00E+00**	<5	NA	-	**2.1 J**	<5	NA	**2.40E+01**	**2.30E+00**	-
Other												
Total Eubacteria (EBAC)	cells/mL	**4.57E+05**	**4.13E+05**	**3.38E+06**	**2.74E+05**	-	**7.06E+04**	**2.85E+05**	**4.38E+05**	**7.14E+04**	**2.20E+04**	-
Sulfate Reducing Bacteria (APS)	cells/mL	**2.39E+05**	**6.33E+03**	**2.50E+04**	**5.40E+04**	-	**9.50E+03**	**6.54E+03**	**1.53E+04**	**3.95E+04**	**2.37E+03**	-
Methanogens (MGN)	cells/mL	**1.06E+01**	**1.42E+02**	<5	**7.90E+01**	-	**3.52E+01**	**4.30 J**	**3.50E+00 J**	**4.29E+01**	**6.00E+00**	-

Table 4-10
2016, 2017, 2021, and 2022 Microbial Insights Quantarray Chlor Analytical Results Summary

Location Group:		Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
Location ID:		AE105R-2	AE105R-2	AE105R-2	AE105R-2	AE105S	AE105S	AE105S	AE106D	AE106D	AE106D	AE106R-3	AE106R-3	AE106R-3	AE106R-3	AE112R-5	AE112R-6	AE112R-6	AE112R-6	TRC-301R-3	TRC-301R-3	TRC-301R-3	TRC-301R-4	TRC-301R-4	TRC-301R-4	TRC-301R-4
Sample Date:		2016	2017	2021	2022	2016	2017	2021	2016	2017	2021	2016	2017	2021	2022	2022	2016	2017	2021	2016	2017	2021	2016	2017	2021	2022
Depth Interval:		98 - 103 ft	98 - 103 ft	98 - 103 ft	98 - 103 ft	35 - 40 ft	35 - 40 ft	35 - 40 ft	34 - 39 ft	34 - 39 ft	34 - 39 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	84 - 88 ft	136 - 146 ft	153 - 163 ft	153 - 163 ft	153 - 163 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	75.5 - 79.5 ft	65.5 - 69.5 ft	65.5 - 69.5 ft
Analyte	Units:																									
Reductive Dechlorination																										
Dehalococcoides (DHC)	cells/mL	**1.02E+02**	**4.54E+01**	-	**8.65E+02**	**1.84E+01**	**1.34E+01**	-	**1.61E+01**	0.4 U	-	**5.10E+01**	**8.71E+02**	-	**9.21E+01**	**1.97E+01**	**1.30E+00**	**2.30E+00**	-	-	-	**1.22E+02**	**1.08E+02**	**8.70E+00**		**7.98E+01**
tceA Reductase (TCE)	cells/mL	<5.00E-01	3.00E+00	-	<5.00E-01	<4.00E-01	0.5 U	-	<3.00E-01	0.4 U	-	<5.00E-01	**2.00E-01**	-	**4.00E-01 J**	<5.00E-01	<4.00E-01	0.4 U	-	-	-	0.5 <	<5.00E-01	0.3 U		<5.00E-01
bvcA Reductase	cells/mL	**5.00E-01**	**1.50E+00**	-	**1.44E+02**	<4.00E-01	5.00E-01	-	<3.00E-01	0.4 ND	-	**2.40E+00**	**1.33E+01**	-	**3.00E-01 J**	<5.00E-01	<4.00E-01	**4.00E-01**	-	-	-	**6.00E-01**	**3.10E+01**	**2.40E+00**		**1.20E+00**
Vinyl Chloride Reductase (VCR)	cells/mL	**9.00E-01**	**5.91E+01**	-	**4.10E+00**	**1.30E+01**	**5.28E+01**	-	<3.00E-01	0.4 U	-	**4.00E-01**	**1.11E+02**	-	**1.30E+01**	<5.00E-01	<4.00E-01	0.4 U	-	-	-	**3.80E+00**	**1.58E+01**	**8.30E+00**		**4.30E+00**
Dehalobacter spp. (DHBt)	cells/mL	**1.31E+02**	**5.81E+03**	-	**1.92E+03**	**1.59E+02**	**2.79E+03**	-	**1.90E+00**	**2.40E+03**	-	**2.28E+02**	**3.85E+03**	-	**1.68E+03**	**3.29E+02**	**9.36E+02**	**5.73E+02**	-	-	-	**2.10E+03**	**3.19E+01**	**8.11E+02**		**1.89E+03**
Dehalobacter DCM (DCM)	cells/mL	<5.00E+00	3.00E-01	-	<5.00E-01	<4.00E+00	5.00E+00	-	<2.50E+00	**4.00E+00**	-	<5.00E+00	4.00E+00	-	<5.00E-01	<5.00E-01	<4.20E+00	**4.00E+00**	-	-	-	5 <	**1.90E+00**	**3.00E-01**		<5.00E-01
Dehalogenimonas spp. (DHG)	cells/mL	**4.87E+02**	**5.51E+02**	-	**4.82E+03**	**1.12E+03**	**3.35E+03**	-	**1.14E+02**	4 U	-	**2.40E+02**	**9.21E+02**	-	**5.21E+02**	**1.35E+03**	**3.70E+00**	**9.93E+02**	-	-	-	**2.97E+03**	**9.67E+02**	**8.91E+02**		**1.14E+03**
CER	cells/mL	-	-	-	**1.00E-01 J**	-	-	-	-	-	-	-	-	-	<5.00E-01	<5.00E-01	-	-	-	-	-	-	5 <				<5.00E-01
TDR	cells/mL	-	-	-	**2.68E+03**	-	-	-	-	-	-	-	-	-	<5.00E-01	<5.00E-01	-	-	-	-	-	-	5 <				<5.00E-01
Desulfitobacterium spp. (DSB)	cells/mL	**2.81E+02**	**2.76E+03**	-	**1.63E+03**	**2.85E+02**	**2.50E+03**	-	**3.30E+00**	**3.22E+03**	-	**8.61E+02**	**3.27E+03**	-	**4.74E+03**	**2.56E+02**	**2.07E+03**	**3.16E+02**	-	-	-	**1.20E+03**	**3.98E+01**	**5.45E+02**		**4.22E+02**
Dehalobium chlorocoercia (DECO)	cells/mL	**9.77E+01**	**3.79E+02**	-	**4.61E+02**	**4.45E+02**	**5.37E+02**	-	**1.57E+02**	**3.65E+02**	-	**9.71E+01**	**2.80E+01**	-	**1.85E+01**	**8.70E+01**	**3.04E+02**	4 U	-	-	-	**5.53E+02**	**9.90E+01**	**2.56E+02**		**7.02E+02**
Desulfuromonas spp. (DSM)	cells/mL	**2.53E+03**	**3.06E+02**	-	<5.00E-01	<4.00E+00	5 U	-	<2.50E+00	4 U	-	**8.93E+03**	**3.24E+02**	-	**2.46E+02**	<5.00E-01	**2.29E+03**	4 U	-	-	-	5 <	8.45E+01	0.3 U		<5.00E-01
PCE-1	cells/mL	-	-	-	<5.00E-01	-	-	-	-	-	-	-	-	-	<5.00E-01	<5.00E-01	-	-	-	-	-	-	5 <				<5.00E-01
PCE-2	cells/mL	-	-	-	**4.26E+01**	-	-	-	-	-	-	-	-	-	<5.00E-01	<5.00E-01	-	-	-	-	-	-	5 <				<5.00E-01
Chloroform Reductase (CFR)	cells/mL	5.00E-01	0.3 U	-	<5.00E-01	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	**4.60E+00 J**	<5.00E-01	**1.70E+02**	4 U	-	-	-	5 <	<5.00E+00	0.3 U		<5.00E-01
1,1 DCA Reductase (DCA)	cells/mL	<5.00E+00	0.3 U	-	<5.00E-01	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<5.00E-01	<5.00E-01	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U		<5.00E-01
1,2 DCA Reductase (DCAR)	cells/mL	<5.00E+00	0.3 U	-	<5.00E-01	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<5.00E-01	<5.00E-01	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U		<5.00E-01
Aerobic (Co)Metabolic																										
Solublemethanemonooxygenase (SMMO)	cells/mL	1.44E+02	3.00E-01	-	**5.87E+01**	**5.73E+02**	**5.00E+00**		**7.82E+02**	**4.00E+00**	-	**1.61E+02**	**4.00E+00**	-	<5.00E-01	<5.00E-01	**9.92E+02**	**4.00E+00**	-	-	-	5 <	**7.91E+02**	**7.70E+00**		**<5.00E-01**
Toluene Dioxygenase (TOD)	cells/mL	2.90E+00	0.3 U	-	<5.00E-01	**1.00E+00**	5 U	-	**2.40E+00**	**1.20E+02**	-	**8.39E+01**	4 U	-	<5.00E-01	<5.00E-01	**2.03E+02**	4 U	-	-	-	5 <	**3.60E+00**	0.3 U		<5.00E-01
Phenol Hydroxylase (PHE)	cells/mL	**2.29E+01**	**7.80E+00**	-	<5.00E-01	**2.37E+02**	5 U	-	**1.20E+01**	**3.57E+03**	-	**6.62E+02**	**1.02E+02**	-	<5.00E-01	<5.00E-01	**3.83E+01**	**9.00E+00**	-	-	-	5 <	**9.66E+01**	**4.13E+01**		**<5.00E-01**
Trichlorobenzene Dioxygenase (TCBO)	cells/mL	<5.00E+00	0.3 U	-	<5.00E-01	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<5.00E-01	<5.00E-01	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U		<5.00E-01
Toluene Monooxygenase 2 (RDEG)	cells/mL	<5.00E+00	0.3 U	-	**8.29E+01**	**1.34E+02**	5 U	-	**<2.50E+00**	**1.89E+04**	-	**<5.00E+00**	**1.56E+01**	-	<5.00E-01	<5.00E-01	**3.20E+01**	4 U	-	-	-	5 <	<5.00E+00	0.3 U		<5.00E-01
Toluene Monooxygenase (RMO)	cells/mL	6.22E+01	0.3 U	-	<5.00E-01	**1.41E+02**	5 U	-	**<2.50E+00**	**3.61E+03**	-	**3.08E+02**	**3.33E+02**	-	<5.00E-01	<5.00E-01	<4.20E+00	4 U	-	-	-	5 <	**5.43E+01**	**7.03E+01**		**<5.00E-01**
Ethene Monooxygenase (EtnC)	cells/mL	<5.00E+00	0.3 U	-	<5.00E-01	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<5.00E-01	<5.00E-01	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U		<5.00E-01
Epoxyalkane Transferase (EtnE)	cells/mL	<5.00E+00	0.3 U	-	<5.00E-01	**6.50E+00**	**1.08E+02**	-	**2.10E+00**	4 U	-	<5.00E+00	4 U	-	<5.00E-01	<5.00E-01	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U		<5.00E-01
Dichloromethane Dehalogenase (DCMA)	cells/mL	<5.00E+00	0.3 U	-	<5.00E-01	<4.00E+00	5 U	-	<2.50E+00	4 U	-	<5.00E+00	4 U	-	<5.00E-01	<5.00E-01	<4.20E+00	4 U	-	-	-	5 <	<5.00E+00	0.3 U		**2.92E+01**
Particulate Methane Monooxygenase (PMMO)	cells/mL	**1.44E+01**	**2.90E+00**	-	NA	**3.70E+03**	**2.70E+00**	-	**5.07E+02**	**7.90E+00**	-	**2.67E+01**	**3.70E+00**	-	NA	NA	**3.06E+01**	4 U	-	-	-		**3.08E+03**	0.3 U		NA
Other																										
Total Eubacteria (EBAC)	cells/mL	**1.51E+05**	**6.88E+04**	-	**2.55E+05**	**4.65E+04**	**8.63E+04**	-	**5.94E+04**	**3.11E+04**	-	**3.87E+05**	**3.20E+05**	-	**3.43E+05**	**1.34E+05**	**2.48E+05**	**9.47E+03**	-	-	-	**1.89E+05**	**5.10E+04**	**5.14E+04**		**5.55E+04**
Sulfate Reducing Bacteria (APS)	cells/mL	**8.92E+04**	**9.12E+03**	-	**1.82E+04**	**8.03E+04**	**2.80E+03**	-	**4.46E+04**	**6.35E+03**	-	**2.56E+05**	**3.17E+04**	-	**2.42E+04**	**2.56E+04**	**3.11E+04**	**7.36E+03**	-	-	-	**3.65E+04**	**2.41E+04**	**1.41E+04**		**9.72E+03**
Methanogens (MGN)	cells/mL	**5.20E+00**	**1.83E+01**	-	**2.88E+01**	**5.40E+00**	**5.50E+00**	-	**2.30E+00**	**2.63E+01**	-	**1.37E+01**	**1.68E+01**	-	**1.49E+01**	**3.73E+01**	**1.61E+01**	**2.44E+01**	-	-	-	**3.10 J**	**5.60E+00**	**2.10E+00**		**1.20E+00 J**

Table 8-1
Post-Temporary Solution Operations, Maintenance, and Monitoring Schedule
Former GE Facility, 50 Fordham Road, Wilmington, MA

Year	2022												2023												2024												2025												2026												2027				
Month	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May
Biennial Groundwater Sampling Event																																																														
Annual LNAPL Gauging and LNAPL Removal																																																																		
Post-Temporary Solution Status Reports																																																																		
Five-Year Review of the Temporary Solution																																																																	

Completed
To be Completed

APPENDICES

Appendix A—Groundwater Sampling Field Records

Appendix B—Waste Manifests

Appendix C— Laboratory Analytical and Data Validation Reports – Groundwater

Appendix D—Groundwater Concentration Trend Graphs

Appendix E—2016-2021 Bedrock Plume Figures (1,4-Dioxane, tetrachloroethene, Trichloroethene)

Appendix F—Activity and Use Limitation

Appendix G—Public Notification Documentation

APPENDIX A
GROUNDWATER SAMPLING FIELD RECORDS

AECOM

Former GE Facility - Wilmington, MA

Building 3 - EPL LNAPL Gauging Record

Date: 4/27/22

Weather: Sunny, 72°F Recorder: A. Grossman / K. Jones

Gauging Information

Well	Time	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Depth to DNAPL (ft btoc)	Depth to Bottom (ft btoc)	Confirm Product w/ Bailer (Y/N/NA)	Product Removed (Y/N/NA)	Comments
AE-3	1703	~~ND~~ ~~6.07~~	6.07	ND	12.46			PID: 135.1 ppm
AE-4	1708	~~ND~~	5.82	ND	12.13			PID: 1.1 ppm
CW-1		~~ND~~ ~~4.81~~	4.82	~~ND~~				PID: 774.1 ppm
CW-2		ND	4.57	~~6.65~~	6.65			PID: 1.7 ppm
GZA-102S	1716	ND	6.22	ND	10.41			PID: 0.4 ppm
PZ-2S	1720	ND	6.02	ND	7.98			PID = 370.6
TRC-101		ND	6.02	~~4.45~~ ND	9.45			PID = 218.1 PPM

Gauging device (Mnfr./Model No.):

Note: If LNAPL is detected at thickness > 0.1 feet, insert absorbant sock and wire basket into well and secure tightly.

(Place spent socks, if used, in 5-gallon bucket within treatment building.)

Notes:

NA = Not Applicable

ND = Not Detected

NR = Not Recorded

ft btoc = feet below top of casing

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s) _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
~~TRC-101~~				82.18		See LNAPL Gauging Record
TRC-102				81.21		
TRC-103	9/27	1700	5.81	82.02	3.1	
TRC-201R						
TRC-202R						
~~GZA-102S~~				82.38		See LNAPL Gauging Record
GZA-102R1				85.18		
GZA-102R2				85.18		
PZ-2S				82.77		See LNAPL Gauging Record
TRC-401R				82.00		
GZA-105S				81.89		
GZA-105D				81.82		
GZA-105R				81.80		
WE-105R2				82.05		
BRW-1 ?						
BRW-1R1 ?						
BRW-1R2				80.76		
BRW-1R3				80.57		
BRW-1R4				80.80		
EMW-10S				78.58		
EMW-10D				78.41		
EMD-10R				78.11		
EMW-11S				79.25		
EMW-11D				79.39		
EMW-11R1				79.43		
EMW-11R2				79.44		
EMW-11R3				79.45		
IP-1R1				82.12		
IP-1R2	9/27	1700	5.57	82.07	34.9	
IP-1R3				82.04		
IP-2R1				82.17		
IP-2R2		1715	5.62	82.14	15.6	
IP-2R3				82.12		
IP-2R4	↓	715	5.49	82.06	424.10	
IP-3R1				81.02		
IP-3R2				80.98		
IP-4R1				80.84		
IP-4R2				80.79		
IP-4R3				80.77		

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
TRC-101				82.18		See LNAPL Gauging Record
TRC-102				81.21		
TRC-103				82.02		
TRC-201R	9/27/22	1727	7.01		NM	
TRC-202R						
GZA-102S				82.38		See LNAPL Gauging Record
GZA-102R1				85.18		
GZA-102R2				85.18		
PZ-2S				82.77		See LNAPL Gauging Record
TRC-401R				82.00		
GZA-105S				81.89		
GZA-105D				81.82		
GZA-105R				81.80		
WE-105R2				82.05		
BRW-1 ?						
BRW-1R1 ?						
BRW-1R2				80.76		
BRW-1R3				80.57		
BRW-1R4				80.60		
EMW-10S				78.56		
EMW-10D	9/27/22	1214	4.68	78.41	0.8	
EMD-10R				78.11		
EMW-11S				79.25		
EMW-11D				79.39		
EMW-11R1				79.43		
EMW-11R2				79.44		
EMW-11R3				79.45		
IP-1R1				82.12		
IP-1R2				82.07		
IP-1R3				82.04		
IP-2R1				82.17		
IP-2R2				82.14		
IP-2R3				82.12		
IP-2R4				82.08		
IP-3R1				81.02		
IP-3R2				80.98		
IP-4R1				80.84		
IP-4R2				80.79		
IP-4R3				80.77		

Notes: R = replicate field measurement

Water level meter make/model/SN

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather_____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
TRC-101				82.18		See LNAPL Gauging Record
TRC-102				81.21		
TRC-103				82.02		
TRC-201R						
TRC-202R						
GZA-102S		1700	6.25	82.38	0.0	See LNAPL Gauging Record
GZA-102R1		1706	6.11	85.18	0.0	
GZA-102R2		1705	6.61	85.18	0.0	
PZ-2S				82.77		See LNAPL Gauging Record
TRC-401R		1740	5.32	82.00		
GZA-105S		1735	4.29	81.89	0.1	
GZA-105D		1736	4.19	81.82	0.0	
GZA-105R		1746	4.98	81.80	0.2	
WE-105R2				82.05		
BRW-1 ?						
BRW-1R1 ?						
BRW-1R2				80.78		
BRW-1R3				80.57		
BRW-1R4				80.60		
EMW-10S				78.58		
EMW-10D				78.41		
EMD-10R				78.11		
EMW-11S				79.25		
EMW-11D				79.39		
EMW-11R1				79.43		
EMW-11R2				79.44		
EMW-11R3				79.45		
IP-1R1				82.12		
IP-1R2				82.07		
IP-1R3				82.04		
IP-2R1				82.17		
IP-2R2				82.14		
IP-2R3				82.17		
IP-2R4				82.15		
IP-3R1				81.02		
IP-3R2				80.98		
IP-4R1				80.84		
IP-4R2				80.79		
IP-4R3				80.77		

no product

4.98 / 0.

Notes: R = replicate field measurement

Water level meter make/model/SN

3.4

AECOM SW

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: | Recorders:

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
AE-106S			3.15	78.42		
AE-106R-1 (47-52)			3.40	79.15		3.4
TRC-301R-1 (96.5-100 5)			3.01	78.57		
MW-4	~~3/6~~	0950	~~2.66~~	77.23	2.66	~~DTW~~ SW= 2.52
MW-4A		0943	~~1.98~~	76.46		~~DTW~~ SW= 1.80
MW-5		1500 1488	3.52	78.99		TOC
PS-1S		1488	4.07	79.21		
PS-1M		1401	3.10	77.30		
PS-1D		1402	1.25	76.51		
PS-2S				77.71		
PS-2M				77.81		
PS-2D				76.91		
GZA-1 (wwtp)		1636	Dry	79.05		
GZA-2 (wwtp)		1625	3.40	79.12		
SG-1		1540	0.24	75.78		
SG-2		1450	0.44	70.82		
Concord Street Pond			~~0.63~~	75.91		Ref Elev is top of 2nd outfall pipe into Pond, west of Fordham Rd
			0.93			

For each of the MWs above, if there is standing water present at the well, measure depth to surface water from the TOC reference elevation. This may require two measurements from TOC to Rim of stickup then rim of stickup down to surface water
At gauges SG-1 and SG-2, if no standing water, dig down up to 12 inches to see water is present, if yes, allow water to fill hole/stabilize and take measurement of depth to water below ground

Notes: R = replicate field measurement

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s) _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
MW-1		1241	2.93	78.81	0.0	
MW-4		0950	2.66	77.23	0.1	SW=
MW-4A		0945	1.95	76.46	0.2	SW=
MW-5		1527	3.36	78.99	0.0	SW=
MW-7		1535	4.63	80.33	0.1	SW= R=4.63
GZA-14				82.64		
GZA-14A				82.31		
PS-1S		1156	2.88	79.21	0.0	SW=
PS-1M		1157	2.54	77.30	0.0	SW=
PS-1D		1158	0.95	76.51	0.0	SW=
PS-2S				77.71		SW=
PS-2M				77.81		SW=
PS-2D				76.91		SW=
PS-3		1039	1.23	76.64	0.0	
PS-4		1005	2.78	78.66	0.0	R=2.78
PS-5S		1015	3.96	80.49	0.0	
PS-5D		1019	3.79	79.68	0.1	
PS-8S		1230	6.68	83.77	0.0	
PS-8M		1231	5.63	82.53	0.0	
PS-8D		1232	5.86	82.77	0.0	
GZA-1 (wwtp)		1630	3.07	78.93 ?	0.2	SW=
GZA-2 (wwtp)		1615	3.04	79.03 ?	0.0	SW=
GZA-3 (wwtp)		1610	3.52	79.68 ?	0.0	SW=
GZA-4 (wwtp)		1800	6.70	83.3 ?	0.1	
STM-7 (Wim Masonry)		1435	4.26	75.57	0.0	
AE-112R-1 (41-51)				81.76		
AE-112R-2 (62-72)				81.78		
AE-112R-3 (91-101)				81.78		
AE-112R-4 (113-123)				81.60		
AE-112R-5 (136-146)				81.75		
AE-112R-6 (153-163)				81.73		
AE-112R-7 (168-175)				81.74		
AE-112D				82.27		
HOW-2 (MW-2)				84.35		
HOW-3 (MW-3)				81.83		
GZA-107M				80.87		
GZA-107D				81.08		
GZA-107R				80.58		

Notes: R = replicate field measurement

Water level meter make/model/SN

PID = J-111 235 Zero = 0.0
ISO = 99.9
post cal = 98.4

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s) _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-104S				79 30		
AE-104M				79 28		
AE-104D				79 30		
AE-108R-1 (36.5-43.5)				78 81		
AE-108R-2 (68-73)				78 85		
AE-108R-3 (84-89)				78 82		
AE-108R-4 (145-150)				78 79		
AE-108R-5 (163-168)				78 80		
AE-105R-1 (90.5-95.5)				79.40		
AE-105R-2 (98-103)				79.40		
AE-105R-3 (107.5-112.5)				79 39		
AE-105R-4 (125-130)				79 37		
AE-105R-5 (143-148)				79 36		
AE-105R-6 (156-161)				79 37		
AE-105S				79 39		
AE-105M				79 35		
AE-105D				79 42		
AE-106R-1 (47-52)				79 15		SW=
AE-106R-2 (69.5-74.5)				79 12		
AE-106R-3 (84-89)				79 13		
AE-106R-4 (144.5-150.5)				79 15		
AE-106R-5 (164-169)				79 14		
AE-106S				78 42		SW=
AE-106M				78 44		
AE-106D				78 41		
TRC-301R-1 (96.5-100.5)				78 57		SW=
TRC-301R-2 (81.5-85.5)				78 57		
TRC-301R-3 (75.5-79.5)				78 57		
TRC-301R-4 (65.5-69.5)				78 57		
PZ-9S				82 17		
PZ-9D				82 16		
PZ-9R				82 27		
GZA-12	9/27	11:01	10.19	87 62	0.2	R: 10.14
GZA-101R	9/27	10:15	10.35	87 41	0.0	
AE-1S				86.26		
AE-1I				86.68		
AE-2R	9/27	1119	8.23	85 23	1.1	
AE-2I	"	1127	8.40	85 39	0.1	

Notes: R = replicate field measurement

Water level meter make/model/SN

Heron Slimline Dipper

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s) _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-104S				79 30		
AE-104M				79 28		
AE-104D				79 30		
AE-108R-1 (36.5-43.5)				78 81		
AE-108R-2 (68-73)				78 85		
AE-108R-3 (84-89)				78 82		
AE-108R-4 (145-150)				78 79		
AE-108R-5 (163-168)				78.80		
AE-105R-1 (90.5-95.5)	4.32	~~1445~~	~~2.99~~	79 40	0.0	1212
AE-105R-2 (98-103)	4.03	~~1445~~	~~2.95~~	79 40	0.0	1212
AE-105R-3 (107.5-112.5)	4.05	~~1446~~	~~2.98~~	79 39	0.0	1213
AE-105R-4 (125-130)	4.14	~~1446~~	~~2.93~~	79 37	0.0	1213
AE-105R-5 (143-148)	4.06	~~1447~~	—	79 36	0.0	1214
AE-105R-6 (158-161)	3.54	~~1447~~	—	79 37	0.0	1214
AE-105S		1220	3.72	79 39	1.2	1220
AE-105M		1221	3.69	79 35	1.2	1221
AE-105D		1221	3.73	79 42	1.3	1221
AE-106R-1 (47-52)		1128	3.67	78 [illegible]	0.8	SW=
AE-106R-2 (89.5-94.5)		1129	3.83	79 12	0.0	
AE-106R-3 (84-88)		1129	3.51	79 13	0.0	
AE-106R-4 (144.5-150.5)		1130	3.48	79 15	0.0	
AE-106R-5 (164-169)		1130	3.47	79 14	0.0	
AE-106S		1134	3.12	78 42	2.6	SW=
AE-106M		1135	2.98	78 44	1.0	
AE-106D		1136	2.95	78 41	0.2	
TRC-301R-1 (96.5-100.5)		1145	2.99	78 57		SW=
TRC-301R-2 (81.5-85.5)		1145	2.95	78 57		
TRC-301R-3 (75.5-79.5)		1146	2.98	78 57		
TRC-301R-4 (65.5-69.5)		1146	2.92	78 57		
PZ-9S		~~1700~~	5.87	82 17	0.0	
PZ-9D		1705	5.45	82 16	0.0	
PZ-9R		1705	5.48	82.27	0.0	
GZA-12				87 62		
GZA-101R				87 41		
AE-1S				86.26		
AE-1I				86.68		
AE-2R				85 23		
AE-2I				85 39		

Notes: R = replicate field measurement

Water level meter make/model/SN

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather 70's Recorder(s) FB / KT

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
MW-1				78 81		
MW-4				77 23		SW=
MW-4A				76 46		SW=
MW-5				78 99		SW=
MW-7				80 33		
GZA-14				82.64		
GZA-14A				82.31		
PS-1S				79.21		SW=
PS-1M				77 30		SW=
PS-1D				76.51		SW=
PS-2S				77.71		SW=
PS-2M				77.61		SW=
PS-2D				76.91		SW=
PS-3				76.64		
PS-4				78.66		
PS-5S				80.49		
PS-5D				79 68		
PS-8S				83 77		
PS-8M				82 53		
PS-8D				82 77		
GZA-1 (wwtp)				78 93 ?		SW=
GZA-2 (wwtp)				79.03 ?		SW=
GZA-3 (wwtp)				79 68 ?		SW=
GZA-4 (wwtp)				83 3 ?		
STM-7 (Wilm. Masonry)				75 57		
AE-112R-1 (41-51)	9/27/22	1225	6.75	81 76	0.3	
AE-112R-2 (62-72)		1226	6.60	81 78	0.3	QC – 6.60
AE-112R-3 (91-101)		1227	6.56	81 78	0.3	
AE-112R-4 (113-123)		1228	6.60	81 80	0.3	
AE-112R-5 (136-146)		1229	6.59	81 75	0.0	
AE-112R-6 (153-163)		1230	6.52	81 73	0.1	
AE-112R-7 (168-175)		1231	6.53	81 74	0.0	
AE-112D	9/27/22	1235	7.24	82 27	1.3	
HOW-2 (MW-2)				84.35		
HOW-3 (MW-3)				81.83		
GZA-107M	9/27/22	1203	4.78	80 87	0.3	
GZA-107D		1201	4.99	81 08	0.4	
GZA-107R		1200	4.55	80 58	0.3	

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s): _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S	9/27	1506	8.6	85 62	5.3	19.3' to bottom
AE-23R	9/27	1500	13.4	85 54	3290	DTP =
AE-24	9/27	1600	8.6	85 63	86.2	
AE-25S	9/27	1530	8.4	85 49	0.9	
AE-25D	9/27	1530	8.31	85 38	2.2	
AE-26R				85.35		
AE-26S	9/27	1545	8.6	85 49	1.8	
AE-26D	9/27	1545	8.34	85 25	3.6	
AE-27R	9/27/22	1239	9.49	85 23	1.0	
~~AE-3~~				82 41		See LNAPL Gauging Record
AE-4				82.03		See LNAPL Gauging Record
DP-1				80.01		
DP-2				79.75		
~~CW-1~~				80 94		See LNAPL Gauging Record
~~CW-2~~				80 73		See LNAPL Gauging Record
PZ-8R				79.04		
GZA-5				79 77		
GZA-6				80 37		
GZA-10				80 29		
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78 91		
STM-8M				78 87		
STM-8D				78.86		
STM-8R				78 78		
STM-8R1				79.08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95 79		
TRC-402 (Reading)				97 47		
TRC-403 (Reading)				97 73		

Notes: R = replicate field measurement
Water level meter make/model/SN

5.3

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather:_____ Recorder(s) _____

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S				85 62		
AE-23R				85 54		DTP =
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		See LNAPL Gauging Record
AE-4				82.03		See LNAPL Gauging Record
DP-1				80.01		
DP-2				79.75		
CW-1				80 94		See LNAPL Gauging Record
CW-2				80.73		See LNAPL Gauging Record
PZ-8R				79.04		
GZA-5		1624	3.75	79.77	0.2	
GZA-6		1640	4.43	80.37	0.0	
GZA-10		1643	4.84	80 29	0.5	
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S				78 91		
STM-8M				78 87		
STM-8D				78 86		
STM-8R				78 78		
STM-8R1				79 08		
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)				97.47		
TRC-403 (Reading)				97.73		

Notes: R = replicate field measurement

Water level meter make/model/SN

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 70's Recorder(s): FB/KJ

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-23S				85.62		
AE-23R				85.54		DTP =
AE-24				85.63		
AE-25S				85.49		
AE-25D				85.38		
AE-25R				85.35		
AE-26S				85.49		
AE-26D				85.25		
AE-27R				85.23		
AE-3				82.41		See LNAPL Gauging Record
AE-4				82.03		See LNAPL Gauging Record
DP-1				80.01		
DP-2				79.75		
CW-1				80.94		See LNAPL Gauging Record
CW-2				80.73		See LNAPL Gauging Record
PZ-8R				79.04		
GZA-5				79.77		
GZA-6				80.37		
GZA-10				80.29		
STM-3S				82.93		
STM-3D				82.89		
STM-3R				82.90		
STM-8S	9/27/22	1512	5.90	78.91	0.2	
STM-8M	↓	1516	5.91	78.87	0.2	
STM-8D		1519	5.83	78.86	0.2	
STM-8R		1515	5.87	78.78	0.2	
STM-8R1		1525	6.61	79.08	0.3	QC-6.61
STM-10S				95.70		
STM-10R1				95.79		
STM-10R2				95.79		
TRC-402 (Reading)				97.47		
TRC-403 (Reading)				97.73		

Notes: R = replicate field measurement
Water level meter make/model/SN

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 60's Recorder(s): FB/KJ

Well	Date	Time	Sight Glass Reading (inches)	TOC Ref Elev	PID	Sight Glass Ruler Measurement (measures in 0.1 inches)	Height of sight glass from rim
AE-26R-1 (50-56)				84.83			
AE-26R-2 (72-78)				84.83			
AE-26R-3 (81-88)				84.83			
AE-26R-4 (104-114)				84.83			
AE-26R-5 (123-132)				84.83			
AE-28R-1 (45-51)				84.81			
AE-28R-2 (75-85)				84.81			
AE-28R-3 (98-108)				84.81			
AE-28R-4 (132-142)				84.81			
AE-29R-1 (37-44)				85.83			
AE-29R-2 (47-54)				85.83			
AE-29R-3 (70-76)				85.83			
AE-29R-4 (90-96)				85.83			
AE-29R-5 (113-119)				85.83			
AE-29R-6 (140-146)				85.83			

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-109R-1 (38-43)	9/27/22	1032	11.25	80.20	0.5	under Pressure still
AE-109R-2 (66-76)		1033	4.12	80.17	0.1	
AE-109R-3 (126-136)		1034	4.15	80.19	0.2	
AE-109R-4 (174-180.5)		1036	4.25	80.17	0.1	
AE-109R-5 (183-189)		1037	4.26	80.18	0.1	QC - 4.26
AE-109R-6 (196-201)		1038	4.26	80.15	0.2	
AE-109R-7 (204-214)		1039	4.27	80.17	0.1	
AE-109R-8 (245-250)		1040	4.28	80.20	0.1	
AE-109D	9/27/22	1044	4.33	80.36	3.2	
AE-110R-1 (34-44)	9/27/22	1049	3.90	80.67	0.2	
AE-110R-2 (70-80)		1050	3.99	80.68	0.3	
AE-110R-3 (128-138)		1051	3.98	80.64	0.4	
AE-110R-4 (158-168)		1052	4.02	80.62	0.4	
AE-110R-5 (171-182)		1053	3.98	80.62	0.3	
AE-110R-6 (190-200)		1054	4.02	80.62	0.4	QC - 4.02
AE-110R-7 (224-234)		1055	4.01	80.64	0.3	
AE-111R-1 (44-54)	9/27/22	1450	13.28	89.03	0.0	
AE-111R-2 (66-74)		1452	13.24	89.01	0.0	
AE-111R-3 (95-103)		1453	13.21	89.02	0.1	
AE-111R-4 (140-150)		1455	13.14	89.02	0.1	QC - 13.14
AE-111R-5 (155-165)		1457	13.14	89.05	0.3	
AE-111R-6 (168-173)		1458	13.16	89.04	0.3	
AE-111R-7 (181-191)		1500	13.14	89.06	0.2	

Notes: R = replicate field measurement

Water level meter make/model/SN

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: _____ Recorder(s) Gauge Glass

	Well	Date	Time	Sight Glass Reading (Inches)	TOC Ref Elev	PID	Sight Glass Ruler Measurement (measures in 0.1 inches)	Height of sight glass from rim
-10.26	AE-26R-1 (50-56)	4/27	1524	~~[illegible]~~	84.83	1.8	9.2	~~[illegible]~~ inches 23"
	AE-26R-2 (72-76)				84.83			
	AE-26R-3 (81-88)				84.83			
	AE-26R-4 (104-114)		1536	-10.15	84.83	4.3	9.9	22 7/8
	AE-26R-5 (123-132)			-10.21	84.83	5.0	10.7	22 3/4
-10.02	AE-28R-1 (45-51)	4/27	1226	~~9.65~~	84.81	10.2	9.65	24 3/4
	AE-28R-2 (75-85)		1239	-10.17	84.81	20.9	10.6	20 15/16
	AE-28R-3 (98-108)		1251	-9.98	84.81	10.1	8.2	" "
	AE-28R-4 (132-142)		1503	-10.37	84.81	1.5	12.9	25 23 1/8
	~~AE-29R-1 (37-44)~~	~~9/27~~	~~9:30~~	~~[illegible]~~	~~85.83~~	~~0.1~~	~~[illegible] -10.65~~	~~[illegible] 21~~ 1/8
	AE-29R-2 (47-54)				85.83	~~[illegible]~~		
	AE-29R-3 (70-76)		9:40	13.6	85.83	0.1	-11.37	21 5/16
	AE-29R-4 (90-96)				85.83			
	AE-29R-5 (113-119)		9:55	11.2	85.83	0.1	~~[illegible]~~ -11.22	21 ~~[illegible]~~ 5/8
-11.33	AE-29R-6 (140-146)		1029	~~13.0~~ 10	85.83	0.1	13.01	21 5/8

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-109R-1 (38-43)				80.20		
AE-109R-2 (66-76)				80.17		
AE-109R-3 (126-136)				80.19		
AE-109R-4 (174-180.5)				80.17		
AE-109R-5 (183-189)				80.18		
AE-109R-6 (196-201)				80.15		
AE-109R-7 (204-214)				80.17		
AE-109R-8 (245-250)				80.20		
AE-109D				80.36		
AE-110R-1 (34-44)				80.67		
AE-110R-2 (70-80)				80.68		
AE-110R-3 (128-138)				80.64		
AE-110R-4 (158-168)				80.62		
AE-110R-5 (171-182)				80.62		
AE-110R-6 (190-200)				80.62		
AE-110R-7 (224-234)				80.64		
AE-111R-1 (44-54)				89.03		
AE-111R-2 (66-74)				89.01		
AE-111R-3 (95-103)				89.02		
AE-111R-4 (140-150)				89.02		
AE-111R-5 (155-165)				89.05		
AE-111R-6 (168-173)				89.04		
AE-111R-7 (181-191)				89.06		

Notes: R = replicate field measurement

Water level meter make/model/SN:

3 Furbish pond Lane DTW = 15.25 9/28/22 @ 1000

AE-29R-1 9/27 1036 ~~-10.88~~ 0 8.3 0.1 -10.88 21 1/2

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 60S Recorder(s): FB / KJ

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-104S	9/27/22	1145	3.13	79.30	0.1	
AE-104M	↓	1146	3.11	79.28	0.4	
AE-104D	↓	1147	3.16	79.30	0.4	DC - 3.16
AE-108R-1 (36.5-43.5)	9/27/22	0914	1.69	78.81	0.3	
AE-108R-2 (68-73)	↓	0914	2.64	78.85	0.3	
AE-108R-3 (84-89)	↓	0921	2.62	78.82	0.1	
AE-108R-4 (145-150)	↓	0922	2.59	78.79	0.1	
AE-108R-5 (163-168)	↓	0924	2.59	78.80	0.0	
AE-105R-1 (90.5-95.5)				79.40		
AE-105R-2 (98-103)				79.40		
AE-105R-3 (107.5-112.5)				79.39		
AE-105R-4 (125-130)				79.37		
AE-105R-5 (143-148)				79.36		
AE-105R-6 (156-161)				79.37		
AE-105S				79.39		
AE-105M				79.35		
AE-105D				79.42		
AE-106R-1 (47-52)				79.15		SW=
AE-106R-2 (69.5-74.5)				79.12		
AE-106R-3 (84-88)				79.13		
AE-106R-4 (144.5-150.5)				79.15		
AE-106R-5 (164-169)				79.14		
AE-106S				78.42		SW=
AE-106M				78.44		
AE-106D				78.41		
TRC-301R-1 (96.5-100.5)				78.57		SW=
TRC-301R-2 (81.5-85.5)				78.57		
TRC-301R-3 (75.5-79.5)				78.57		
TRC-301R-4 (65.5-69.5)				78.57		
PZ-9S				82.17		
PZ-9D				82.16		
PZ-9R				82.27		
GZA-12				87.62		
GZA-101R				87.41		
AE-1S				86.26		
AE-1I				86.88		
AE-2R				85.23		
AE-2I				85.39		

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Lockheed Martin Corporation
Former GE Site - Wilmington, MA
Water Level Measurements

Weather: 60's Recorder(s): FB / JK

Well	Date	Time	Depth to Water	TOC Ref Elev	PID	Comments
AE-100R-1 (18-24)	9/27/22	1636	6.93	87.87	0.2	
AE-100R-2 (43-48)	↓	1638	6.97	87.95	1.7	
AE-100R-3 (50-56)		1640	6.91	87.92	1.3	
AE-100R-4 (63-68)		1641	6.92	87.89	0.6	
AE-100R-5 (88-93)		1642	6.96	87.86	0.8	
AE-100R-6 (108.5-113.5)	↓	1643	6.95	87.84	0.5	
AE-101R-1 (30.5-35.5)	9/27/22	0929	3.08	79.07	0.1	
AE-101R-2 (55-60)	↓	0930	3.04	79.07	0.1	
AE-101R-3 (80-85)		0931	3.01	79.07	0.2	3.01 QC
AE-101R-4 (153-158)		0933	3.00	79.07	0.1	
AE-101R-5 (175-180)		0934	3.01	79.07	0.1	
AE-101R-6 (227-232)	↓	0935	2.96	79.07	0.1	
AE-101S	9/27/22	0938	3.19	79.34	0.2	
AE-101D	↓	0937	3.24	79.37	1.4	
AE-102RR-1 (43-48)	9/27/22	0943	3.70	79.83	0.1	
AE-102RR-2 (75-80)	↓	0944	4.03	79.84	0.4	
AE-102RR-3 (111-116)		0945	3.65	79.89	0.3	
AE-102RR-4 (125-130)		0946	3.60	79.84	0.1	
AE-102RR-5 (141-146)		0947	3.61	79.82	0.2	
AE-102RR-6 (153-158)	↓	0948	3.65	79.83	0.3	
AE-102S	9/27/22	0955	4.01	80.12	5.3	
AE-102M	↓	0953	4.06	80.17	0.4	
AE-102D	↓	0954	4.00	80.16	0.3	
AE-103R-1 (48-53)	9/27/22	1000	2.79	78.99	0.6	
AE-103R 2 (62-67)	↓	1001	2.75	78.99	0.8	QC - 2.75
AE-103R-3 (70-76)		1002	2.79	79.01	0.7	
AE-103R-4 (98-105)		1003	2.72	79.00	0.7	
AE-103R-5 (122-128)		1004	2.70	79.08	1.3	
AE-103R-6 (138-144)		1005	2.67	79.00	0.4	
AE-103R 7 (162 5-168)	↓	1006	2.71	78.99	0.5	
AE-103S	9/27/22	1009	3.26	79.43	0.3	QC - 3.26
AE-103M	↓	1010	3.25	79.42	0.2	
AE-103D	↓	1011	3.25	79.42	4.2	
AE-104R-1 (48-54)	9/27/22	1017	3.12	78.90	0.4	
AE-104R-2 (62-68)	↓	1018	3.42	78.85	0.3	
AE-104R 3 (97-102)		1019	2.68	78.86	1.4	
AE-104R-4 (128-133)		1022	2.77	78.86	0.5	
AE-104R-5 (158-162)		1023	3.02	78.86	0.4	
AE-104R-6 (168-174)	↓	1024	2.96	78.85	0.6	

Notes: R = replicate field measurement

Water level meter make/model/SN:

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started.

AECOM Supervisor Name: Dylan Potter
Phone Number:
AECOM SH&E Rep. Name:
Phone Number:
Meeting Leader: Sean Haggett

Date: 9/27/22	Project Name/Location: 40 Fordham Rd	Project Number:

Today's Scope of Work:

Gauging

Muster Point Location:	First Aid Kit Location:	Fire Extinguisher Location:	Spill Kit Location:

1. Required Topics

- [x] Fitness for Duty requirements, all sign in / sign out
- [x] Required training (incl. task specific) completed and current
- [x] SH&E Plan onsite - understood, reviewed, signed by all (incl. scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- [x] Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- [x] STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- [x] Requirement to report to supervisor any injury, illness, damage, near miss, unsafe act / condition
- [x] Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- [x] Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- [x] Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- [x] Work area set up and demarcation/ barricades in place to protect workers, site staff, and the public
- [ ] Required checklists/records available, understood (describe):
- [ ] Lessons Learned / SH&E improvements (describe):

2. Discuss if Applicable to Today's Work

Check ☑ as reviewed or mark ■ as not applicable

☑	Biological/ Chemical / Electrical Hazards
☑	Ergonomics - Lifting, Body Position
☑	Lock Out/ Tag Out
	Short Service Employees - visual identifier and mentor/ oversight assignment
☑	Simultaneous/ Neighbouring Operations
☑	Slip/ Trip/ Fall Hazards
☑	Specialized PPE Needs
☑	Traffic Control
☑	Waste Management/ Decontamination
☑	Weather Hazards / Heat Stress / Cold Stress
☑	Subcontractor Requirements (e.g., JHAs, THAs, procedures, reporting, etc.)
☑	Work Permits / Plans required (e.g., Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.); in place, understood (identify/attach):
☐	Other Topics (describe/attach):
☐	Client specific requirements (describe):

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today:	Describe Lessons Learned/ Improvement Areas from today:
Traffic from UPS	

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	Signature	Date / Time (at end of day / shift)
Dylan Potter		9/27/22 1800

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up.

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition.
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor.
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor.

Print Name & Company	Signature	~~Initials & Sign In~~ Time	Initials & Sign Out Time
Sean Heggett	AECOM	~~In & Fit~~ 0730	Out & Fit 1800
Floyd Burton	AECOM	In & Fit 0730	Out & Fit 1800
Kaleb Jones	AECOM	In & Fit 0745	Out & Fit 1800
Rose Kelley		~~In & Fit~~ 0800	Out & Fit 1800
Dylan Potter		In & Fit 0700	Out & Fit 1800
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started.

AECOM Supervisor Name:
Phone Number:
AECOM SH&E Rep. Name:
Phone Number:
Meeting Leader:

Date: 9/28/22	Project Name/Location:	Project Number: 60688023

Today's Scope of Work:

GW sampling - FLUTe wells

Muster Point Location:	First Aid Kit Location:	Fire Extinguisher Location:	Spill Kit Location:
trailer	trailer / vehicle	N/A	N/A

1. Required Topics

- [x] Fitness for Duty requirements, all sign in / sign out
- [x] Required training (incl. task specific) completed and current
- [x] SH&E Plan onsite - understood, reviewed, signed by all (incl. scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- [x] Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- [x] STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- [x] Requirement to report to supervisor any injury, illness, damage, near miss, unsafe act / condition
- [x] Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- [x] Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- [x] Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- [x] Work area set up and demarcation/ barricades in place to protect workers, site staff, and the public
- [ ] Required checklists/records available, understood (describe)
- [ ] Lessons Learned / SH&E improvements (describe):

2. Discuss if Applicable to Today's Work

Check ☑ as reviewed or mark ■ as not applicable

☑	☐	Biological/ Chemical / Electrical Hazards
☑	☐	Ergonomics - Lifting, Body Position
☐	☒	Lock Out/ Tag Out
		Short Service Employees - visual identifier and mentor/ oversight assignment
☑	☐	Simultaneous/ Neighbouring Operations
☑	☐	Slip/ Trip/ Fall Hazards
☐	☒	Specialized PPE Needs
☑	☐	Traffic Control
☑	☐	Waste Management/ Decontamination
☑	☐	Weather Hazards / Heat Stress / Cold Stress
☐	☒	Subcontractor Requirements (e.g., JHAs, THAs, procedures, reporting, etc.)
☐	☒	Work Permits / Plans required (e.g., Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.); in place, understood (identify/attach):
☐	☐	Other Topics (describe/attach):
☐	☐	Client specific requirements (describe):

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today:	Describe Lessons Learned/ Improvement Areas from today:
Observation: be aware of splash back from Flutes	

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	Signature	Date 9/28/22 Time (at end of day / shift) 1800
Dylan Potter		

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

9/28/22

AECOM

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up.

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition.
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor.
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor.

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
Dylan Potter	DP	In & Fit 0645	Out & Fit
Rose Kelley	Rose Kelley	In & Fit 07:15	Out & Fit
Kaleb Jones	Kaleb	In & Fit 0745	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started.

AECOM Supervisor Name:
Phone Number:
AECOM SH&E Rep. Name:
Phone Number:
Meeting Leader:

Date: 9/21/22	Project Name/Location:	Project Number: 60688023

Today's Scope of Work:

wetland wells - gw sampling

Muster Point Location:	First Aid Kit Location:	Fire Extinguisher Location:	Spill Kit Location:

1. Required Topics

- [x] Fitness for Duty requirements, all sign in / sign out
- [x] Required training (incl. task specific) completed and current
- [x] SH&E Plan onsite - understood, reviewed, signed by all (incl. scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- [x] Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- [x] STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- [x] Requirement to report to supervisor any injury, illness, damage, near miss, unsafe act / condition
- [x] Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- [x] Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- [x] Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- [x] Work area set up and demarcation/ barricades in place to protect workers, site staff, and the public
- [ ] Required checklists/records available, understood (describe)
- [ ] Lessons Learned / SH&E improvements (describe)

2. Discuss if Applicable to Today's Work

Check ☑ as reviewed or mark ■ as not applicable

- [x] [ ] Biological/ Chemical / Electrical Hazards
- [x] [ ] Ergonomics - Lifting, Body Position
- [ ] [x] Lock Out/ Tag Out
- [x] Short Service Employees - visual identifier and mentor/ oversight assignment
- [x] [ ] Simultaneous/ Neighbouring Operations
- [x] [ ] Slip/ Trip/ Fall Hazards
- [x] [ ] Specialized PPE Needs – waders
- [x] [ ] Traffic Control
- [x] [ ] Waste Management/ Decontamination
- [x] [ ] Weather Hazards / Heat Stress / Cold Stress
- [ ] [x] Subcontractor Requirements (e.g., JHAs, THAs, procedures, reporting, etc.)
- [ ] [x] Work Permits / Plans required (e.g., Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.); in place, understood (identify/attach):
- [ ] [ ] Other Topics (describe/attach):
- [ ] [ ] Client specific requirements (describe):

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today:	Describe Lessons Learned/ Improvement Areas from today:
observation: use tailgate to assist putting on heavy backpacks	

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	Signature	Date 9/21/22 Time (at end of day / shift) 1850
Dylan Potter		

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

9/29/22

AECOM

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up.

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition.
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor.
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor.

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
Dylan Potter	DJP	In & Fit 0650	Out & Fit 1900
Kaleb Jones	Kaleb	In & Fit 0730 KJ	Out & Fit 1850
Rose Kelley	Rose Kelley	~~In & Fit~~ 0730	~~Out & Fit~~ 1850
Zu Burton	ZB	In & Fit 0730	Out & Fit 1850
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started.

AECOM Supervisor Name:
Phone Number:
AECOM SH&E Rep. Name:
Phone Number:
Meeting Leader:

Date: 9/30/22	Project Name/Location:	Project Number: 60688023

Today's Scope of Work:

GW sampling - island and EPL

Muster Point Location:	First Aid Kit Location:	Fire Extinguisher Location:	Spill Kit Location:

1. Required Topics

- [x] Fitness for Duty requirements, all sign in / sign out
- [x] Required training (incl. task specific) completed and current
- [x] SH&E Plan onsite - understood, reviewed, signed by all (incl. scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- [x] Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- [x] STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- [x] Requirement to report to supervisor any injury, illness, damage, near miss, unsafe act / condition
- [x] Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- [x] Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- [x] Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- [x] Work area set up and demarcation/ barricades in place to protect workers, site staff, and the public
- [ ] Required checklists/records available, understood (describe)

- [ ] Lessons Learned / SH&E improvements (describe):

2. Discuss if Applicable to Today's Work

Check [✓] as reviewed or mark [■] as not applicable

- [x] [ ] Biological/ Chemical / Electrical Hazards
- [x] [ ] Ergonomics - Lifting, Body Position
- [ ] [x] Lock Out/ Tag Out
- [x] Short Service Employees - visual identifier and mentor/ oversight assignment
- [x] [ ] Simultaneous/ Neighbouring Operations
- [x] [ ] Slip/ Trip/ Fall Hazards
- [x] [ ] Specialized PPE Needs – waders
- [x] [ ] Traffic Control
- [x] [ ] Waste Management/ Decontamination
- [x] [ ] Weather Hazards / Heat Stress / Cold Stress
- [ ] [x] Subcontractor Requirements (e.g. JHAs, THAs, procedures, reporting, etc.)
- [ ] [x] Work Permits / Plans required (e.g. Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.), in place, understood (identify/attach):

- [ ] [ ] Other Topics (describe/attach):

- [ ] [ ] Client specific requirements (describe):

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today	Describe Lessons Learned/ Improvement Areas from today:

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	Signature	Date / Time (at end of day / shift)
Dylan Potter		9/30/22 1600

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

9/30/22

AECOM

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up.

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition.
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor.
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor.

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
Dylan Potter		In & Fit 0605	Out & Fit 1606
Kaleb Jones		In & Fit 0730	Out & Fit 1600
Rose Valley		In & Fit 0730	Out & Fit 1600
Floyd Burton		In & Fit 0730	Out & Fit 1600
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started.

AECOM Supervisor Name:
Phone Number:
AECOM SH&E Rep. Name:
Phone Number:
Meeting Leader:

Date: 10/3/22	Project Name/Location:	Project Number:

Today's Scope of Work:

GW sampling

Muster Point Location:	First Aid Kit Location:	Fire Extinguisher Location:	Spill Kit Location:

1. Required Topics

- ☐ Fitness for Duty requirements, all sign in / sign out
- ☐ Required training (incl. task specific) completed and current
- ☐ SH&E Plan onsite - understood, reviewed, signed by all (incl. scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- ☐ Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- ☐ STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- ☐ Requirement to report to supervisor any injury, illness, damage, near miss, unsafe act / condition
- ☐ Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- ☐ Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- ☐ Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- ☐ Work area set up and demarcation/ barricades in place to protect workers, site staff, and the public
- ☐ Required checklists/records available, understood (describe)
- ☑ Lessons Learned / SH&E improvements (describe):

Stretch and flex, fatigue, complacency, lifting methods

2. Discuss if Applicable to Today's Work

Check ☑ as reviewed or mark ▣ as not applicable

- ☐ ☐ Biological/ Chemical / Electrical Hazards
- ☐ ☐ Ergonomics - Lifting, Body Position
- ☐ ☐ Lock Out/ Tag Out
- Short Service Employees - visual identifier and mentor/ oversight assignment
- ☐ ☐ Simultaneous/ Neighbouring Operations
- ☐ ☐ Slip/ Trip/ Fall Hazards
- ☐ ☐ Specialized PPE Needs
- ☐ ☐ Traffic Control
- ☐ ☐ Waste Management/ Decontamination
- ☐ ☐ Weather Hazards / Heat Stress / Cold Stress
- ☐ ☐ Subcontractor Requirements (e.g., JHAs, THAs, procedures, reporting, etc.)
- ☐ ☐ Work Permits / Plans required (e.g., Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.); in place, understood (identify/attach):
- ☐ ☐ Other Topics (describe/attach):
- ☐ ☐ Client specific requirements (describe)

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today	Describe Lessons Learned/ Improvement Areas from today

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	Signature	Date / Time (at end of day / shift)
Dylan Potter		10/3/22 1615

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

10/3/22

AECOM

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up.

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition.
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor.
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor.

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
Dylan Potter		In & Fit 0730	Out & Fit
Floyd Button AECOM		In & Fit 0725	Out & Fit
Rosa Kelley		In & Fit 0730	Out & Fit
Kaleb Jones. AECOM		In & Fit 0730	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started.

AECOM Supervisor Name:
Phone Number:
AECOM SH&E Rep. Name:
Phone Number:
Meeting Leader:

Date: 10/4/22	**Project Name/Location:**	**Project Number:**

Today's Scope of Work:

GW sampling

Muster Point Location:	**First Aid Kit Location:**	**Fire Extinguisher Location:**	**Spill Kit Location:**

1. Required Topics

- [x] Fitness for Duty requirements, all sign in / sign out
- [x] Required training (incl task specific) completed and current
- [x] SH&E Plan onsite - understood, reviewed, signed by all (incl scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- [x] Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- [x] STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- [x] Requirement to report to supervisor any injury, illness, damage, near miss, unsafe act / condition
- [x] Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- [x] Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- [x] Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- [x] Work area set up and demarcation/ barricades in place to protect workers, site staff and the public
- [ ] Required checklists/records available, understood (describe)
- [ ] Lessons Learned / SH&E improvements (describe)

2. Discuss if Applicable to Today's Work

Check ☑ as reviewed or mark ■ as not applicable

- [x] [ ] Biological/ Chemical / Electrical Hazards
- [x] [ ] Ergonomics - Lifting, Body Position
- [ ] [x] Lock Out/ Tag Out
- [x] Short Service Employees - visual identifier and mentor/ oversight assignment
- [x] [ ] Simultaneous/ Neighbouring Operations
- [x] [ ] Slip/ Trip/ Fall Hazards
- [x] [ ] Specialized PPE Needs
- [x] [ ] Traffic Control
- [x] [ ] Waste Management/ Decontamination
- [x] [ ] Weather Hazards / Heat Stress / Cold Stress
- [ ] [x] Subcontractor Requirements (e.g., JHAs, THAs, procedures, reporting, etc.)
- [ ] [x] Work Permits / Plans required (e.g., Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.); in place, understood (identify/attach):
- [ ] [ ] Other Topics (describe/attach)
- [ ] [ ] Client specific requirements (describe)

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today	Describe Lessons Learned/ Improvement Areas from today
weather hazards: monitored potential rain	

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	**Signature**	**Date** 10/4/22 **Time** (at end of day / shift) 1615
Dylan Potter		

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

10/4/22

AECOM

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition.
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
Dylan Potter		In & Fit 0700	Out & Fit 1615
Kaleb Jones AECOM		In & Fit 0730 KJ	Out & Fit 1615 KJ
Floyd Burton		In & Fit 0700	Out & Fit 1530
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started.

AECOM Supervisor Name:
Phone Number:
AECOM SH&E Rep. Name:
Phone Number:
Meeting Leader:

Date: 10/5/22	**Project Name/Location:**	**Project Number:**

Today's Scope of Work:

GW Sampling - Building 1

Muster Point Location:	**First Aid Kit Location:**	**Fire Extinguisher Location:**	**Spill Kit Location:**

1. Required Topics

- [x] Fitness for Duty requirements, all sign in / sign out
- [x] Required training (incl. task specific) completed and current
- [x] SH&E Plan onsite - understood, reviewed, signed by all (incl. scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- [x] Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- [x] STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- [x] Requirement to report to supervisor any injury, illness, damage, near miss, unsafe act / condition
- [x] Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- [x] Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- [x] Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- [x] Work area set up and demarcation/ barricades in place to protect workers, site staff, and the public
- [ ] Required checklists/records available, understood (describe)
- [ ] Lessons Learned / SH&E improvements (describe):

2. Discuss if Applicable to Today's Work

Check [x] as reviewed or mark [■] as not applicable

- [x] [ ] Biological/ Chemical / Electrical Hazards
- [x] [ ] Ergonomics - Lifting, Body Position
- [ ] [x] Lock Out/ Tag Out
- [x] Short Service Employees - visual identifier and mentor/ oversight assignment
- [x] [ ] Simultaneous/ Neighbouring Operations
- [x] [ ] Slip/ Trip/ Fall Hazards
- [x] [ ] Specialized PPE Needs
- [x] [ ] Traffic Control
- [x] [ ] Waste Management/ Decontamination
- [x] [ ] Weather Hazards / Heat Stress / Cold Stress
- [ ] [x] Subcontractor Requirements (e.g., JHAs, THAs, procedures, reporting, etc.)
- [ ] [x] Work Permits / Plans required (e.g., Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.) in place, understood (identify/attach)
- [ ] [ ] Other Topics (describe/attach)
- [ ] [ ] Client specific requirements (describe)

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today	Describe Lessons Learned/ Improvement Areas from today
- heavy rain - weather hazards - UPS trucking times	

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	**Signature**	**Date** **Time** (at end of day / shift)

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

10/5/22

AECOM

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up.

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition.
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely.
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor.
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor.

Print Name & Company	Signature	Initials & Sign In Time	Initials & Sign Out Time
Dylan Potter		In & Fit 0640	Out & Fit 1600
Sean Haggett		~~In & Fit~~ 0730	Out & Fit 1600
Floyd Burton		In & Fit 0800	Out & Fit 1600
Rose Kelley	Rose Kelley	In & Fit 0730	Out & Fit 1600
Kaleb Jones		In & Fit 0800	Out & Fit 1600
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

AECOM

Americas

Daily Tailgate Meeting

S3AM-209-FM5

Instructions: Conduct meeting prior to sending crews to individual tasks. Require attendance of all AECOM employees and subcontractors. Invite personnel from simultaneous operations for coordination purposes. Review scope of work and briefly discuss required and applicable topics. **This meeting is a daily refresher, not a full orientation.** Task-specific discussions associated with Task Hazard Assessment (THA) follow this meeting at the task location immediately before individual task is started

AECOM Supervisor Name: Dylan Potter
Phone Number:
AECOM SH&E Rep. Name: Scott Deets
Phone Number:
Meeting Leader: Dylan Potter

Date: 10/6/22	Project Name/Location: LNE Wilmington	Project Number:

Today's Scope of Work:

GW Sampling

Muster Point Location:	First Aid Kit Location:	Fire Extinguisher Location:	Spill Kit Location:

1. Required Topics

- [x] Fitness for Duty requirements, all sign in / sign out
- [x] Required training (incl. task specific) completed and current
- [x] SH&E Plan onsite - understood, reviewed, signed by all (incl. scope, preplanning hazard assessments / risk registers, controls, procedures, requirements, etc.)
- [x] Task Hazard Assessments (THAs) are to be reviewed and completed for each task immediately prior to conducting
- [x] STOP WORK Right & Responsibility- all task changes/changed conditions re-assess with THA
- [x] Requirement to report to supervisor any injury illness, damage, near miss, unsafe act / condition
- [x] Emergency Response Plan – including muster point, first aid kit, fire extinguisher, clinic/hospital location
- [x] Personal Protective Equipment (PPE) - Required items per hazard assessments in good condition / in use by all
- [x] Equipment/machinery inspected (documented as required) and in good condition - operators properly trained/certified
- [x] Work area set up and demarcation/ barricades in place to protect workers, site staff, and the public
- [ ] Required checklists/records available, understood (describe)

- [ ] Lessons Learned / SH&E improvements (describe):

2. Discuss if Applicable to Today's Work

Check [✓] as reviewed or mark [■] as not applicable

- [x] [ ] Biological/ Chemical / Electrical Hazards
- [x] [ ] Ergonomics - Lifting, Body Position
- [ ] [x] Lock Out/ Tag Out
- Short Service Employees - visual identifier and mentor/ oversight assignment
- [ ] [x] Simultaneous/ Neighbouring Operations
- [x] [ ] Slip/ Trip/ Fall Hazards
- [ ] [x] Specialized PPE Needs
- [x] [ ] Traffic Control
- [x] [ ] Waste Management/ Decontamination
- [ ] [x] Weather Hazards / Heat Stress / Cold Stress
- [ ] [x] Subcontractor Requirements (e.g., JHAs, THAs, procedures, reporting, etc.)
- [ ] [x] Work Permits / Plans required (e.g., Fall Protection, Confined Space, Hot Work, Critical Lifts, etc.); in place, understood (identify/attach):

- [ ] [ ] Other Topics (describe/attach):

- [ ] [ ] Client specific requirements (describe):

3. Daily Check Out by Site Supervisor

Describe incidents, near misses, observations or Stop Work interventions from today:	Describe Lessons Learned/ Improvement Areas from today:

The site is being left in a safe condition and work crew checked out as fit unless otherwise specified as above.

Site Supervisor Name	Signature	Date / Time (at end of day / shift)
Dylan Potter		10/6/22 1700

Worker Acknowledgement / Sign In Sign Out sheets applicable to this meeting are on reverse and, if applicable, attached.

10/6/22

AECOM

All employees:

- **STOP WORK if concerned / uncertain about safety / hazard or additional precaution is not recorded on the THA.**
- **Be alert and communicate any changes in personnel or conditions at the worksite to the supervisor.**
- **Reassess task, hazards, & mitigations on an ongoing basis; amend the THA if needed.**

SITE WORKERS (including AECOM Contractors and Subcontractors): Your signature below means that you understand:

* The requirement to participate in creating, reviewing, & updating hazard assessments (THA) applicable to your task(s).
* The hazards & control measures associated with each task you are about to perform.
* The permit to work requirements applicable to the work you are about to perform (if it includes permitted activities)
* That no tasks or work is to be performed without a hazard assessment.
* Your authority & obligation to "Stop Work" intervene, speak up/ listen up

Your initials (right columns) certify that you arrived & departed fit for duty, & have reported all incidents/near misses; meaning:

* You are physically and mentally fit for duty and have inspected your required PPE to ensure satisfactory condition
* You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely
* You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or impairment/fatigue issue to the AECOM Supervisor
* You signed out as fit / uninjured unless you have otherwise informed the AECOM Supervisor

Print Name & Company	Signature	~~Initials & Sign In~~ Time	Initials & Sign Out Time
Dylan Potter		In & Fit 0645	Out & Fit 1630
Kaleb Jones		In & Fit 0730	Out & Fit 1630
		~~In & Fit~~ 0800	Out & Fit 1630
		~~In & Fit~~ 0730	Out & Fit 1630
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit
		In & Fit	Out & Fit

(Attach additional Site Worker sign-in/out sheets if needed) Identify number of attached sheets: _____

SITE VISITOR / SITE REPRESENTATIVE

Name	Company Name	Arrival Time	Departure Time	Signature

U.S. Environmental

Rentals • Sales • Service
DEVICE & DATA EXPERTISE

usenvironmental.com (888) 550-8100

U S Environmental Rental Corp
166 Riverview Ave DELIVERY -
Waltham, MA 02453
(781)899-1560

Loc MA1
Con# 131336
Res# 88241
CONTRACT

Rented To:
Aecom
P.O Box 5604
Glen Allen VA 23058-5604

Delivery Location:
Aecom - Wilmington Site
40 Fordham Road
Wilmington MA 01887
Dylan Potter /(508) 333-2316

Ordered By: Dylan Potter
PO#: 60688023.02.2
Account #: Wilmington Ma Site

Ship Date: 09/26/22 Mon
Ship Method: Delivery By 5PM
Bill To: Scott Olson

Start Date: 09/27/22 Tue AXG
Through: 10/11/22 Tue GRR
Project#:

Qty	Item	Description
		Shed door will be unlocked, leave equipment in there if you cannot get ahold of anyone on site
1	3020-1115	Solinst Model 122 Serial #: 287769 One day use 9/27
1	3010-1447	Heron Skinny Dipper - 200FT Serial #: 13FF2202251HB Requested Skinny Dipper
1	3010-1448	Heron Skinny Dipper - 200FT Serial #: 13FF2204213ML Requested Skinny Dipper
1	3010-1090	Heron Skinny Dipper Serial #: 32883 Requested Skinny Dipper
1	3010-1382	Solinst Model 101 - 200' Serial #: 363735 Requested Solinist
1	3010-1438	Solinst Model 101 - 100' Serial #: 238022 Requested Solinist
1	4000-1048	Geotech Geopump Model II Serial #: G6311U
1	4000-1035	Geotech Geopump Model II Serial #: 509AL
1	4000-1313	Geotech Geopump Model II Serial #: G6443U
1	3550-1270	Geotech Turbidity Meter Serial #: 18021659
1	3550-1341	Geotech Turbidity Meter Serial #: 21063328
1	3550-1275	Geotech Turbidity Meter Serial #: 18091873
1	3550-1268	Geotech Turbidity Meter Serial #: 18043534
1	3550-1324	Geotech Turbidity Meter Serial #: 19062111
1	3510-1345	Ysi Pro Quatro Display

U.S. Environmental

Rentals • Sales • Service
DEVICE & DATA EXPERTISE

usenvironmental.com (888) 550-8100

U S Environmental Rental Corp
166 Riverview Ave DELIVERY -
Waltham, MA 02453
(781)899-1560

Loc MA1
Con# 131336
Res# 88241
CONTRACT

Rented To:
Aecom
P.O Box 5604
Glen Allen VA 23058-5604

Delivery Location:
Aecom - Wilmington Site
40 Fordham Road
Wilmington MA 01887
Dylan Potter /(508) 333-2316

Ordered By: Dylan Potter
PO#: 60688023.02.2
Account #: Wilmington Ma Site

Ship Date: 09/26/22 Mon
Ship Method: Delivery By 5PM
Bill To: Scott Olson

Start Date: 09/27/22 Tue AXG
Through: 10/11/22 Tue GRR
Project#:

Qty	Item	Description
		Serial #: 21K103653
		Include ring stands
1	3510-1332	Ysi Pro Quatro Display
		Serial #: 21K103637
		Include ring stands
1	3510-1348	Ysi Pro Quatro Display
		Serial #: 21K103644
		Include ring stands
1	3510-1361	Ysi Pro Series Handset
		Serial #: 20K101870
		Include ring stands
1	3510-1326	Ysi Pro Quatro Display
		Serial #: 21K103631
		Include ring stands
4	7761	Ra - Nitrogen Tank 40
1	1000-1083	Ion Science Tiger Lt
		Serial #: T-111235
1	1000-1560	Ion Science Tiger Lt
		Serial #: T-118684
1	1000-1559	Ion Science Tiger Lt
		Serial #: T-118392
1	1000-1558	Ion Science Tiger Lt
		Serial #: T-118687
1	4030-1020	Qed Sample Pro Pump 1.75"
		Serial #: 10317
1	7761	Ra - Nitrogen Tank 40
1	7756	Ra - Nitrogen Regulator
1	4050-1064	Qed Mp-10 Controller
		Serial #: MP10-1735
500	10003	Tubing Ldpe .170 X 1/4
10	10152	Tubing Silicone S15 Generic
3	40004	Nitrile Pf Gloves Large
1	40003	Nitrile Pf Gloves Medium
5	30083	Zero Oxygen Standard (120ML)
1	40066	Ysi Large Calibration Kit
2	30089	Orp Standard 238MV (30 Ml)
30	42069	Groundwater Filter .45 Micron

05/22 12:44:3 Page 2

U.S. Environmental

Rentals • Sales • Service
DEVICE & DATA EXPERTISE

usenvironmental.com (888) 550-8100

U S Environmental Rental Corp
166 Riverview Ave DELIVERY -
Waltham, MA 02453
(781)899-1560

Loc MA1
Con# 131336
Res# 88241
CONTRACT

Rented To:
Aecom
P.O Box 5604
Glen Allen VA 23058-5604

Delivery Location:
Aecom - Wilmington Site
40 Fordham Road
Wilmington MA 01887
Dylan Potter /(508) 333-2316

Ordered By: Dylan Potter
PO#: 60688023.02.2
Account #: Wilmington Ma Site

Ship Date: 09/26/22 Mon
Ship Method: Delivery By 5PM
Bill To: Scott Olson

Start Date: 09/27/22 Tue AXG
Through: 10/11/22 Tue GRR
Project#:

Qty	Item	Description	
1	SURCHARGE	Fuel Surcharge	
2	42042	Qed 1 3/4 Poly Bladders	
2	42045	Qed 1 3/4 Grab Plate 1/4 X 1/4	

U.S. Environmental

Rentals • Sales • Service
DEVICE & DATA EXPERTISE

usenvironmental.com (888) 550-8100

U S Environmental Rental Corp
166 Riverview Ave DELIVERY -
Waltham, MA 02453
(781)899-1560

Loc MA1
Con# 131336
Res# 88241
CONTRACT

Rented To:
Aecom
P.O Box 5604
Glen Allen VA 23058-5604

Delivery Location:
Aecom - Wilmington Site
40 Fordham Road
Wilmington MA 01887
Dylan Potter /(508) 333-2316

Ordered By: Dylan Potter
PO#: 60688023.02.2
Account #: Wilmington Ma Site

Ship Date: 09/26/22 Mon
Ship Method: Delivery By 5PM
Bill To: Scott Olson

Start Date: 09/27/22 Tue AXG
Through: 10/11/22 Tue GRR
Project#:

Qty.	Item	Description
		Shed door will be unlocked, leave equipment in there if you cannot get ahold of anyone on site
1	3020-1115	Solinst Model 122 Serial #: 287769 One day use 9/27
1	3010-1447	Heron Skinny Dipper - 200FT Serial #: 13FF2202251HB Requested Skinny Dipper
1	3010-1448	Heron Skinny Dipper - 200FT Serial #: 13FF2204213ML Requested Skinny Dipper
1	3010-1090	Heron Skinny Dipper Serial #: 32883 Requested Skinny Dipper
1	3010-1382	Solinst Model 101 - 200' Serial #: 363735 Requested Solinist
1	3010-1438	Solinst Model 101 - 100' Serial #: 238022 Requested Solinist
1	4000-1048	Geotech Geopump Model II Serial #: G6311U
1	4000-1035	Geotech Geopump Model II Serial #: 509AL
1	4000-1313	Geotech Geopump Model II Serial #: G6443U
1	3550-1270	Geotech Turbidity Meter Serial #: 18021659
1	3550-1341	Geotech Turbidity Meter Serial #: 21063328
1	3550-1275	Geotech Turbidity Meter Serial #: 18091873
1	3550-1268	Geotech Turbidity Meter Serial #: 18043534
1	3550-1324	Geotech Turbidity Meter Serial #: 19062111
1	3510-1345	Ysi Pro Quatro Display

3

10/05/22 12:44:31 Page 1

U.S. Environmental

Rentals • Sales • Service
DEVICE & DATA EXPERTISE
usenvironmental.com (888) 550-8100

U S Environmental Rental Corp
166 Riverview Ave DELIVERY -
Waltham, MA 02453
(781)899-1560

Loc MA1
Con# 131336
Res# 88241
CONTRACT

Rented To:
Aecom
P.O Box 5604
Glen Allen VA 23058-5604

Delivery Location:
Aecom - Wilmington Site
40 Fordham Road
Wilmington MA 01887
Dylan Potter /(508) 333-2316

Ordered By: Dylan Potter
PO#: 60688023.02.2
Account #: Wilmington Ma Site

Ship Date: 09/26/22 Mon
Ship Method: Delivery By 5PM
Bill To: Scott Olson

Start Date: 09/27/22 Tue AXG
Through: 10/11/22 Tue GRR
Project#:

Qty	Item	Description	
		Serial #: 21K103653	
		Include ring stands	
1	3510-1332	Ysi Pro Quatro Display	
		Serial #: 21K103637	
		Include ring stands	
1	3510-1348	Ysi Pro Quatro Display	
		Serial #: 21K103644	
		Include ring stands	
1	3510-1361	Ysi Pro Series Handset	
		Serial #: 20K101870	
		Include ring stands	
1	3510-1326	Ysi Pro Quatro Display	
		Serial #: 21K103631	
		Include ring stands	
4	7761	Ra - Nitrogen Tank 40	
1	1000-1083	Ion Science Tiger Lt	
		Serial #: T-111235	
1	1000-1560	Ion Science Tiger Lt	
		Serial #: T-118684	
1	1000-1559	Ion Science Tiger Lt	
		Serial #: T-118392	
1	1000-1558	Ion Science Tiger Lt	
		Serial #: T-118687	
500	10003	Tubing Ldpe .170 X 1/4	
10	10152	Tubing Silicone S15 Generic	
3	40004	Nitrile Pf Gloves Large	
1	40003	Nitrile Pf Gloves Medium	
5	30083	Zero Oxygen Standard (120ML)	
1	40066	Ysi Large Calibration Kit	
2	30089	Orp Standard 238MV (30 Ml)	
30	42069	Groundwater Filter .45 Micron	
1	SURCHARGE		Fuel Surcharge

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GW Sampling	Manufacture/Model:	YSI ProQuatro
Fieldwork Dates	9/26 - 10/6	Serial Number:	21K103537
Date & Result of Last Temp. Check		CALIBRATION DATE:	10/6
Air temperature:	AM 24.9 PM 75.1	Calibration Initials:	DP
Solution Temperature:	AM PM	Time:	1010
Inst. Barometric Press.(mmHg):	AM PM	Calibration Check Initials:	DP
Pressure Corrected / Source:	AM / PM /	Time:	1600

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	25.2	8.2	7.54	8.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	20.8	NA	0.11	Cal or (Ck) (circle)
pH	S.U	7.00	19.8	7.02	6.94	7.02	4.00	20.4	4.00	4.14	4.00	10.00	22.1	10.03	9.91	10.04	NA	NA	NA	NA	NA
ORP*	mV	220.9		229.1	229	229.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	19.6	NA	1003	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	27.3	NA	25.3	Cal or (Ck) (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	30.6	7.65	7.9	0.25
DO	mg/L	0		NA		
pH	S.U.	7.0	30.3	7.01	6.96	0.05
ORP	mV	238	29.7	220.6	215.3	5.3
Sp. EC	µs/cm	1000	30.2	NA	1048	48
Sp. EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp Cond	us/cm	Specified standard	± 5%

Record Information for one instrument per sheet
Pen only; line-out errors, initial and date

GeoTech
18013534

0.02	200	100	800	value
0.63	22.4	107	785	pre
0.02	20.0	100	800	cal'd
0.02	17.9	99.0	815	post

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	CLC Wilmington		
Field Activity	GW Sampling	**Manufacture/Model:**	YSI Pro Quatro
Fieldwork Dates		**Serial Number:**	
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	
Air temperature:	AM 12.4 PM	**Calibration**	**Initials:** DP
Solution Temperature:	AM PM		**Time:** 1230
Inst. Barometric Press.(mmHg):	AM 763.2 PM	**Calibration Check**	**Initials:**
Pressure Corrected / Source:	AM / PM /		**Time:**

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	12.4	10.75	11.21	10.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	11.7	NA	0.10	(Cal or Ck) circle
pH	S.U.	7.00	11.9	7.07	6.89	7.06	4.00	11.9	4.00	4.04	4.00	10.00	11.9	10.16	10.07	10.16	NA	NA	NA	NA	NA
ORP*	mV		12.0	242.2	242.1	242.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	11.8	NA	1020	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	11.5	NA	17	Cal or Ck circle

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	~~30.58~~	~~7.65~~	~~7.9~~	~~0.25~~
DO	mg/L	0	25.2 20.8	8.2 NA	7.6 0.11	0.6 0.11
pH	S.U	7.0	19.8	7.02	6.94	0.08
ORP	mV		20.9	229	229	0
Sp. EC	µs/cm	1000	19.8	NA	1003	3
Sp. EC	µs/cm	0	22.3	NA	25.3	25.3

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* - ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U	7.0 Temp Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond	us/cm	Specified standard	± 5%

Record Information for one Instrument per sheet
Pen only; line-out errors, initial and date

GeoTech
1804353H

0.02	20.0	120	800	pre
0.02	18.9	94.1	805	cal'd
0.02	20.0	100	800	
0.02	22.4	107	785	post

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington	Manufacture/Model:	YSI Pro Quatro
Field Activity	GWS	Serial Number:	20K101872
Fieldwork Dates	10/6/22	CALIBRATION DATE:	10/6/22
Date & Result of Last Temp. Check		Calibration Initials:	RK
Air temperature:	AM 15°C PM 23°C	Time:	0730
Solution Temperature:	AM 15°C PM 23°C	Calibration Check Initials:	RK
Inst. Barometric Press.(mmHg):	AM 759 PM 757	Time:	1545
Pressure Corrected / Source:	AM / PM /		

INSTRUMENT NUMBER

RK

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15	10.10	10.3	10.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	15	NA	0.0	Cal or Ck (circle)
pH	S.U.	7.00	15	7.04	7.05	7.04	4.00	15	4.0	4.0	4.0	10.00	15	10.12	10.10	10.12	NA	NA	NA	NA	NA
ORP*	mV	238	15	247	247	245	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	15	NA	~~1000~~ 997	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~0 µs/cm~~		NA		~~Cal or Ck (circle)~~

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	23.2	9.03	8.81	0.22
DO	mg/L	0	23.2	NA	0.0	0.0
pH	S.U.	7.0	23.2	7.0	7.23	0.23
ORP	mV	238	23.2	233	227.9	5.1
Sp. EC	µs/cm	1000	23.2	NA	991	9.0
~~Sp. EC~~	~~µs/cm~~	~~0~~		~~NA~~		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	L4C Wilmington		
Field Activity	GWS	Manufacture/Model:	
Fieldwork Dates	10/5/22	Serial Number:	20K101870
Date & Result of Last Temp. Check		CALIBRATION DATE:	10/5/22
Air temperature:	AM 55°F PM 60°F	Calibration Initials:	RK
Solution Temperature:	AM 14 PM 15	Time:	0730
Inst. Barometric Press.(mmHg):	AM 764 PM 759	Calibration Check Initials:	RLe
Pressure Corrected / Source:	AM / PM /	Time:	1545

INSTRUMENT NUMBER

RK

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	12.5	~~10.89~~	10.79	10.79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	14	NA	0.0	Cal or Ck (circle)
pH	S.U	7.00	14	7.04	7.07	7.05	4.00	14	4.0	4.0	4.0	10.00	14	10.11	10.17	10.16	NA	NA	NA	NA	NA
ORP*	mV	238	14	~~240~~	~~240~~	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	14	NA	997	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~0 µs/cm~~	~~NA~~	~~NA~~	~~NA~~	~~Cal or Ck (circle)~~

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	15.0	10.02	10.07	0.5
DO	mg/L	0	15.0	NA	0.0	0.0
pH	S.U	7.0	15.0	7.04	7.14	0.10
ORP	mV	238	15.0	244	240.0	4.0
Sp. EC	µs/cm	1000	15.0	NA	991	9.0
~~Sp EC~~	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp Cond	us/cm	Specified standard	± 5%

Record Information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	EMC Wilmington	Manufacture/Model:	YSI ProQuatro
Field Activity	GW Sampling	Serial Number:	21K 103644
Fieldwork Dates	9/26/22 - 10/[illegible]/22	CALIBRATION DATE:	10/6/22
Date & Result of Last Temp. Check		Calibration Initials:	KJ
Air temperature:	AM 14.8 PM 73	Time:	0745
Solution Temperature:	AM PM	Calibration Check Initials:	KJ
Inst. Barometric Press.(mmHg):	AM 760 G PM 759.5	Time:	1500
Pressure Corrected / Source:	AM / PM /		

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	15.0	10.05	9.07	9.60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U	7.00	14.9	7.04	7.15	7.05	4.00	14.9	4.00	4.05	4.00	10.00	15.1	10.12	10.01	10.14	NA	NA	NA	NA	NA
ORP*	mV	238	15.1	244.0	243.1	244.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	15.1	NA	1017	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	25.6	7.92	7.17	0.75
DO	mg/L	0	25.6	NA	7.92	1
pH	S.U.	7.0	21.7	7.01	7.07	0.06
ORP	mV	238	28.4	224.5	220.0	4.5
Sp. EC	µs/cm	1000	30.8	NA	988	12
Sp EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* = ORP is checked ("RUN" mode) instead of calibrated Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	60688023		
Field Activity	GWS	Manufacture/Model:	YSI Pro Quatro
Fieldwork Dates	9/26 - 10/7	Serial Number:	21K103637
Date & Result of Last Temp. Check		CALIBRATION DATE:	10/3/22
Air temperature:	AM 11.5 PM	Calibration Initials:	DP
Solution Temperature:	AM PM	Time:	0900
Inst. Barometric Press.(mmHg):	AM 766.7 PM	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	11.6	~~11.7~~ 11.13	11.21	11.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	11.7	NA	0.08	Cal or Ck (circle)
pH	S.U	7.00	11.1	7.07	7.03	7.07	4.00	11.1	4.00	4.04	4.00	10.00	11.4	10.19	10.09	10.19	NA	NA	NA	NA	NA
ORP*	mV		11.5	242.8	241.9	242.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	11.1	NA	1005	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	15.6	NA	15.7	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	12.4	10.75	11.12	0.38
DO	mg/L	0	11.7	NA	0.10	0.10
pH	S.U.	7.0	11.9	7.07	6.89	.18
ORP	mV		12.0	242	242	0
Sp. EC	µs/cm	1000	11.8	NA	1020	20
Sp. EC	µs/cm	0	11.5	NA	17	17

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond	us/cm	Specified standard	± 5%

Record Information for one instrument per sheet
Pen only; line-out errors, initial and date

"Turb": GeoTech

0.02	20.0	100	800	value
0.02	19.4	100	814	initial
0.02	20.0	100	800	cal'd
0.02	18.9	94.1	805	Post

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GW Sampling	**Manufacture/Model:**	YSI Pro Quatro
Fieldwork Dates	9/27 - 10/7	**Serial Number:**	21E103637
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	9/29/22
Air temperature:	AM 14.1 PM	**Calibration Initials:**	DP
Solution Temperature:	AM PM	**Time:**	0800
Inst. Barometric Press.(mmHg):	AM 766.8 PM	**Calibration Check Initials:**	
Pressure Corrected / Source:	AM / PM /	**Time:**	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	14.0	10.41	10.45	10.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	12.4	NA	0.13	Cal or Ck (circle)
pH	S.U	7.00	15.3	7.04	7.13	7.04	4.00	15.3	4.17	4.03	4.00	10.00	14.4	10.13	10.11	10.13	NA	NA	NA	NA	NA
ORP*	mV	231	14.2	238.9	240.6	234	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	15.7	NA	1030	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	14.7	NA	27	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	11.6	11.13	11.21	0.08
DO	mg/L	0	11.7	NA	0.08	0.08
pH	S.U	7.0	11.1	7.07	7.03	0.04
ORP	mV		11.5	243	242	1
Sp EC	µs/cm	1000	11.1	NA	1005	5
Sp EC	µs/cm	0	18.6	NA	15.7	15.7

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond.	us/cm	Specified standard	± 5%	Recalibrate

* ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turb	0.02	20	100	800	
GeoTech	0.71	25.9	99.8	745	8.2
1804 3534	0.02	20.0	100	800	cal'd
	0.02	19.4	100	814	post

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GW Sample	Manufacture/Model:	YSI Pro Quatro
Fieldwork Dates	10/6/22	Serial Number:	21K103631
Date & Result of Last Temp. Check	10/6/22	CALIBRATION DATE:	10/6/22
Air temperature:	AM 14.8 PM	Calibration Initials:	SH
Solution Temperature:	AM 13.5 PM	Time:	0820
Inst. Barometric Press.(mmHg):	AM 761.5 PM	Calibration Check Initials:	1530
Pressure Corrected / Source:	AM 0770 / YSI PM /	Time:	SH

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	14.1		10.62		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	13.8	NA	0.23	Cal or (circle)
pH	S.U	7.00	14.0	7.04	7.03	7.04	4.00	14.1	4.00	3.83	4.00	10.00	14.3	10.16	10.14	10.16	NA	NA	NA	NA	NA
ORP*	mV	238	13.7	219.4	218.3	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	13.8	NA	999	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	13.9	NA	12	Cal or (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	16.5	10.14	10.03	~~0.99~~ 0.11
DO	mg/L	0	16.3	NA	0.13	0.13
pH	S.U.	7.0	16.1	7.04	7.06	0.02
ORP	mV	238	16.2	220.1	219.1	1.0
Sp EC	µs/cm	1000	16.1	NA	997	3.0
Sp EC	µs/cm	0	16.0	NA	13	13

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GW Sampling	Manufacture/Model:	YSI ProQuatro
Fieldwork Dates	9/26/22 - 10/4/22	Serial Number:	21K103644
Date & Result of Last Temp. Check		CALIBRATION DATE:	10/4/22
Air temperature:	AM 10.5 PM 13.1	Calibration Initials:	KJ
Solution Temperature:	AM PM	Time:	0740
Inst. Barometric Press.(mmHg):	AM 766.6 PM 764.0	Calibration Check Initials:	KJ
Pressure Corrected / Source:	AM / PM /	Time:	1540

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	9.3	11.72	11.46	0.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U	7.00	11.6	7.06	7.16	7.07	4.00	11.5	4.00	3.92	4.02	10.00	11.6	10.17	10.02	10.15	NA	NA	NA	NA	NA
ORP*	mV	238	12.4	247.2	247.6	247.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	11.6	NA	1021	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference	
DO	mg/L	NA	~~11.1~~	~~10.32~~	~~9.55~~	~~1.77~~	
DO	mg/L	0		NA			
pH	S.U	7.0	14.9	7.04	7.04	0	
ORP	mV	238	15.1	244.0	241.2	~~3.8~~	3.8
Sp EC	µs/cm	1000	~~14.6~~ 14.9	NA	1021	~~22~~ 22	
Sp EC	µs/cm	0		NA			

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* = ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GW Sampling	**Manufacture/Model:**	YSI Pro Quatro
Fieldwork Dates	9/26/22 - 10/7/22	**Serial Number:**	21K103644
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	10/5/22
Air temperature:	AM 12.4 PM 14.4°C	**Calibration** Initials:	KJ
Solution Temperature:	AM PM	Time:	0820
Inst. Barometric Press.(mmHg):	AM 761.9 PM 759.9	**Calibration Check** Initials:	KJ
Pressure Corrected / Source:	AM / PM /	Time:	1530

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	12.2	10.74	10.12	10.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U	7.00	13.5	7.05	7.19	7.07	4.00	13.5	4.00	4.04	4.03	10.00	13.9	10.14	10.20	10.15	NA	NA	NA	NA	NA
ORP*	mV	238	[illegible]	245.3	240.0	240.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	[illegible] 15.6	NA	9886	1022	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	14.5	10.27	10.08	0.19
DO	mg/L	0		NA		
pH	S.U	7.0	15.1	7.04	8.99	0.05
ORP	mV	238	[illegible] 15.3		241.9	
Sp EC	µs/cm	1000	15.1	NA	997	3
Sp EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* = ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	E. LMC Wilmington		
Field Activity	GW Sampling	Manufacture/Model:	YSI Quatro
Fieldwork Dates	10/5/22	Serial Number:	21K103631
Date & Result of Last Temp. Check	10/5/22	CALIBRATION DATE:	10/5/22
Air temperature:	AM 13.3 PM	Calibration Initials:	SH
Solution Temperature:	AM 13.1 PM	Time:	0800
Inst. Barometric Press.(mmHg):	AM 761.4 PM	Calibration Check Initials:	SH
Pressure Corrected / Source:	AM YSI 0800 PM /	Time:	1430

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	13.5	11.07	10.41	11.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	12.8	NA	0.31	Cal or CB (circle)
pH	S.U	7.00	13.1	7.05	6.95	7.05	4.00	13.0	4.00	4.04	4.00	10.00	13.1	10.14	9.99	10.04	NA	NA	NA	NA	NA
ORP*	mV	238	12.1	257.6	246.1	257.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	12.9	NA	994	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	12.9	NA	12	Cal or CB (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	15.1	10.78	10.51	0.29
DO	mg/L	0	15.6	NA	~~7.05~~ 0.45	~~0.01~~ 0.45
pH	S.U	7.0	14.9	7.04	7.03	0.01
ORP	mV	238	15.0	219.1	220.4	1.3
Sp. EC	µs/cm	1000	15.1	NA	999	1.0
Sp EC	µs/cm	0	15.0	NA	13	13

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U	7.0 Temp Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington				
Field Activity	GW Sampling		Manufacture/Model:	YSI Quatro	
Fieldwork Dates	9/29		Serial Number:	21A 103631	
Date & Result of Last Temp. Check	9/29		CALIBRATION DATE:	9/29/22	
Air temperature:	AM 13	PM	Calibration	Initials: SH	
Solution Temperature:	AM 13	PM		Time: 0800	
Inst. Barometric Press.(mmHg):	AM 767	PM	Calibration Check	Initials: SH	
Pressure Corrected / Source:	AM YSI / 0800	PM /		Time: 1601	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	12.1	10.89	10.81	10.89	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	12.3	NA	0.04	Cal or OK (circle)
pH	S.U	7.00	12.3	7.07	7.14	7.07	4.00	12.1	4.00	4.11	4.00	10.00	12.2	10.15	10.11	10.15	NA	NA	NA	NA	NA
ORP*	mV		12.1	249.1	231.4	249.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	12.2	NA	1030	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	12.1	NA	7	Cal or OK (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	13.5	10.52	10.41	10.52
DO	mg/L	0	13.1	NA	0.13	0.13
pH	S.U	7.0	13.0	7.02	7.05	0.03
ORP	mV	238	13.2	219.9	220.1	0.05
Sp EC	µs/cm	1000	13.0	NA	994	6.0
Sp EC	µs/cm	0	12.8	NA	12	12

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GWS	Manufacture/Model:	YSI Quatro Pro
Fieldwork Dates	10/4/22	Serial Number:	21K103631
Date & Result of Last Temp. Check		CALIBRATION DATE:	10/4/22
Air temperature:	AM 48°F PM 12.6°C	Calibration Initials:	RK
Solution Temperature:	AM 12°C PM	Time:	0730
Inst. Barometric Press.(mmHg):	AM 766.6 PM 765.3	Calibration Check Initials:	RK
Pressure Corrected / Source:	AM / PM /	Time:	1415

INSTRUMENT NUMBER

RK

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	8.4	11.93	11.7	11.80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	12	NA	0	Cal or Ck (circle)
pH	S.U.	7.00	12	7.06	7.07	7.06	4.00	12	4.0	4.0	4.0	10.00	12	10.16	10.17	10.16	NA	NA	NA	NA	NA
ORP*	mV	238	12	249	240	249	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	12	NA	1014	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	12.6	10.7	10.32	0.38
DO	mg/L	0	14	NA 7.04	0.0	0.0
pH	S.U.	7.0	14		6.9	0.14
ORP	mV	238	14	245	258	13
Sp EC	µs/cm	1000	14	NA	986	14.0
~~Sp EC~~	~~µs/cm~~	~~0~~		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GWS	Manufacture/Model:	YSI ProQuatro
Fieldwork Dates	10/3	Serial Number:	20K101870
Date & Result of Last Temp. Check		CALIBRATION DATE:	10/3
Air temperature:	AM 11°C PM 14.3°C	Calibration Initials:	RL
Solution Temperature:	AM ~~11.6~~ 11.6 PM 12.4	Time:	0750
Inst. Barometric Press.(mmHg):	AM 770 PM 768	Calibration Check Initials:	~~RL~~ RL
Pressure Corrected / Source:	AM ~~/~~ / PM /	Time:	1530

INSTRUMENT NUMBER

RL

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	11°C	11.33	11.59	11.40	NA	NA	NA	NA	NA	NA	NA	10/3/19	NA	NA	0 mg/L	11 °C	NA	0.0	Cal or Ck (circle)
pH	S.U	7.00	11.6	7.07	7.06	7.20	4.00	11.6	4.0	4.06	4.03	10.00	11.6	~~7.03~~	9.94	10.10	NA	NA	NA	NA	NA
ORP*	mV	238	11.6	250	250.3	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	11.6	NA	1006	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~0 µs/cm~~		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	14.3	10.37	10.46	0.09
DO	mg/L	0	12.4	NA	0.03	0.03
pH	S.U	7.0	12.4	7.06	7.01	0.05
ORP	mV	238	12.4	248	246	~~2.0~~
Sp EC	µs/cm	1000	12.4	NA	1019	19
~~Sp EC~~	~~µs/cm~~	~~0~~		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GWS	Manufacture/Model:	YSI Quatro Pro
Fieldwork Dates	9/30	Serial Number:	20k101870
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/30/22
Air temperature:	AM 44°F PM 62°F	Calibration Initials:	RK
Solution Temperature:	AM 14°C PM	Time:	0730
Inst. Barometric Press.(mmHg):	AM 768 PM 766	Calibration Check Initials:	RK
Pressure Corrected / Source:	AM ~~[illegible]~~ PM /	Time:	1415

INSTRUMENT NUMBER

RK

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	10.8	11.10	11.3	11.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	14	NA	0	Cal or Ck (circle)
pH	S.U	7.00	14	7.04	7.15	7.05	4.00	14	4.00	4.10	4.03	10.00	14	10.12	10.15	10.12	NA	NA	NA	NA	NA
ORP*	mV	238	14	248	246	248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	14	NA	944	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	~~0 µs/cm~~	~~14~~	~~NA~~		~~Cal or Ck (circle)~~

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.6	8.35	7.81	0.54
DO	mg/L	0	19.2	NA	0.0	0.0
pH	S.U	7.0	19.2 ~~[illegible]~~	7.02	7.00	0.02
ORP	mV	238	19.2	238	234.4	3.6
Sp EC	µs/cm	1000	1000	NA	1027	27
~~Sp EC~~	~~µs/cm~~	~~0~~		~~NA~~		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond.	us/cm	Specified standard	± 5%	Recalibrate

* - ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LMC Wilmington		
Field Activity	GWS	Manufacture/Model:	YSI ProQuatro
Fieldwork Dates	9/29	Serial Number:	20K101870
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/29/22
Air temperature:	AM 50°F PM	Calibration Initials:	RK
Solution Temperature:	AM 13°C PM	Time:	0730
Inst. Barometric Press.(mmHg):	AM 770 PM	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM /	Time:	

INSTRUMENT NUMBER

RK

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	13.5	10.68	10.67	10.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	13.5	NA	10.12	Cal or Ck (circle)
pH	S U	7.00	13.5	7.06	7.0	7.0	4.00	13.5	4.0	4.09	4.0	10.00	13.5	10.16	10.06	10.17	NA	NA	NA	NA	NA
ORP*	mV	238	13.5	246	249.4	246	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	13.5	NA	944	946	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	13.5	NA	250	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	10.8	10.1	11.3	0.2
DO	mg/L	0	14	NA	-0.02	0
pH	S.U.	7.0	14°C	7.06	7.15	0.09
ORP	mV	238	14	248	246	2.0
Sp EC	µs/cm	1000	14	NA	944	56
~~Sp EC~~	~~µs/cm~~	~~0~~	~~14~~	~~NA~~		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S U	7.0 Temp. Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Wilmington
Field Activity	GWS
Fieldwork Dates	9/27/22
Date & Result of Last Temp. Check	
Air temperature:	AM 60°F PM 68°F
Solution Temperature:	AM 20°C PM
Inst. Barometric Press.(mmHg):	AM 760 PM 760
Pressure Corrected / Source:	AM / PM /

Manufacture/Model:	YSI Pro Quatro
Serial Number:	20K101870
CALIBRATION DATE:	9/27/22
Calibration Initials:	RK
Calibration Time:	0900
Calibration Check Initials:	RK
Calibration Check Time:	1635

INSTRUMENT NUMBER

RK

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	20	8.88	8.7	8.87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L	20	NA	8.9	Cal or Ck (circle)
pH	S U	7.00	20	7.02	7.00	7.02	4.00	20	4.0	4.0	4.0	10.00	20	10.06	10.08	10.04	NA	NA	NA	NA	NA
ORP*	mV	238	20	233	234	232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	20	NA	968	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm	20	NA	989	Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	24.1 °C	8.39	8.4	0.01
DO	mg/L	0	24.1	NA	99.7	0.3
pH	S U	7.0	24.4 °C	7.00	7.12	0.12
~~ORP~~	~~mV~~	238	24.4	~~985~~	~~954~~	~~41~~
Sp EC	µs/cm	1000	24.4	985	964	21
~~Sp EC~~	µs/cm	0	24.4	NA		
ORP	mV	288	24.4	232.3	229.9	2.4

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* - ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	LLC Livingston		
Field Activity	GW Sampling	**Manufacture/Model:**	YSI ProQuatro
Fieldwork Dates	9/26/22 - 10/7/22	**Serial Number:**	21K103644
Date & Result of Last Temp. Check		**CALIBRATION DATE:**	10/3/22
Air temperature:	AM 7.0° PM 12.0	**Calibration**	**Initials:** KJ
Solution Temperature:	AM PM		**Time:** 0745
Inst. Barometric Press.(mmHg):	AM 766.7 PM 769.1	**Calibration Check**	**Initials:** 1545
Pressure Corrected / Source:	AM / PM /		**Time:** KJ

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	**Units**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Initial Reading**	**Calibrated Reading**	**Standard Value @25 °C**	**Solution or Air Temp °C**	**Standard Temp/Pres Correction**	**Reading**	**Status of Check**
DO	mg/L	NA	7.5	12.25	12.30	12.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U	7.00	10.8	7.07	7.26	7.07	4.00	10.6	4.00	4.07	4.00	10.00	10.08	10.14	10.16	10.14	NA	NA	NA	NA	NA
ORP*	mV	258	11.3	249.2	247.4	248.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	10.9	NA	10°C	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	10.2		11.96	
DO	mg/L	0		NA		
pH	S.U.	7.0	13.6	7.07	7.25	0.18
ORP	mV	~~258~~ 258	14.5	243.3	242.0	3.3
Sp. EC	µs/cm	1000	13.6	NA	1000	0
Sp. EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Wilmington Lockheed Martin		
Field Activity	GW Sampling	Manufacture/Model:	YSI Pro Quatro
Fieldwork Dates	9/26/22 - 10/7/22	Serial Number:	21K103644
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/30/22
Air temperature:	AM 8.1°C PM 16.1	Calibration	Initials: KJ
Solution Temperature:	AM PM		Time: 800
Inst. Barometric Press.(mmHg):	AM 768.7 PM ~~76~~ 770.1	Calibration Check	Initials: KJ
Pressure Corrected / Source:	AM / PM /		Time: 1300

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	7.8	11.89	12.13	11.98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U	7.00	12.1	7.06	7.17	7.06	4.00	11.6	4.00	3.84	4.08	10.00	12.1	10.13	10.02	10-13	NA	NA	NA	NA	NA
ORP*	mV	238	11.9	247.9	244.9		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	8.0	NA	1022	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	~~[illegible]~~ 16.1	~~[illegible]~~ 9.77	~~[illegible]~~ 4.85	0.12
DO	mg/L	0		NA		
pH	S.U	7.0	18.1	7.03	7.04	0.01
ORP	mV	238	18.2	240.1	234.7	~~[illegible]~~ 5.4
Sp. EC	µs/cm	1000	~~[illegible]~~ 18.3	NA	1040	40
Sp. EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj.	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond.	us/cm	Specified standard	± 5%	Recalibrate

* = ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Wilmington Lockheed Martin		
Field Activity	GW Sampling	Manufacture/Model:	YSI Quatro
Fieldwork Dates	9/26/22 - 9/27/22	Serial Number:	21K103644
Date & Result of Last Temp. Check		CALIBRATION DATE:	9/29/22
Air temperature:	AM 10 0°C PM 8.1	Calibration Initials:	KS
Solution Temperature:	AM PM	Time:	0745
Inst. Barometric Press.(mmHg):	AM 770.3 PM 768.7	Calibration Check Initials:	
Pressure Corrected / Source:	AM / PM /	Time:	

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	10.9		10.63	10.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U	7.00	16.1	7.04	7.18	7.04	4.00	15.4	4.00	3.93	4.00	10.00	13.9	10.14	9.61	10.14	NA	NA	NA	NA	NA
ORP*	mV	238	16.3	238	243.2	238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp. EC	µs/cm	1000	16.7	NA	998	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	8.2		12.22	
DO	mg/L	0		NA		
pH	S.U	7.0	13.1	7.06	7.17	0.11
ORP	mV	238	11.9	247.9	244.9	3.0
Sp. EC	µs/cm	1000	8.1	NA	1022	22
Sp. EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U.	7/4/10 Temp. Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp. Cond	us/cm	Specified standard	± 5%	Recalibrate

* – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U.	7.0 Temp. Adj.	± 0.3
ORP	mV	Specified standard	± 10.0
sp. Cond.	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Water Quality Calibration Log

AECOM

Site Name / TO# / Job#	Wilmington Lockheed Martin	Manufacture/Model:	YSI Pro Quatro
Field Activity	GW Sampling	Serial Number:	21K103644
Fieldwork Dates	9/26/22 - 10/7/22	CALIBRATION DATE:	9/28/22
Date & Result of Last Temp. Check	9/28/22 17.6°C	Calibration Initials:	KJ
Air temperature:	AM 17.6°C PM 19.6	Time:	0940
Solution Temperature:	AM PM		
Inst. Barometric Press.(mmHg):	AM 761.8 PM 760.8	Calibration Check Initials:	KJ
Pressure Corrected / Source:	AM / PM /	Time:	1625

INSTRUMENT NUMBER

CALIBRATION INFORMATION (*circle results outside of criteria*)

		STANDARD #1					STANDARD #2					STANDARD #3					CHECK				
Parameter	Units	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Initial Reading	Calibrated Reading	Standard Value @25 °C	Solution or Air Temp °C	Standard Temp/Pres Correction	Reading	Status of Check
DO	mg/L	NA	17.1		99.8		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 mg/L		NA		Cal or Ck (circle)
pH	S.U	7.00	18.0	7.00	7.03	7.00	4.00	18.3	4.00	4.17	4.01	10.00	18.2	10.08	9.89	10.01	NA	NA	NA	NA	NA
ORP*	mV	238	18.5	238	229.1	238.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sp EC	µs/cm	1000	18.0	NA	957	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0 µs/cm		NA		Cal or Ck (circle)

END OF DAY CALIBRATION CHECK (*circle results outside of criteria*)

Parameter	Units	Standard value @ 25c	Solution/Air Temperature	Standard Correction	Reading	Difference
DO	mg/L	NA	19.7		9.45	
DO	mg/L	0	~~19.7~~	NA	~~9.45~~	
pH	S.U	7.0	25.6		7.07	0.09
ORP	mV	238	21.0		225.7	12.3
Sp EC	µs/cm	1000	21.8	NA	1025	25
Sp EC	µs/cm	0		NA		

CALIBRATION REQUIREMENTS

Parameter	Units	Standard	Reqmnt.	Action
DO	mg/L	O_2 Solubility	± 0.2	Change DO membrane
DO	mg/L	0.0	≤ 0.50 but ≥ 0	Change DO membrane
pH	S.U	7/4/10 Temp Adj	± 0.05	Recalibrate
ORP	mV	Specified standard	± 10.0	Calibrate*
sp Cond	us/cm	Specified standard	± 5%	Recalibrate

* ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

END OF DAY CHECK REQUIREMENTS

Parameter	Units	Standard	Reqmnt.
DO	mg/L	100 % Saturation	± 0.5 mg/L
DO	mg/L	0.0	≤ 0.50 mg/L but ≥ 0
pH	S.U	7.0 Temp Adj	± 0.3
ORP	mV	Specified standard	± 10.0
sp Cond	us/cm	Specified standard	± 5%

Record information for one instrument per sheet
Pen only; line-out errors, initial and date

Turbidity Meter Calibration Log

AECOM

Site Name: Former Lockheed Martin Wilmington
Field Activity: GW Sampling
Fieldwork Dates: 9/26/22 - 10/7/22
Manufacturer: GeoTech
Model Number: Turbidimeter
Serial Number: 21063328

Instrument Number:

Date	Time	Initials	Temp (°C)	Standard #1 Value (NTU)	Standard #1 Reading (NTU)	Standard #2 Value (NTU)	Standard #2 Reading (NTU)	Standard #3 Value (NTU)	Standard #3 Reading (NTU)	Comments
9/28/22	1030	KJ	18.7	<0.10	0.05	100	100	800	789	Level in 800 is low
9/29/22	0815	KJ	12.4	<0.10	0.02	100	101	800	828	
9/30/22	0748	KJ	7.0°	<0.10	0.18	100	104	800	745	
10/3/22	0815	KJ	8.0°	<0.10	0.16	100	98.1	800	772	
10/4/22	0810	KJ	8.0°	<0.10	0.02	100	116	800	747	
10/5/22	0830	KJ	10.0	<0.10	0.02	100	100	800	805	
10/5/22	1430	KJ	13.5°	0.02	2.32	100	106	800	19.8	800: 830
10/6/22	0820	KJ	14.5	<0.10	0.02	100	103	20.0	20.3	800: 806
11/6/22	1515	KJ	21.2	<0.10	0.02	100	104	20.0	19.3	800: 777
Acceptance Criteria				± 0.10 NTU		± 0.50 NTU		± 5.0 NTU		

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

Turbidity Meter Calibration Log

AECOM

Site Name: LMC Wilmington
Field Activity: GWS
Fieldwork Dates: 10/4/22
Manufacturer: ~~[illegible]~~ GeoTech
Model Number: G
Serial Number: 1906211

Instrument Number: RK

Date	Time	Initials	Temp (°C)	Standard #1 Value (NTU)	Standard #1 Reading (NTU)	Standard #2 Value (NTU)	Standard #2 Reading (NTU)	Standard #3 Value (NTU)	Standard #3 Reading (NTU)	Comments	
10/4	0745	RK	44°F	0.02	0.02	20	20	100	100	800	802
10/4	1415	RK	55°F	0.02	0.02	20	20	100	101	800	806
10/5	0730	RK	55°F	0.02	0.08	20	20.4	100	100	800	801
10/5	1430	RK	50°F	0.02	0.13	20	20.2	100	103	800	~~1060~~ 807
10/6	0730	RK	60°F	0.02	0.07	20	20.1	100	100	800	800
10/6	1545	RK	75°F	0.02	0.02	20	20.1	100	95.5	800	813

Acceptance Criteria	± 0.10 NTU	± 0.50 NTU	± 5.0 NTU

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

Turbidity Meter Calibration Log

AECOM

Site Name: Wilmington
Field Activity: GWS
Fieldwork Dates: 9/28 – 10/3
Manufacturer: GeoTech
Model Number: Turbidity meter
Serial Number: [redacted]1009 1873

Instrument Number: RK

Date	Time	Initials	Temp (°C)	Standard #1		Standard #2		Standard #3		4	
				Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value (NTU)	Reading (NTU)	Value Comments	Reading
9/28	0945	RK	25°C	0.02	0.02	20	19.9	100	101	800	798
9/28	1640	RK	25°C	0.02	0.02	20	19.7	100	100	800	808
9/29	0730	RK	12°C	0.02	0.07	20	20	100	100	800	803
9/30	0730	RK	44°F	0.02	0.02	20	21.2	100	101	800	800
9/30	1400	RK	61°F	0.02	2.38	20	21.5	100	100	800	780
10/3	0730	RK	45°F	0.02	0.17	20	20.3	100	100	800	801
10/3	1545	RK	54°F	0.02	0.02	20	19.8	100	99.4	800	800
Acceptance Criteria				± 0.10 NTU		± 0.50 NTU		± 5.0 NTU			

- Record information for one instrument per sheet
- One sheet can be used on multiple days on the same site
- Use pen only; cross out errors with a single line

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200
781 Industrial Dr, Elmhurst, IL 60126 (630) 501-1847

Order No.: 0
Date: 9/26/2022
Technician: MA

YSI

Company: 0
Contact: 0
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
0	0	✓	
Handheld Display	3510-1326	✓	

Item	Tech	QC	Item	Tech	QC
Cable 12 '			AC Adaptor		
Flow Cell			Stand		
Barb Kit			D.O Kit		
Storage / Cal Cup			Calibration Kit		
Sensor Guard					
Manual					
Sonde Cap					
Software					
Extra Batteries					
Display Comm. Cable					
Sonde Comm. Cable					

Calibration Report

0		0		
Parameter	*Accuracy*	*Before*	*After*	*Lot #*
Conductivy 1000 µs/cm	*(+/-.5%)*	1017	1000	2GD075
pH 7 Buffer	*(+/- .2)*	7.47	7.00	1GH743
pH mV for 7 Buffer	*(0 +/- 50)*		**-27.4**	
pH 4 Buffer	*(+/- .2)*	4.60	4.00	OGB875
pH mV for 4 Buffer	*(180 +/- 50)*		**140.8**	
pH 10 Buffer	*(+/- .2)*	10.34	10.05	2GD857
pH mV for 10 Buffer	*(-180 +/- 50)*		**-198.0**	
ORP mV, 237.5	*(+/- 20 mV)*	196.7	238.00	9GC160
DO 100% Sat	*(+/- 2%)*	102.0%	99.0%	
0% DO Check	*(+/- 2%)*		1.90	
Turbidity 0 NTU	*(+/- 5%)*			
Turbidity 126 NTU	*(+/- 5%)*			

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200
781 Industrial Dr, Elmhurst, IL 60126 (630) 501-1847

Order No.: 0
Date: 9/26/2022
Technician: MA

Company: 0
Contact: 0
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
0	0	✓	
Handheld Display	3510-1348	✓	

Item	Tech	QC	Item	Tech	QC
Cable 12 '			AC Adaptor		
Flow Cell			Stand		
Barb Kit			D.O Kit		
Storage / Cal Cup			Calibration Kit		
Sensor Guard					
Manual					
Sonde Cap					
Software					
Extra Batteries					
Display Comm. Cable					
Sonde Comm. Cable					

Calibration Report

0			0	
Parameter	*Accuracy*	*Before*	*After*	*Lot #*
Conductivy 1000 µs/cm	*(+/-.5%)*	1010	1000	2GD075
pH 7 Buffer	*(+/- .2)*	7.02	7.02	1GH743
pH mV for 7 Buffer	*(0 +/- 50)*		-11.6	
pH 4 Buffer	*(+/- .2)*	4.28	4.00	OGB875
pH mV for 4 Buffer	*(180 +/- 50)*		159.0	
pH 10 Buffer	*(+/- .2)*	10.17	10.04	2GD857
pH mV for 10 Buffer	*(-180 +/- 50)*		-185.1	
ORP mV, 237.5	*(+/- 20 mV)*	212.0	238.00	9GC160
DO 100% Sat	*(+/- 2%)*	86.2%	99.1%	
0% DO Check	*(+/- 2%)*		1.30	
Turbidity 0 NTU	*(+/- 5%)*			
Turbidity 126 NTU	*(+/- 5%)*			

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt; b) verify that all items are in acceptable condition and function properly; and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

AECOM

Well ID: **AE-2R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 1455 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): D Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 36' c. Screen Length 14 (22' - 36') 4.75" open bedrock
b. Water Table Depth 8.52 d. Pump Intake 29'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K103637
GeoTech		180430434

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1515	3.2	15.6	6.10	3671	1.89	105.2	10.8	160	0.00	Iron floc / none
1520	4	15.5	6.07	3677	1.85	107.5	17.2	160	0.00	clear / none
1525	4.8	15.5	6.06	3676	1.85	109.1	0.79	160	0.00	"
1530	5.4	15.2	6.07	3683	2.04	110.5	3.46	160	0.00	"
1535	6	15.1	6.06	3682	2.13	111.8	9.59	160	0.00	"
1540	6.6	15.1	6.06	3688	2.21	113.1		160	0.00	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

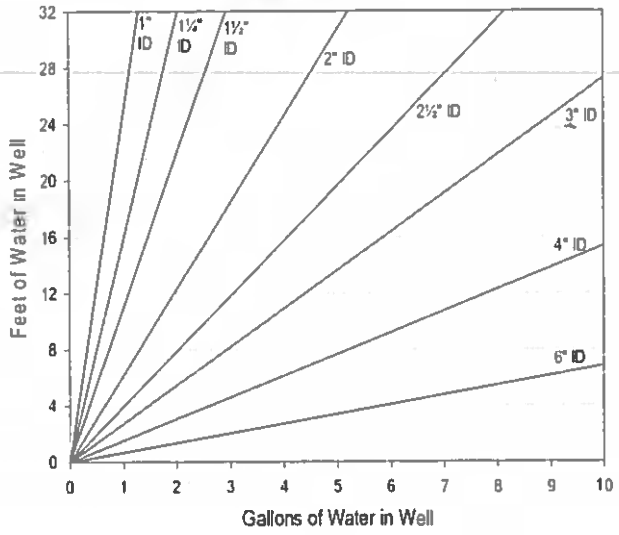
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE2R-_____-1	40mL VOA	3	HCL	VOCs 8260C	1545

Comments Heavy iron floc. Purge for 15 minutes before connecting YSI

Signature _____ Date 10/3/22

AECOM

Well ID: AE-2R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0 275 L (flow cell vol.) = 0.663 L ; 0.633 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: AE-3

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/30/22 Time: Start 1015 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 50's clouds Collector(s): Floyd Button

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 13' c. Screen Length 10 (3' - 13') 2" PVC Casing
b. Water Table Depth 6.20 d. Pump Intake 8'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	21K105653

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1020	0	22.0	6.66	1456	0.48	-28.2	0	200	0	clear/none
1025	1	22.3	6.55	1446	0.03	-47.0	0	200	0	
1030	2	22.3	6.56	1444	0.03	-53.9	0	200	0	
1035	3	22.3	6.57	1443	0.03	-55.5	0	200	0	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

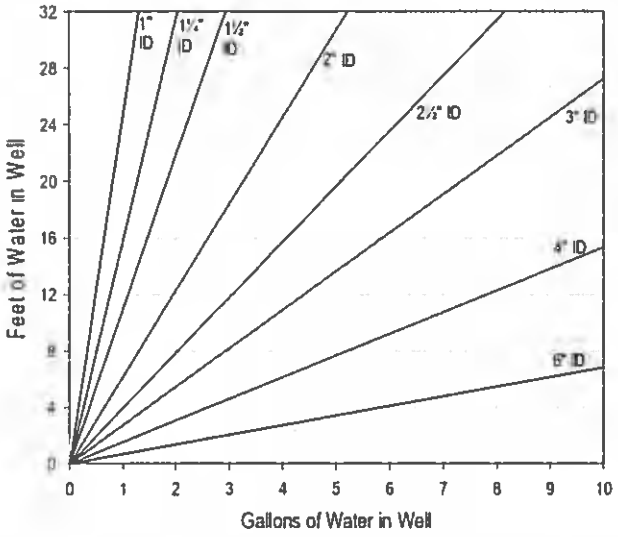
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE3-093022-1	40mL VOA	2-8	HCL	VPH	1040
	1L A	2-3	HCL/None	EPH and PAH	
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss (As) - FF	

Comments MS/MSD

Signature Floyd Button Date 9/30/22

AECOM

Well ID: AE-3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: AE-4

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/30/22 Time: Start 0915 am/pm
Project No: 60688023 Finish 1005 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 50's Sunny Collector(s): Floyd Burton

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 13' c. Screen Length 10 (3' - 13') 2" PVC Casing
b. Water Table Depth 5.95' d. Pump Intake 8'
c. Water Column (a-b) 7.05' e. Calculated System Purge Volume 1.15 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Serial Number 21K103653

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0930	0	21.0	7.16	2940	0.86	-50.7	3.6	200	0.71	clear/none
0935	1	21.9	6.56	2418	0.01	-36.6	3.4	200	0.84	↓
0940	2	21.9	6.57	2407	0.02	-37.0	3.4	200	0.91	
0945	3	21.9	6.57	2403	0.02	-37.2	3.4	200	0.96	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

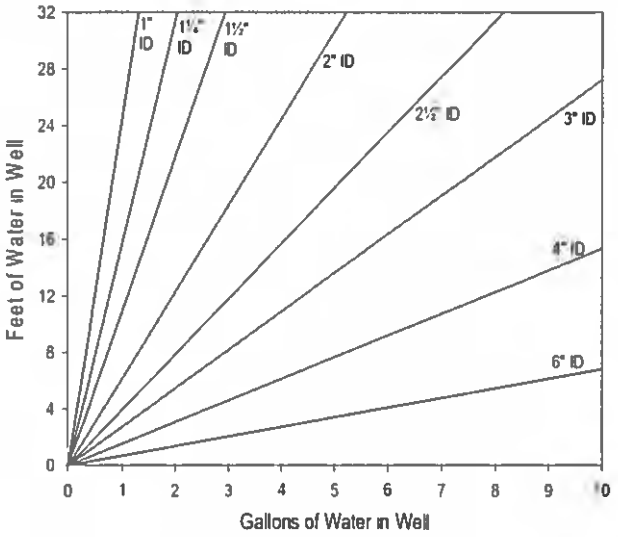
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE4-073022-1					0950
	~~250mL P~~	~~1~~	~~HNO3~~	~~Total (As)~~	↓
	~~250mL P~~	~~1~~	~~HNO3~~	~~Diss (As) - FF~~	
	40mL VOA	2	HCl	VPH	
	1L Amber	2	HCl	EPH and PAH	

Comments

Signature F Burton III Date 9/30/22

AECOM

Well ID: AE-4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: AE-23R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start 1330 am/pm
Project No: 60688023 Finish 1345 am/pm
Site Location: 50 Fordham Rd. Wilmington, MA
Weather Conds: Raining 60's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 55' c. Screen Length 10 (44.7' - 54.7') 1.5" PVC Casing
b. Water Table Depth 8.91 d. Pump Intake 49'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.48 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: hydrolift to evacuate well, then peristaltic to sample after recharge

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	21K103631
	Geotech	Turbidimeter	2106332 8

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1340	NA	16.0	6.18	2195	1.16	153.0	24.1	NA	NA	clear/org. decay.

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A	
Has required volume been removed	☑	☐	☐	pgd dry
Has required turbidity been reached	☐	☐	☑	
Have parameters stabilized	☐	☐	☑	

If no or N/A - Explain below.
grab Sample

3. SAMPLE COLLECTION: Method: grab

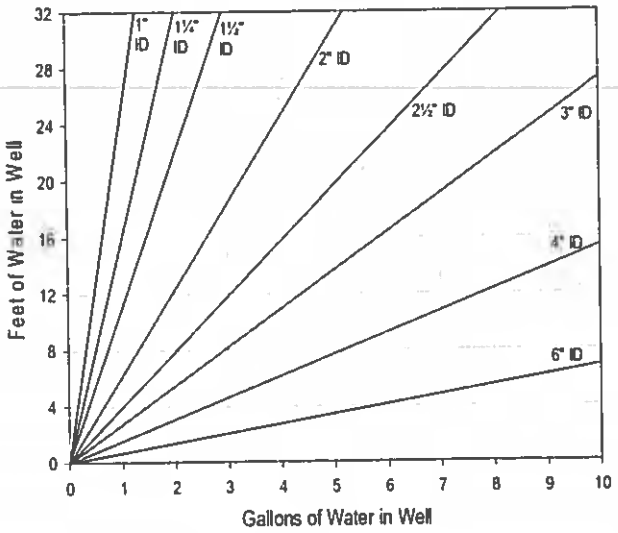
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE23R-100522	40mL VOA	3	HCL	VOCs 8260C	1345
	250 mL A	1	NaHSO4	1,4-dioxane	

Comments _____

Signature _____ Date 10/5/22

AECOM

Well ID: AE-23R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[57 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.828 L ; 0.828 L x 3 well vol. = 2.48 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: AE-23S

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start 1000 am/pm
Project No: 60688023 Finish 1030 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Rainy 60's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 20' c. Screen Length 10 (10' - 20') 2" PVC Casing
b. Water Table Depth 8.94 d. Pump Intake 15'
c. Water Column (a-b) e. Calculated System Purge Volume 1.49 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	21K103631
	Geotech	Peristaltic	21063328

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1000	1	17.0	5.02	298.1	0.29	181.7	7.11	200	8.99	Clear/org. decay
1005	2	17.1	4.91	253.8	0.26	174.1	5.91	200	8.98	" "
1010	3	17.1	4.91	229.5	0.38	169.7	4.43	200	8.97	" "
1015	4	17.3	4.90	223.6	0.31	166.3	2.97	200	8.97	" "
1020	5	17.0	4.87	223.9	0.26	166.5	2.11	200	8.97	" "
1025	6	17.0	4.86	221.1	0.27	166.9	1.78	200	8.97	" "

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

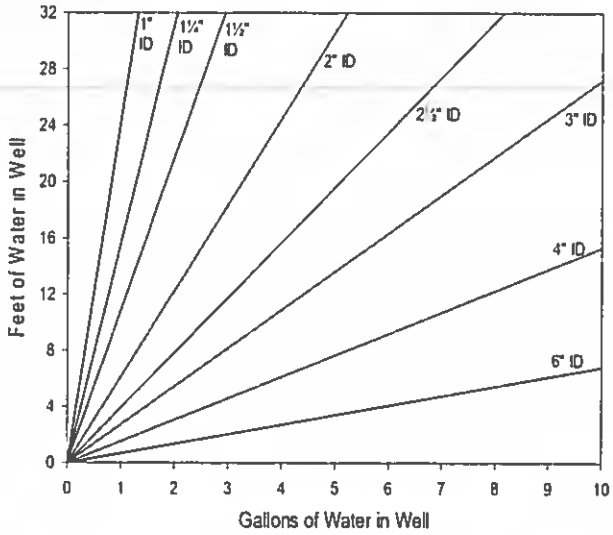
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE23S-100522-1	40mL VOA	3	HCL	VOCs 8260C	1030

Comments

Signature Date 10/5/22

AECOM

Well ID: AE-23S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[23 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.498 L ; 0.498 L x 3 well vol. = 1.49 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: AE-24

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start 1040 am/pm
Project No: 60688023 Finish 1120 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Raining 60's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 17.25' c. Screen Length 10 (7.25' - 17.25') 2" PVC Casing
b. Water Table Depth 8.93 d. Pump Intake 12.25'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.41 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	21K101631
Geotech	turbidimeter	21067328

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1040	1	17.0	5.66	311.3	5.12	169.1	12.4	200	8.95	clear/ org decay
1045	2	17.0	5.75	309.8	5.03	166.1	9.42	200	8.95	" "
1050	3	17.1	5.80	304.4	4.97	164.1	8.11	200	8.95	" "
1055	4	17.1	5.81	306.7	5.36	165.1	7.99	200	8.85	" "
1100	5	17.0	5.81	305.9	5.31	165.2	6.61	200	8.85	" "
1105	6	17.0	5.82	304.1	5.29	165.4	4.38	200	8.85	" "
1110	7	17.0	5.82	302.2	5.33	165.1	4.11	200	8.85	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

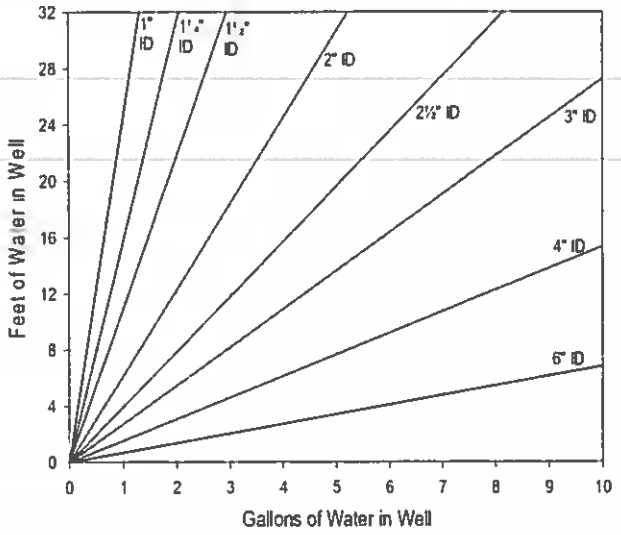
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE24-100522-1	40mL VOA	3	HCL	VOCs 8260C	1115
	250 mL VOA	1	NaHSO4	1,4-Dioxane	
22A-AE24-100522-2	40mL VOA	3	HCL	VOCs 8260C	1120
	250 mL VOA	1	NaHSO4	1,4-Dioxane	

Comments _____

Signature Sean Haggett Date 10/5/22

AECOM

Well ID: AE-24



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0 0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0 6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[20 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.469 L ; 0.469 L x 3 well vol. = 1.41 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-26R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start 0945 am/pm
Project No: 60688023 Finish 1430 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 50's RAIN Collector(s): FB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 10" e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	50-56	49	2.2	2.2	200	200	10.66	11
2	72-78	71	2.4	NS	140	NS	17.10	NS
3	81-88	80	2.8	NS	120	NS	22.36	NS
4	104-114	103	3.9		100	100	40.32	
5	123-132	122	3.8		80	80	46.63	

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	21K103655

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1005	3	10.56	16.1	611	0.04	-192.9	1.6	NM	Clear/none
2	Not Sampled									
3	Not Sampled									
4	1133	3	7.86	16.2	1167	7.56	-193.2	0		Clear/none
5	1402	3	7.67	16.7	1368	0.05	-143.5	0		

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE26R1-100522-1	VOCs, 1,4-Diox, VPH, EPH, Total/Dissolved (As, Fe, Mn), Chloride	1010
	Nitrite, Nitrate, Sulfate, Sulfide, TOC, Dissolved (CH4/Etha/Ethe/Ace/Prop)	
22A-AE26R4-100522-1	VOCs	1135
22A-AE26R5-100522-1	VOCs, 1,4-dioxane	1410

Notes:

Signature [signature] Date 10/5/22

AECOM

Well ID: **AE-26S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/12 Time: Start 1300 am/pm
Project No: 60688023 Finish 1345 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Rainy 64° F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 32' c. Screen Length 10 (20' - 30') 2" PVC Casing
b. Water Table Depth 8.85' d. Pump Intake 25'
c. Water Column (a-b) e. Calculated System Purge Volume 1.84 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProQuatro Serial Number 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1305	1	16.8	7.37	980	1.16	92.1	0.02	200	0.09	Clear/Sulfur
1310	1	16.6	5.68	502	0.83	146.5	0.02	200	0.09	Clear/Sulfur
1315	1	16.6	5.53	480	0.68	153.9	0.02	200	0.09	Clear/Sulfur
1320	1	16.5	5.49	476	0.55	156.0	0.02	200	0.09	Clear/Sulfur
1325	1	16.5	5.47	479	0.32	158.1	0.64	200	0.10	Clear/Sulfur
1330	1	16.4	5.45	496	0.27	161.1	0.02	200	0.10	Clear/Sulfur
1335	1	16.4	5.43	519	0.19	165.5	0.02	200	0.10	Clear/Sulfur

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

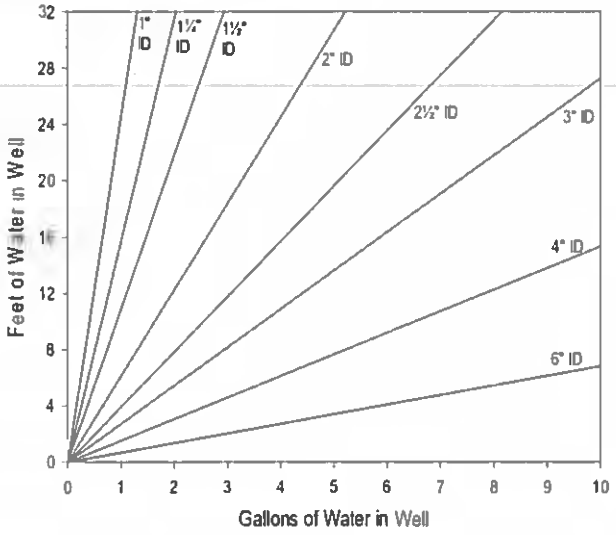
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE26S-100512-1	40mL VOA	3	HCL	VOCs 8260C	1335
	500mL P	1	HNO3	Total (As)	
	500mL P	1	HNO3	Diss. (As) FF	

Comments

Signature Date 10/5/12

AECOM

Well ID: AE-26S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[35 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.615 L ; 0.615 L x 3 well vol. = 1.84 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: AE-27R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start 0950 am/pm
Project No: 60688023 Finish 1050 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Rainy 60 F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 60 c. Screen Length 10 (50-60') 2" PVC Casing
b. Water Table Depth 9.71 d. Pump Intake 55'
c. Water Column (a-b) 50.29 e. Calculated System Purge Volume _____ (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProQuatro Serial Number 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0955	1	16.4	7.42	3178	3.00	-221.9	1.26	200	1.01	Clear/Sulfurous
1000	1	16.3	7.38	3197	1.07	-250.7	0.38	200	1.56	Clear/Sulfurous
1005	1	16.3	7.39	3225	0.34	-265.5	0.52	200	1.79	Clear/Sulfurous
1010	1	16.2	7.41	3263	0.16	-276.9	0.02	200	1.94	Clear/Sulfurous
1015	1	16.1	7.42	3282	0.86	-283.7	0.02	200	2.04	Clear/Sulfurous
1020	1	16.0	7.45	3301	0.40	-288.6	0.02	200	2.12	Clear/Sulfurous
1025	1	15.9	7.75	3349	0.23	-307.0	0.02	200	2.29	Clear/Sulfurous

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

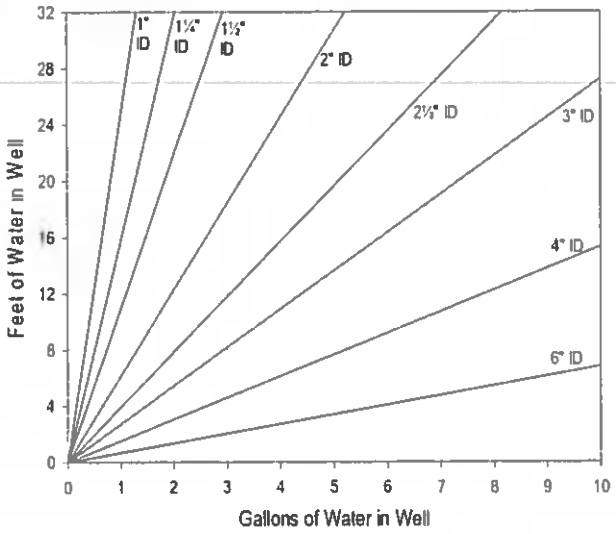
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE27R-100522-1	40mL VOA	3	HCL	VOCs 8260C	1045
	250 mL P	2	HNO3	Total/ Diss (Fe, Mn) FF	
	500 mL P	1	None	Cl, SO4, NO2, NO3	
	250 mL P	1	Zn acetate	Sulfide	
	250 mL A	1	H3PO4	TOC	
	40 mL VOA	3	~~HCL~~ BAK	gases (M, ethe, etha, ace, pr)	

Comments

Signature Kaleb Jones Date 10/5/22

AECOM

Well ID: AE-27R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0 1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L ; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1030	1	15.9	7.96	3364	0.21	-304.6	0.02	200	2.22	clear/sulfurous
1035	1	15.8	8.04	3369	0.17	-300.7	0.02	200	2.24	clear/sulfurous
1040	1	15.8	8.10	3373	0.17	-297.6	0.02	200	2.25	clear/sulfurous
1045	1	15.7	8.10	3363	0.15	-294.4	0.02	200	2.26	clear/sulfurous

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

AECOM

Well ID: **AE-28R**

Low Flow Ground Water Sample Collection Record

0945

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start ~~1000~~ am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 60°F Rainy Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA

d. Depth to Water in FLUTe liner _____ e. Purge Pressure NA f. Sample Pressure NA

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	45-51	44	2.1	2.1	230	230	9.5	10min
2	75-85	74	3.6	3.6	130	136	26.70	26.5
3	98-108	97	3.8	3.8	100	100	37.5	37
4	132-142	131	4.2	4.2	80	90	55.5	46.67

a. Field Testing Equipment used: Make Model Serial Number

YSI Pro Quatro 20K101870

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	~~1000~~ 1003	~~[illegible]~~ 1000	7.43	16.4	2113	0.06	-133.8	0.03		Clear
2	1048	1045	7.65	16.0	1772	0.07	-123.5	0.09		Clear
3	1350	1400	7.70	16.3	1669	0.08	-149.6	2.44		Clear
4	1450	1500	7.64	16.6	1733	0.14	-175.4	5.04		Clear

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE28R1-100522-1	VOC	1015
22A-AE28R2-100522-1	~~VOCs, 1,4-diox., Total/Dissolved (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC~~	1045
	~~Diss. H, Gases (Ace., Prop., Meth., Ethe., Etha.)~~, Microbial, ~~CSIA~~	
22A-AE28R3-100522-1	VOCs	~~[illegible]~~ 1400
22A-AE28R4-100522-1	VOCs	1500

Notes: MS/MSD on sample 22A-AE28R3-

Port 2: → start time = 1127

Hydrogen purge time and rate = 1152 = sample time, purge time = 25min

Signature Rose Kelley Date 10/5/22

AECOM

Well ID: **AE-29R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/4/22 Time: Start 0840 am/pm
Project No: 60688023 Finish 1225 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Cloudy, 63°F Collector(s): K. Jones

1. **WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)**

a. Total Well Length 150' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 1,641 e. Purge Pressure NA f. Sample Pressure NA

2. **PORT DATA:**

Port	Sampling Interval (ft BGS)	Port Depth (ft BGS)	Recommended Purge Volume (Liters)	Actual Purge Volume (Liters)	Max Flow Rate expected (mL/min)	Actual Flow Rate (mL/min)	Expected Purge Time (min)	Actual Purge Time (min)
1	37-44	36	2.3	2.4	320	200	7.23	12
2	47-54	46	2.4	NS	250	NS	9.65	NS
3	70-76	69	2.4	2.4	170	160	14.18	15
4	90-96	89	2.6	NS	130	NS	19.9	NS
5	113-119	112	2.8	2.8	100	100	27.36	28
6	140-146	139	3.1	3.152	80	80	37.35	38

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K103644

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	0840	12m	5.77	14.2	3831	0.37	192.2	2.31	N/M	Clear/none
2	Not Sampled									
3	0930	15m	6.21	14.4	3448	0.34	124.4	3.76	N/M	Clear/none
4	Not Sampled									
5	0955	28m	7.26	15.0	678	0.16	-63.9	1.02	N/M	Clear/none
6	1030	38m	7.44	15.82	1638	0.17	-138.9	0.18	N/M	Clear/none

3. **SAMPLE COLLECTION:**

Sample ID	Analysis	Time
22A-AE29R1-100422-1	VOCs	0842
22A-AE29R3-100422-1	VOCs	0945
22A-AE29R5-100422-1	VOCs	1023
22A-AE29R6-100422-1	VOCs, 1,4-diox, Total/Dissolved (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC, Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.), CSIA	1108

Notes: MS/MSD on sample 22A-AE29R1-100422-1

Hydrogen purge time and rate = 1152-1222 @ 80 mL/min

Signature Kaleb Jones Date 10/4/22

AECOM

Well ID: **AE-100R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/4/22 Time: Start 0700 am/pm
Project No: 60688023 Finish 1345 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 40s Clouds Collector(s): FB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 114' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 8" e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0731	Before 2nd Purge DTW @0817	Before 3rd Purge DTW @0900
1	18-24	98	4.03	3.07	0.224	3.99	7.08	7.10
2	43-48	99	4.10	3.07	0.239	4.22	7.16	7.16
3	50-56	100	4.14	3.07	0.242	7.08	7.14	7.15
4	63-68	101	4.18	3.07	0.244	7.08	7.16	7.18
5	88-93	102	4.23	3.07	0.246	7.28	7.28	7.33
6	108.5-113.5	103	4.37	3.07	0.248	NS	NS	NS

a. Field Testing Equipment used: Make YSI Model Pro Serial Number 21K10365.3

b. 1st Purge Time/Duration Purged on 9/22 c. 2nd Purge Time/Duration 0740/6mins
d. 3rd Purge Time/Duration 0822/6mins e. 4th Purge Time/Duration 0905/6mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	0955	5	6.70	15.0	2448	0.20	-53.1	0	NM	Clear/none
2	1000	5	6.43	15.2	2584	0.05	60.5	0		Clear/none
3	1005	5	6.63	15.1	2061	0.05	69.5	0		Clear/none
4	1010	5	6.74	15.3	1850	0.07	54.1	0		Clear/none
5	1015	5	6.92	15.4	1532	0.09	47.3	0		Clear/none
6	Not Sampled									

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE100R1-100422-1	VPH, EPH, Total/Diss (As)	1035
22A-AE100R2-100422-1	VOCs	1105
22A-AE100R3-100422-1	VOCs, 1,4-dioxane	1115
22A-AE100R4-100422-1	VOCs, 1,4-dioxane	1125
22A-AE100R5-100422-1	VOCs, Total/Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC	1140
	Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.), CSIA, Microbial	

Notes:

Hydrogen purge time and rate = start @1257 / purge time 15 mins / sample time = 1315

Signature FWB III Date 10/4/22

AECOM

Well ID: **AE-101D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp Date: 10/6/22 Time: Start 1320 am/pm
Project No: 60688023 Finish 1420 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 75°F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 25.5' c. Screen Length 5 (20' - 25') 2" PVC Casing
b. Water Table Depth 3.39 d. Pump Intake 22.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.55 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1 0 unit		>0 5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1325	1	18.8	6.10	1916	0.49	-13.8	113	200	0.03	rust orange / none
1330	1	18.5	5.98	1962	0.41	-11.6	87.8	200	0.04	rusty orange / none
1335	1	18.2	5.91	2010	0.55	-12.3	39.7	200	0.06	rusty orange / none
1340	1	16.9	5.89	2037	0.58	-11.1	17.7	200	0.08	rusty orange / none
1345	1	17.4	5.89	2035	0.51	-10.8	14.2	200	0.06	rusty orange / none
1350	1	17.4	5.86	2043	0.54	-9.8	9.97	200	0.06	clear / none
1355	1	17.3	5.84	2049	0.84	-8.8	7.78	200	0.06	clear / none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

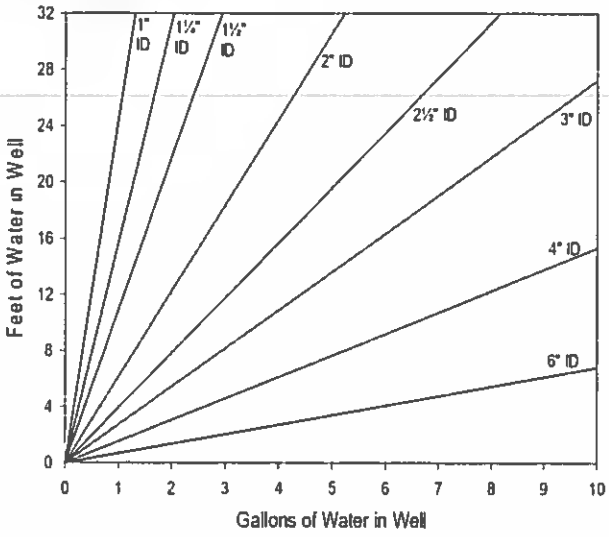
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE101D- -1	40mL VOA	3	HCL	VOCs 8260C	1416
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments _____

Signature Kathleen Jones Date 10/6/22

AECOM

Well ID: AE-101D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[25 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.5175; 0.5175 L x 3 well vol. = 1.55 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1400	1	17.5	5.8	2067	0.47	-8.0	7.62	200	0.06	clear/none
1405	1	17.4	5.82	2075	0.40	-7.9	10.00	200	0.06	clear/none
1410	1	17.5	5.82	2085	0.30	-8.0	7.44	200	0.06	clear/none

AECOM

Well ID: **AE-101R2**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 0840 (am)/pm
Project No: 60688023 Finish 0920 (am)/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 40's Clouds Collector(s): FB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 60' c. Screen Length 5 (55' - 60') 0.5" CMT Channel
b. Water Table Depth 3.24 d. Pump Intake 57.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	PRO	21K103653

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0850	0	15.3	7.18	405	3.75	-55.6	3.3	200	NM	clear/none
0855	1	14.9	6.88	1695	0.33	-90.5	1.1	200		
0900	2	14.9	6.89	1691	0.30	-90.8	1.0	200	↓	↓
0905	3	14.8	6.91	1687	0.30	-90.9	1.0	200		

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

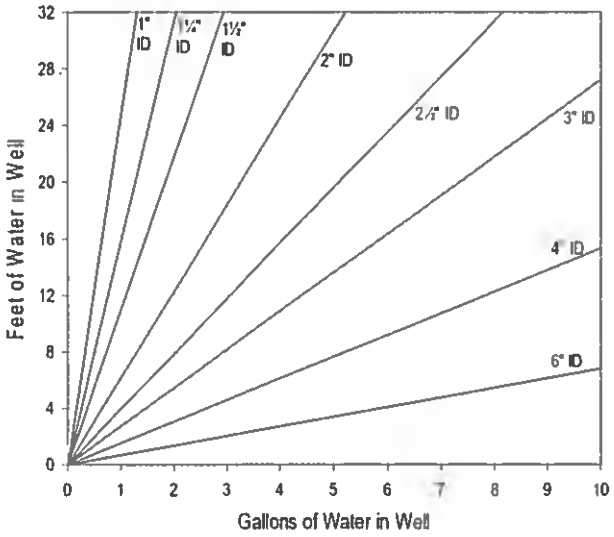
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE101R2-10~~03~~22-1	40mL VOA	3	HCL	VOCs 8260C	0910
	250 mL Amber	1	NaHSO4	1,4-dioxane	

Comments _____

Signature _____ Date 10/3/22

AECOM

Well ID: AE-101R2



Volume / Linear Ft of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[60 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-101R4**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 0930 am/pm
Project No: 60688023 Finish 1020 am/pm
Site Location: 50 Fordham Rd. Wilmington, MA
Weather Conds: 40's Clouds Collector(s): FB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 158' c. Screen Length 5 (153'-158') 0.5" CMT Channel
b. Water Table Depth 3.18 d. Pump Intake 155.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model PRO Serial Number 21K105653

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0940	0	16.7	7.28	587	8.96	-55.4	4.0	200	NM	Clear/none
0945	1	15.3	6.78	3199	0.88	-60.9	1.2	↓	↓	↓
0950	2	15.3	6.81	3192	0.90	-62.3	1.2			
0955	3	15.3	6.82	3185	0.84	-63.1	1.3			

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

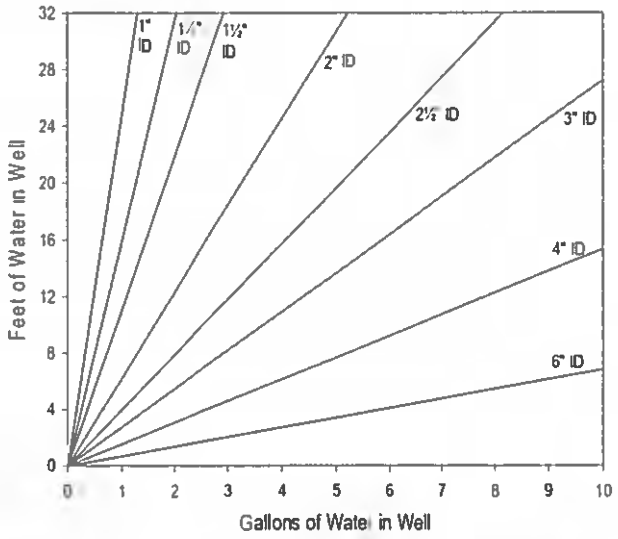
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE101R4-10322-1	40mL VOA	3	HCL	VOCs 8260C	1000
	500mL P	1	HNO3	Total (Fe, Mn)	
	500mL P	1	HNO3	Diss. (Fe, Mn) FF	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	40mL V	3	TSP	gases (Acet, Prop, Meth, Eth, Etha)	

Comments

Signature _____ Date 10/3/22

AECOM

Well ID: AE-101R4



Volume / Linear Ft of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[85 ft (channel length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: AE-101R6

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start 1030 am/pm
Project No: 60688023 Finish 1120 am/pm
Site Location: 50 Fordham Rd. Wilmington, MA
Weather Conds: 40's Clouds Collector(s): FB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 232' c. Screen Length 5 (227' - 232') 0.5" CMT Channel
b. Water Table Depth 3.24 d. Pump Intake 229.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	21K103653

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1040	0	14.8	6.44	548	1.61	-51.2	3.7	200	NM	clear/odor
1045	1	14.6	7.39	637	0.40	-145.5	1.6	200	↓	↓
1050	2	14.6	7.40	633	0.37	-146.8	1.6	200		
1055	3	14.6	7.42	632	0.37	-147.1	1.6	200	↓	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

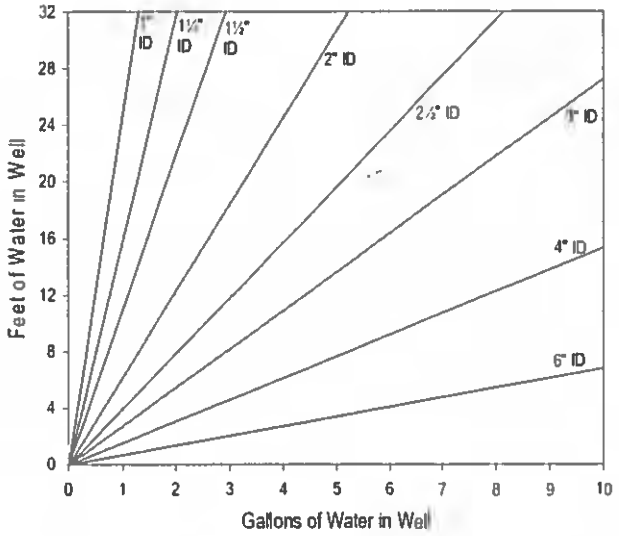
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE101R6-100522-1	40mL VOA	3	HCL	VOCs 8260C	1100
	250 mL Amber	1	NaHSO4	1,4-dioxane	
	500mL P	1	HNO3	Total (Fe, Mn)	
	500mL P	1	HNO3	Diss. (Fe, Mn) FF	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	40mL V	3	TSP	gases (Acet, Prop, Meth, Eth, Etha)	

Comments

Signature _____ Date 10/3/22

AECOM

Well ID: AE-101R6



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

232 ft (channel length) x 0.0097 L/ft + 0.275 L (flow cell vol.) = 1.29 L

(cont nued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-102M**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 0845 am/pm
Project No: 60688023 Finish 0915 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Cloudy 55°F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30' c. Screen Length 5 (23' - 28') 2" PVC Casing
b. Water Table Depth 4.29' d. Pump Intake 25.5'
c. Water Column (a-b) 25.71 e. Calculated System Purge Volume 1.64 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make: YSI Model: Pro Quatro Serial Number: 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
850	1	16.6	6.71	2722	3.48	165.6	19.1	200	0.09	clear/none
855	1	16.5	6.41	2650	1.44	74.1	10.2	200	0.10	clear/none
900	1	16.3	6.16	2670	0.50	74.2	2.6	200	0.11	clear/none
905	1	16.3	6.10	2641	0.33	71.2	0.5	200	0.11	clear/none
910	1	16.2	6.08	2716	0.30	67.8	0.4	200	0.11	clear/none
915	1	16.1	6.07	2731	0.26	69.9	0.3	200	0.11	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

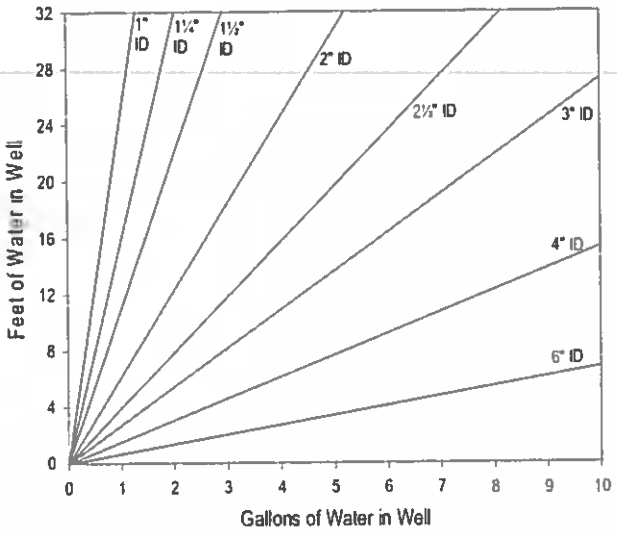
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE102M-100322-1	40mL VOA	3	HCL	VOCs 8260C	915
	250 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	250 mL Amber	1	NaHSO4	1,4-dioxane	
	40mL V	3	TSP	gases (Acet, Prop, Meth, Eth, Etha)	

Comments

Signature Kathleen Jones Date 10/3/22

AECOM

Well ID: AE-102M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[28 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.5466; 0.5466 L x 3 well vol. = 1.64 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID **AE-102RR**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/28/22 Time: Start 910 (am/pm)
Project No: 60688023 Finish 1750 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny, 72°F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 167' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 1.06 e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min Discard (Liters)	Initial DTW @ 910	Before 2nd Purge DTW @1000	Before 3rd Purge DTW @1040
1	43-48	99.4	4.23	3.26	0.234	3.48	3.88	3.98
2	75-80	100.4	4.30	3.26	0.250	3.61	3.76	3.81
3	111-116	101.4	4.34	3.26	0.252	NS	NS	NS
4	125-130	102.4	4.39	3.26	0.254	3.57	3.62	3.68
5	141-146	103.4	4.43	3.26	0.257	3.58	3.63	3.67
6	153-158	104.4	4.47	3.26	0.259	3.59	3.66	3.71

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	21K103644
GeoTech	Turbidimeter	21063328

b. 1st Purge Time/Duration 9/26/22
c. 2nd Purge Time/Duration 910 - 915
d. 3rd Purge Time/Duration 9/28/22 1005 - 1010
e. 4th Purge Time/Duration 1045 - 1050

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1213	[illegible]	8.22	14.7	464.4	0.42	-149.2	1.87	ND	clear
2	1217	5	7.30	14.5	508	0.26	-85.7	0.27	ND	clear
3	Not Sampled									
4	1218	5	7.21	14.6	365.6	0.54	-64.6	0.02	ND	clear
5	1220	5	7.21	14.7	1139.2	0.37	-72.5	0.02	ND	clear
6	1225	5	7.34	15.1	813	0.32	-92.5	0.12	ND	clear

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE102RR1-[illegible]-1	VOCs, Total/Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC	1305
22A-AE102RR2-[illegible]-1	Diss. H, Gases (Acety., Prop., Meth., Ethe., Etha.), CSIA, Microbial	
22A-AE102RR4-[illegible]-1	VOCs, 1,4-dioxane	1310
22A-AE102RR5-[illegible]-1	VOCs	1315
22A-AE102RR5-[illegible]-2	VOCs	1320
22A-AE102RR6-[illegible]-1	VOCs, 1,4-dioxane, Total/Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC	1325
	Gases (Acety., Prop., Meth., Ethe., Etha.)	1330

Notes:

Hydrogen purge time and rate = 219 mL/min 15 min 1737

Signature Kaleb Jones Date 9/28/22

175 mL/min 1604

AECOM

Well ID: **AE-103D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp Date: 10/9/12 Time: Start 1015 am/pm
Project No: 60688023 Finish 1050 am/pm
Site Location: 50 Fordham Rd. Wilmington, MA
Weather Conds: 60°F Cloudy Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40.5' c Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 3.78 d. Pump Intake 37.5'
c. Water Column (a-b) 36.72 e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model 30 (Handheld) Serial Number 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1020	1	15.0	5.71	3225	0.32	176.6	10.9	200	0.14	Clear/none
1025	1	14.9	5.64	3230	0.23	195.5	7.7	200	0.14	clear/none
1030	1	14.9	5.68	3230	0.16	203.1	7.0	200	0.13	Clear/none
1035	1	14.7	5.67	3230	0.13	211.4	1.6	200	0.15	Clear/none
1040	1	14.6	5.67	3226	0.13	216.1	1.1	200	0.15	Clear/none
1045	1	14.6	5.64	3227	0.12	218.9	1.0	200	0.14	clear/none
1050	1	14.6	5.67	3224	0.11	220.1	0.5	200	0.14	Clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

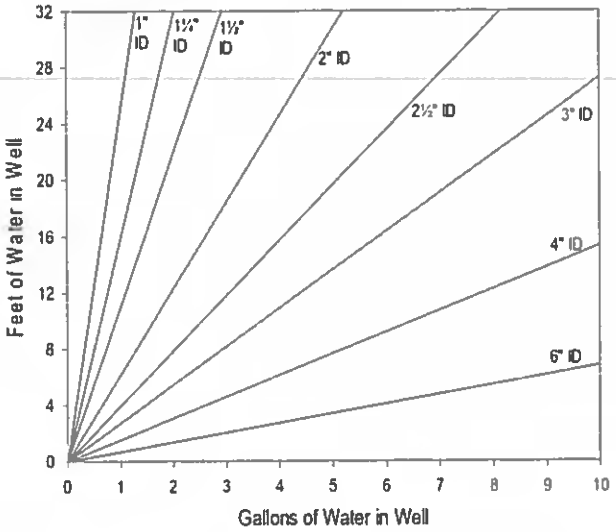
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE103D-[illegible]22-1	40mL VOA	3	HCL	VOCs 8260C	1030
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	250mL P	2	HNO3	Total & Diss (As, Fe, Mn)	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	vial	2	~~ESPRAK~~	Gases (M, Eth, Etha, Ac, Pr)	

Comments ~~MS/MSD~~

Signature [signature] Date 10/3/12

AECOM

Well ID: AE-103D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-103S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 945 (am/pm)
Project No: 60688023 Finish 1005 (am/pm)
Site Location: 50 Fordham Rd. Wilmington, MA
Weather Conds: cloudy 57°F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 22' c. Screen Length 5 (15' - 20') 2" PVC Casing
b. Water Table Depth 4.45 d. Pump Intake 17.5'
c. Water Column (a-b) 17.55 e. Calculated System Purge Volume 141 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make: YSI Model: ProQuatro Serial Number: 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
950	1	16.5	6.50	1183	0.35	-51.0	32.7	200	0.04	none/clear
955	1	15.4	6.49	1187	0.29	-51.8	22.1	200	0.01	clear/none
1000	1	15.3	6.47	1205	0.28	-50.5	10.9	200	0.02	clear/none
1005	1	15.1	6.46	1194	0.20	-50.2	9.8	200	0.02	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

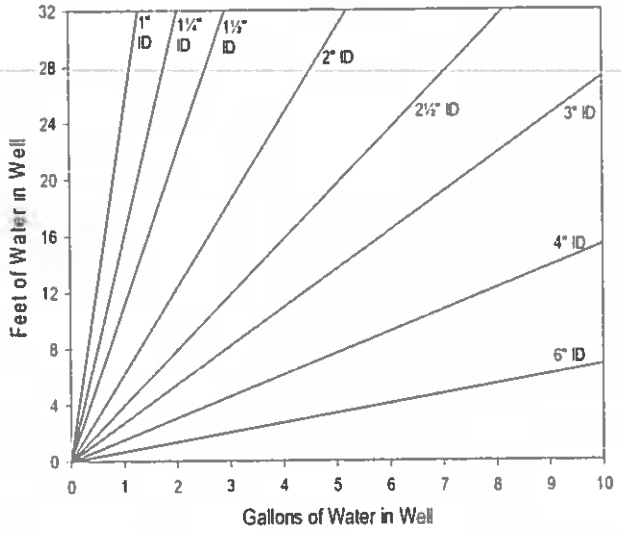
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE103S-[illegible]22-1					1005
	250mL P	1	HNO3	total As	
	250mL P	1	HNO3	Diss. As (FF)	

Comments

Signature Kaleb Jones Date 10/3/22

AECOM

Well ID: AE-103S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[20 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.469; 0.469 L x 3 well vol. = 1.41 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: AE-103R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/28/22 Time: Start 0855 am/pm
Project No: 60688023 Finish 1330 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 65°F Sunny Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial 8:55 DTW @	Before 2nd Purge DTW @ 0944	Before 3rd Purge DTW @ 1035
1	48-53	98	4.15	3.23	0.232	2.63	2.86	2.91
2	62-67	99	4.22	3.23	0.250	2.71	2.83	2.89
3	70-76	100	4.27	3.23	0.252	2.75	2.84	2.87
4	98-105	101	4.31	3.23	0.254	2.64	2.93	2.8
5	122-128	102	4.35	3.23	0.257	2.65	2.80	2.83
6	138-144	103	4.4	3.23	0.259	NS	NS	NS
7	162.5-168	104	4.44	3.23	0.261	2.6	2.79	2.84

a. Field Testing Equipment used: Make YSI ProQuatro Model _____ Serial Number 20K101870

b. 1st Purge Time/Duration 9/26/22
c. 2nd Purge Time/Duration 9/28/22 0900-0905
d. 3rd Purge Time/Duration 9/28/22 0848-0955
e. 4th Purge Time/Duration 9/28/22 1037-1045

Port	Time (24hrs)	Purge Time (min)	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1230	1120	6.68	14	2958	0	82.1	0.02		Clear
2	1236	5	6.15	14.1	2565	0	140.9	0.02		Clear
3	1241	5	6.21	13.9	2506	0	151.0	0.02		Clear
4	1247	5	6.86	13.8	1180	0	32.5	0.02		Clear
5	1251	5	7.01	13.7	1067	0	-18.7	0.02		Clear
6	Not Sampled									
7	1256	5	7.41	13.6	732	0	-90.1	0.02		Clear

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE103R1-092822-1	Total/ Dissolved (As)	
22A-AE103R2-092822-1	VOC, Total/ Diss (Fe, Mn), NO3, SO2, S, TOC, Gases (CH4/Ethe/Etha/Ace/Prop)	
22A-AE103R3-092822-1	VOCs	
22A-AE103R4-092822-1	VOCs, 1,4-dioxane	
22A-AE103R5-092822-1	VOCs, 1,4-dioxane, CSIA, Microbial, Total/ Diss(Fe, Mn), Cl, NO2, NO3, SO2, S, TOC, Gases(meth, Ethe, Etha, Acety, Prop), Diss. H	
22A-AE103R7-092822-1	VOCs	

Notes: MS/MSD on 22A-AE103R4-

Hydrogen purge time and rate =

Signature Rose Kelley Date 9/26/22

DNA! R5 | flow rate 700 mL/min | purge time 1456 - 1500 | volume removed 1 L

AECOM

Well ID: **AE-104D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 1415 am/pm
Project No: 60688023 Finish 1515 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 60F Cloudy Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 40 5' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 3.39' d. Pump Intake 37.5'
c. Water Column (a-b) 37.11 e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

• Temperature	3%	• D.O.	< 0.5 mg/L	•Drawdown	<0.3 ft
• pH	± 1.0 unit		>0.5 mg/L within 10%	•Turbidity	<10 NTU
• Sp. Cond.	3%	•ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Quatro Pro Serial Number 20K101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1430		15.5	5.82	3090	0.85	152.0	0.07	180	3.39	Clear
1435		15.3	5.57	3117	0.26	182.2	0.02	180	3.39	
1440		15.1	5.51	3118	0.13	197.7	0.02		3.39	
1445		15.1	5.49	3158	0.10	200.9	0.02		3.39	
1450		15.1	5.48	3198	0.08	203.9	0.02		3.39	
1455		15.1	5.48	3207	0.08	205.5	0.02	↓	3.39	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

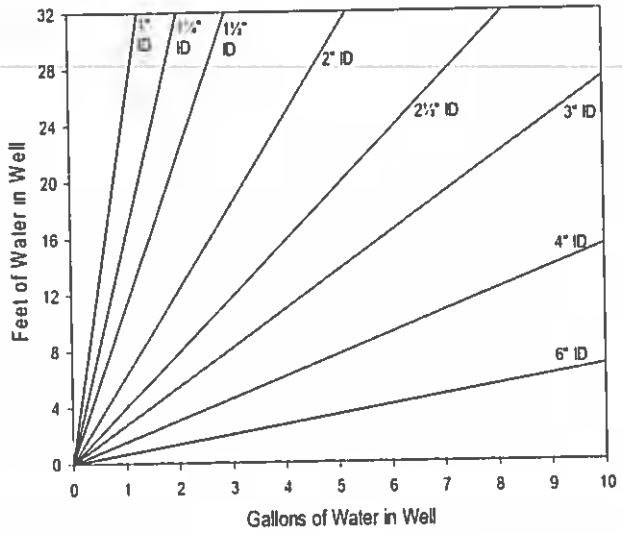
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE104D-100322-1	40mL VOA	3	HCL	VOCs 8260C	1500
	250 mL Amber	1	NaHSO4	1,4 dioxane	↓
22A-AE104D-100322-2	40mL VOA	3	HCL	VOCs 8260C	
	250 mL Amber	1	NaHSO4	1,4 dioxane	↓

Comments

Signature Rose Kelly Date 10/3/22

AECOM

Well ID: AE-104D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-104R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/28/22 Time: Start 0910 am/pm
Project No: 60688023 Finish 1505 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny, 60s Collector(s): Dylan Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner _____ e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0913	Before 2nd Purge DTW @1001	Before 3rd Purge DTW @1100
1	48-54	99	4.23	3.27	0.234	2.69	3.44	3.23
2	62-68	100	4.30	3.27	0.250	NS	NS	NS
3	97-102	101	4.34	3.27	0.252	2.69	2.59	2.85
4	128-133	102	4.39	3.27	0.254	NS	NS	NS
5	156-162	103	4.43	3.27	0.257	2.83	2.96	2.99
6	168-174	104	4.47	3.27	0.259	NS	NS	NS

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	21K103644
GeoTech		2106 3328

b. 1st Purge Time/Duration purged on 9/26/22
c. 2nd Purge Time/Duration 0913 - 0918
d. 3rd Purge Time/Duration 1005 - 1010
e. 4th Purge Time/Duration 1105 - 1110

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1244	5min	7.70	13.7	1037	1.22	-19.6	0.02	NM	clear/none
2	Not Sampled									
3	1247	5min	7.79	13.6	793	0.39	-93.4	0.02	NM	clear/none
4	Not Sampled									
5	1252	5min	7.46	13.5	931	0.08	-98.8	0.02	NM	clear/none
6	Not Sampled									

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE104R1-____-1	VOCs, 1,4-dioxane	1505
22A-AE104R3-____-1	VOCs, 1,4-dioxane	1510
22A-AE104R5-____-1	VOCs, 1,4-dioxane	1515

Notes: _____

Signature _____ Date 9/28/22

AECOM

Well ID: **AE-105D**

Low Flow Ground Water Sample Collection Record 1045

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start ~~0945~~ am/pm
Project No: 60688023 Finish 1130 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny, 60s Collector(s): Dylan Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 78.5' c. Screen Length 5 (73' - 78') 2" PVC Casing
b. Water Table Depth 4.83 d. Pump Intake 75.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 3.09 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	21K103637
	Geotech		1804:3534

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1055	2	12.4	7.95	1126	0.70	-103.5	0.02	200	0.00	clear/none
1100	3	12.5	7.48	1062	0.28	-135.6	0.02	200	0.00	"
1105	4	12.4	7.40	1032	0.21	-155.0	0.02	200	0.00	"
1110	5	12.2	7.33	1019	0.21	-166.6	0.02	200	0.00	"
1115	6	12.1	7.22	1016	0.19	-176.0	0.02	200	0.00	"
1120	7	12.1	7.19	1019	0.20	-180.0	0.02	200	0.00	"
1125	8	12.2	7.15	1037	0.18	-179.6	0.02	200	0.00	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

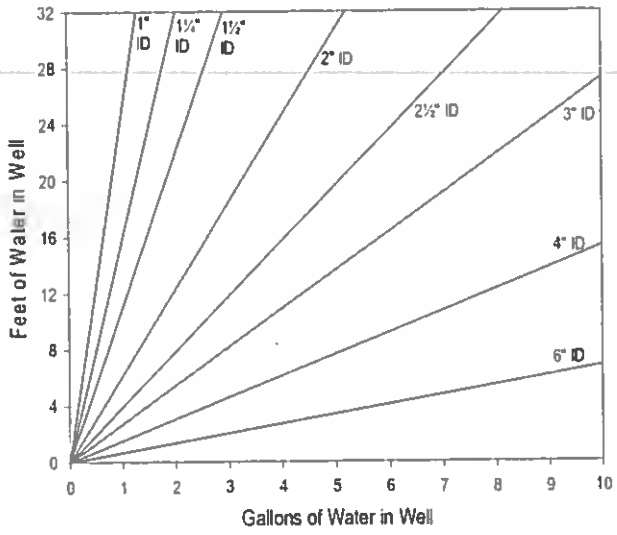
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE105D-092922-1	40mL VOA	3	HCL	VOCs 8260C	1130
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	250mL P	1	HNO3	total As	
	250mL P	1	HNO3	Diss. As (FF)	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	500mL P	1	zinc acetate	Sulfide	
	40mL V	2	H3PO4	TOC	
	vial	3	~~TSP~~ PAIC	Gases (M, Eth, Etha, Ac, Pr)	

Comments _____

Signature _____ Date 9/29/22

AECOM

Well ID: AE-105D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

78 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.03; 1.03 L x 3 well vol. = 3.09 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **AE-105R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 0900 am/pm
Project No: 60688023 Finish 1535 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 60's Sunny Collector(s): TB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.55 e. Purge Pressure 54 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @0944	Before 2nd Purge DTW @1034	Before 3rd Purge DTW @1118
1	90.5-95.5	96.7	4.23	3.29	0.234	NS	NS	NS
2	98-103	97.7	4.30	3.29	0.250	4.07	4.36	4.27
3	107.5-112.5	98.7	4.34	3.29	0.252	4.07	4.30	4.24
4	125-130	99.7	4.39	3.29	0.254	4.12	4.24	4.23
5	143-148	100.7	4.43	3.29	0.257	4.13	4.20	4.21
6	156-161	101.7	4.47	3.29	0.259	NS	NS	NS

a. Field Testing Equipment used: Make YSI Model Pro Serial Number 21K103653

b. 1st Purge Time/Duration ~~0936~~ purged 9/26/22 c. 2nd Purge Time/Duration 0949 / 8mins
d. 3rd Purge Time/Duration 1036 / 8mins e. 4th Purge Time/Duration 1120 / 8 MINS

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	Not Sampled									
2	1150	5	7.69	10.9	411.5	5.02	10.7	1.3	NM	Clear/none
3	1155	5	7.50	10.8	361.7	0.20	-18.8	1.0	NM	"
4	1200	5	7.48	10.9	334.0	0.04	-44.0	1.0	NM	"
5	1205	5	7.49	10.9	302.9	0.05	-62.7	1.0	NM	"
6	Not Sampled									

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE105R2-092922-1	VOCs, 1,4-dioxane, Total/Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC	1455
	Diss. H, Gases (Acety., Prop., Meth., Etha.), CSIA, Microbial	
22A-AE105R3-092922-1	VOCs	1430
22A-AE105R4-092922-1	VOCs, 1,4-dioxane	1455
22A-AE105R5-092922-1	VOCs	1440

Notes:

Hydrogen purge time and rate = 15mins @ 225 ml/min. Sampled @ 1420-1435

Signature [signature] Date 9/29/22

AECOM

Well ID: **AE-105S**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1450 am/pm
Project No: 60688023 Finish 1515 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 70, sunny Collector(s): Dylan Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 42' c. Screen Length 5 (35' - 40') 2" PVC Casing
b. Water Table Depth 3.81 d. Pump Intake 37.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI (GeoTech) Model Quatro Serial Number 21K103637

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1500	2	12.2	6.14	1338	0.29	-21.6	7.29	200	0.06	clear/none
1505	3	12.1	6.13	1335	0.28	-23.6	1.87	200	0.07	"
1510	4	12.0	6.12	1336	0.25	-25.5	0.02	200	0.07	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

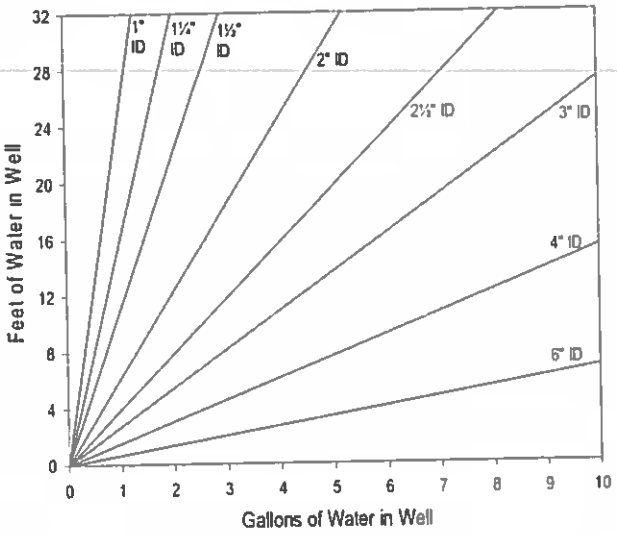
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE105S-092922-1	250mL P	1	HNO3	total As	1515
	250mL P	1	HNO3	Diss. As (FF)	↓

Comments

Signature [signature] Date 9/29/22

AECOM

Well ID: AE-105S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AE-106M

AECOM

Well ID: [redacted]

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1015 am/pm
Project No: 60688023 Finish 1050 am/pm
Site Location: 50 Fordham Rd, Wilmington MA
Weather Conds: 70F Sunny Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted) 2" PVC

a. Total Well Length 27.5' ~~[illegible]~~ c. Screen Length 5 (22.5-27.5) ~~5 (34.25'-39.25')~~ ~~0.62" steel~~

b. Water Table Depth 3.0' d. Pump Intake ~~[illegible]~~ 25'

c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K103644
Geotech	turbidimeter	21063328

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1025	1	11.3	6.35	2388	2.61	195.6	3.86	200	3.14	Clear
1030	1	11.3	5.71	2383	0.60	208.1	2.08	200	3.15	Clear
1035	1	11.1	5.69	2380	0.48	211.7	1.91	200	3.16	Clear
1040	1	11.1	5.70	2384	0.30	214.5	1.59	200	3.16	Clear
1045	1	11.1	5.72	2389	0.17	218.1	0.02	200	3.16	Clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-~~[illegible]~~ 106M-092922-1	40mL VOA	3	HCL	VOCs 8260C	1050
22A-106M-092922-2	1				1055

22A-106M-092922-1

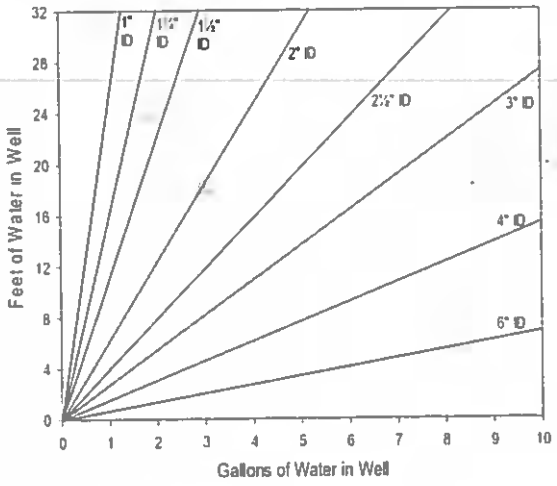
Comments Analyis req. & VOCs 8260C, Total/Diss (Fe, Mn) FF, Cl, SO_4, NO_2, NO_3, Sulfide, TOC, gases (M, ethe, etha, ace, pr)
Duplicate: Same analysis as "...092922-1" - 22A-106M-092922-2

Signature Kaleb Jones Date 9/29/22

D

AECOM

Well ID: AE-106M



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663 L ; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: AE-106R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1000 am/pm
Project No: 60688023 Finish 1330 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggerty

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 1.65 e. Purge Pressure 53 psi f. Sample Pressure 37 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 1020	Before 2nd Purge DTW @ 1057	Before 3rd Purge DTW @
1	47-52	96	4.31	3.34	0.237	3.63	3.69	
2	69.5-74.5	97	4.38	3.34	0.250	NS	NS	NS
3	84-88	98	4.42	3.34	0.252	3.58	3.61	
4	144.5-150.5	99	4.46	3.34	0.254	NS	NS	NS
5	164-169	100	4.51	3.34	0.257	3.41	3.54	

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro DSS Quatro	21K103631
	geotech	turbidmeter	19062111

b. 1st Purge Time/Duration 9/27 6 mins c. 2nd Purge Time/Duration 9/29 6 mins @ 1020
d. 3rd Purge Time/Duration 9/29 6 mins @ 1057 e. 4th Purge Time/Duration 9/29 6 mins @

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1155	3:00	7.95	10.5	134	0.28	108.1	2.50	—	Clear/none
2	Not Sampled									
3	1206	3:00	7.95	10.3	633	0.07	81.1	1.76	—	Clear/none
4	Not Sampled									
5	~~1209~~ 1215	3:00	8.04	10.3	181.2	2.71	69.0	2.11	—	Clear/none

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE106R1-092922-1	VOCs	1305
22A-AE106R3-092922-1	VOCs, Total/ Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC, Diss. H, Gases (Acety., Prop., Meth., Etha.), CSIA, Microbial	1300
22A-AE106R5-092922-1	VOCs, 1,4-dioxane	1310

Notes:

Hydrogen purge time and rate = 210 ml/min 15 mins

Signature Date 9/29/22

AECOM

Well ID: **AE-108R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/28/'22 Time: Start 0930 am/pm
Project No: 60688023 Finish 1350 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny, 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 168' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.89 to steel bar e. Purge Pressure 55 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 0938	Before 2nd Purge DTW @1029	Before 3rd Purge DTW @1205
1	36.5-43.5	99.7	4.31	3.07	0.237	3.73	3.79	3.76
2	68-73	100.7	4.38	3.06	0.250	NS	NS	NS
3	84-89	101.7	4.42	3.05	0.252	2.55	2.57	2.58
4	145-150	102.7	4.46	3.05	0.254	NS	NS	NS
5	163-168	103.7	4.51	3.05	0.257	2.61	2.66	2.63

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Pro Quatro	
	Geotech	turbidimeter	

b. 1st Purge Time/Duration 4/27 5mins c. 2nd Purge Time/Duration 9/28 6mins @093
d. 3rd Purge Time/Duration 6mins @ 1029 e. 4th Purge Time/Duration 6mins @ 1205

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1305	3:00	9.62	14.2	2294	0.28	145.2	2.83	–	clear/none
2	Not Sampled									
3	1312	3:00	7.61	14.3	2157	0.98	94.1	1.72	–	clear/none
4	Not Sampled									
5	1318	3:00	7.51	14.3	631	0.10	33.2	1.21	–	Clear/none

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE108R1-092822-1	VOCs, Total/Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC, Gases (Ace,Prop,Meth,Etha,Ethe)	1330
22A-AE108R3-092822-1	VOCs	1340
22A-AE108R5-092822-1	VOCs	1350

Notes:

Signature Date 9/28/22

AECOM

Well ID: **AE-109D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 1035 am/pm
Project No: 60688023 Finish 1110 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny, 72°F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 23.5' c. Screen Length 5 (18' - 23') 2" PVC Casing
b. Water Table Depth 4.48 d. Pump Intake 20.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProQuatro Serial Number 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1040	1	16.8	6.24	1463	0.28	82.0	0.58	200	0.05	Clear/none
1045	1	16.7	6.28	1431	0.30	81.1	0.20	200	0.05	Clear/none
1050	1	16.7	6.29	1420	0.32	82.3	0.02	200	0.05	Clear/none
1055	1	16.7	6.29	1421	0.29	83.3	0.02	200	0.06	Clear/none
1100	1	16.6	6.30	1489	0.26	83.5	0.02	200	0.06	Clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

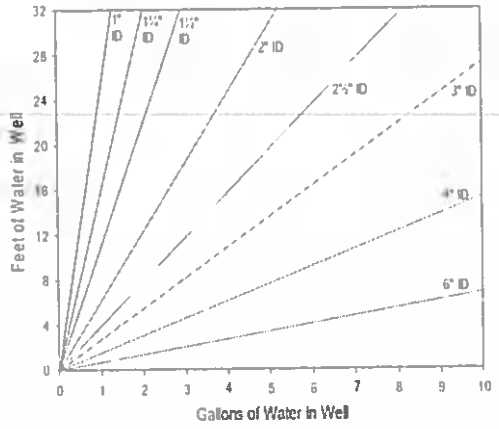
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE109D-[illegible]-1	40mL VOA	3	HCL	VOCs 8260C	1100
	250 mL A	1	NaHSO4	1,4-dioxane	
	250 mL plastic	1	HNO3	Total As	
	250 mL plastic	1	HNO3	Dissolved As (field filter)	

Comments _____

Signature Caleb Jones Date 10/6/22

AECOM

Well ID: AE-109D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1 3900
4	0 6528	2.4711
6	1 4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **AE-109R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/4/22 Time: Start 0903 am/pm
Project No: 60688023 Finish 1413 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: cloudy, 50s Collector(s): D Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 250' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner [illegible] e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 0903	Before 2nd Purge DTW @ 1003	Before 3rd Purge DTW @ 1118
1	38-43	97.4	4.07	3.2	0.23	~~4.89~~	~~5.16~~	4.94
2	66-76	98.4	4.15	3.2	0.250	4.29	5.39	5.49
3	126-136	99.4	4.19	3.2	0.252	NS	NS	NS
4	174-180.5	100.4	4.23	3.2	0.254	4.50	4.41	4.41
5	183-189	101.4	4.28	3.2	0.257	NS	NS	NS
6	196-201	102.4	4.32	3.2	0.259	4.41	4.42	4.42
7	204-214	103.4	4.36	3.2	0.261	NS	NS	NS
8	245-250	104.4	4.40	3.2	0.263	4.24	5.18	5.35

1003
RI = 4.83

a. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProQuatro	21K103637
	Geotech		18A93534

b. 1st Purge Time/Duration ~~0913~~ Purged on 9/26 c. 2nd Purge Time/Duration 0913-0919
d. 3rd Purge Time/Duration 1019-1024 e. 4th Purge Time/Duration 1121-1126

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1236	4	8.07	13.3	1392	0.38	123.2	7.10	NM	clear
2	1240	4	7.84	13.3	1209	0.27	59.1	0.02		
3	Not Sampled									
4	1243	5	8.09	13.3	319.9	0.18	4.7	0.02		
5	Not Sampled									
6	1247	5	7.96	13.3	251.8	0.15	-22.1	0.11		
7	Not Sampled									
8	1250	5	7.95	13.3	159.7	0.15	-61.2	1010		white

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE109R1-100422-1	VOCs	1350
22A-AE109R2-100422-1	VOCs, 1,4-Dioxane	1355
22A-AE109R4-100422-1	VOCs	1400
22A-AE109R6-100422-1	VOCs, 1,4-dioxane, Total/Diss (Fe, Mn), NO3, NO2, Cl, SO4, S, TOC,	1345
	Gases (Ace,Prop,Meth,Etha,Ethe)	
22A-AE109R8-100422-1	VOCs	1405

Notes: MS/MSD on 22A-AE109R6-100422-1

Signature [signature] Date 10/4/22

AECOM

Well ID: **AE-110R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/5/22 Time: Start 0900 am/pm
Project No: 60688023 Finish 1425 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: rain, 50s Collector(s): D Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 250' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 0.75 e. Purge Pressure 55 psi f. Sample Pressure 38 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 0925	Before 2nd Purge DTW @1030	Before 3rd Purge DTW @1145
1	34-44	98	4.15	3.23	0.232	4.20	4.92	5.97
2	70-80	99	4.22	3.23	0.250	4.27	4.76	5.55
3	128-138	100	4.27	3.23	0.252	NS	NS	NS
4	158-168	101	4.31	3.23	0.254	NS	NS	NS
5	171-182	102	4.35	3.23	0.257	4.33	4.29	4.29
6	190-200	103	4.4	3.23	0.259	NS	NS	NS
7	224-234	104	4.44	3.23	0.261	4.33	4.30	4.29

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K103637
Geotech		18043534

b. 1st Purge Time/Duration Purged on 9/26
c. 2nd Purge Time/Duration 0905-0910
d. 3rd Purge Time/Duration 1034-1043 (changed tank)
e. 4th Purge Time/Duration 1146-1151

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1328	4min	8.25	13.7	629	0.39	-32.8	89.9	NM	light brown/none
2	1330	4min	7.97	13.7	590	0.23	-75.4	24.6	NM	clear/none
3	Not Sampled									
4	Not Sampled									
5	1332	5min	7.84	13.7	719	0.20	-91.7	6.72	NM	clear/none
6	Not Sampled									
7	1338	5	7.63	13.7	1043	0.17	-91.4	1.55	NM	clear/none

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE110R1-100522-1	VOCs	1410
22A-AE110R2-100522-1	VOCs	1415
22A-AE110R5-100522-1	VOCs	1420
22A-AE110R7-100522-1	VOCs, 1,4-dioxane	1425

Notes:

Signature [signature] Date 10/5/22

AECOM

Well ID: **AE-111R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 0700 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: sunny, 70s Collector(s): D Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 200' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 1.6' e. Purge Pressure 59 psi f. Sample Pressure 42 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min. Discard (Liters)	Initial DTW @ 0705	Before 2nd Purge DTW @ 0855	Before 3rd Purge DTW @ 0940
1	44-54	108	4.15	3.15	0.232	13.36	13.35	13.36
2	66-74	109	4.22	3.15	0.250	13.28	13.28	13.29
3	95-103	110	4.27	3.15	0.252	NS	NS	NS
4	140-150	111	4.31	3.15	0.254	NS	NS	NS
5	155-165	112	4.35	3.15	0.257	NS	NS	NS
6	168-173	113	4.4	3.15	0.259	13.20	13.22	13.25
7	181-191	114	4.44	3.15	0.261	NS	NS	NS

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K103637
GeoTech		1804

b. 1st Purge Time/Duration Purged on 9/26/22
c. 2nd Purge Time/Duration 0716-0722
d. 3rd Purge Time/Duration 0857-0903
e. 4th Purge Time/Duration 0947-0953

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1052	5min	7.95	13.6	1642	0.22	96.0	0.02	NM	clear/none
2	1055	6min	7.79	13.4	1717	0.18	73.3	0.02	NM	clear/none
3	Not Sampled									
4	Not Sampled									
5	Not Sampled 6min									
6	1100	17:6	8.07	13.6	468	0.14	-73.7	0.02	NM	clear/none
7	Not Sampled									

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE111R1-100622-1	VOCs	1125
22A-AE111R2-100622-1	VOCs	1130
22A-AE111R6-100622-1	VOCs	1135

Notes: MS/MSD on 22A-AE111R2-100622-1

Signature _____ Date 10/6/22

AECOM

Well ID: AE-112D

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 900 (am)/pm
Project No: 60688023 Finish 1005 am/(pm)
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 70F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 30' c. Screen Length 5 (24.5' - 29.5') 2" PVC Casing
b. Water Table Depth 7.12 d. Pump Intake 27'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
905	1	15.0	5.97	2350	0.64	168.2	7.01	200	0.20	clear/none
910	1	14.8	5.43	2342	0.66	161.8	3.51	200	0.20	clear/none
915	1	14.7	5.33	2339	0.93	100.9	2.24	200	0.21	clear/none
920	1	14.6	5.26	2328	0.97	119.4	1.03	200	0.20	clear/none
925	1	14.8	5.25	2327	0.98	125.6	0.02	200	0.20	clear/none
930	1	14.7	5.22	2324	1.01	131.9	0.02	200	0.20	clear/none
935	1	14.8	5.19	2321	1.14	146.5	0.02	200	0.20	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

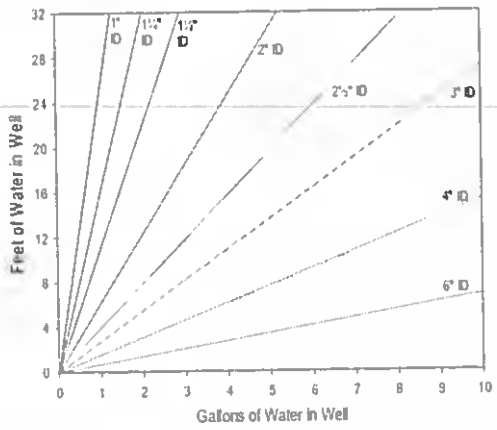
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE112D-100622-1	40mL VOA	3	HCL	VOCs 8260C	1000
	250 mL plastic	1	HNO3	Total As	
	250 mL plastic	1	HNO3	Dissolved As (field filter)	

Comments _____

Signature _____ Date 10/6/22

AECOM

Well ID: AE-112D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
940	1	14.8	5.19	2282	1.15	141.6	0.02	206	0.20	clear/none
945	1	14.8	5.16	2316	1.72	135.2	0.02	200	0.20	clear/none
950	1	14.7	5.15	2317	1.36	152.8	0.02	200	0.26	clear/none
955	1	14.8	5.15	2313	1.35	156.3	0.02	200	0.20	clear/none
1000	1	14.6	5.15	2312	1.33	162.2	0.02	200	0.20	clear/none

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **AE-112R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 0730 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 70's Sunny Collector(s): FB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 175' b. Water Table Depth NA c. Water Column (a-b) NA
d. Depth to Water in FLUTe liner 9" e. Purge Pressure 56 psi f. Sample Pressure 39 psi

2. PORT DATA:

Port	Sampling Interval (ft BGS)	Pump Depth (ft BGS)	Purge Volume (Liters)	Sample Stroke Volume (Liters)	Min Discard (Liters)	Initial DTW @ 0735	Before 2nd Purge DTW @ 0840	Before 3rd Purge DTW @ 0940
1	41-50	100.9	4.15	3.21	0.232	6.66	6.69	6.71
2	62-72	101.9	4.22	3.21	0.250	NS	NS	NS
3	91-101	102.9	4.27	3.21	0.252	6.65	6.67	6.65
4	113-123	103.9	4.31	3.21	0.254	NS	NS	NS
5	136-146	104.9	4.35	3.21	0.257	6.68	6.70	6.73
6	153-163	105.9	4.4	3.21	0.259	NS	NS	NS
7	168-175	106.9	4.44	3.21	0.261	NS	NS	NS

a. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	21K103653

b. 1st Purge Time/Duration ~~0845/6mins~~ Purged on 9/26/22
c. 2nd Purge Time/Duration 0745 ~~0845~~/6mins
d. 3rd Purge Time/Duration 0845/6mins
e. 4th Purge Time/Duration 0945/6mins

Port	Time (24hrs)	Purge Time	pH	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	PID (ppm)	Color/Odor
1	1040	4	7.73	13.3	960	0.40	-120.6	0	NM	clear/none
2	Not Sampled									
3	1045	4	7.44	13.5	952	0.09	-110.3	0		
4	Not Sampled									
5	1050	4	7.43	14.3	889	0.01	-118.0	0		
6	Not Sampled									
7	Not Sampled									

3. SAMPLE COLLECTION:

Sample ID	Analysis	Time
22A-AE112R1-100622-1	VOCs	1120
22A-AE112R3-100622-1	VOCs	1130
22A-AE112R5-100622-1	VOCs, Total/Diss (Fe, Mn), Cl, SO4, NO2, NO3, S	1150
	TOC, gases (M, Ethe, Etha, Ace, Pr), Diss H, CSIA, Microbial	

Notes: Hydrogen - Start - 1400 / purge - 25mins / Sample - 1425

Signature FnB Date 10/6/22

AECOM

Well ID: **EMW-10D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/4/22 Time: Start 1300 am/pm
Project No: 60688023 Finish 1345 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Cloudy 55°F Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 29' c. Screen Length 10 (19' - 29') 2" PVC Casing
b. Water Table Depth 4.94 d. Pump Intake 24'
c. Water Column (a-b) 24.06 e. Calculated System Purge Volume 1.61 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Quatro Serial Number 20K103631

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1315		15.1	5.6	2238	0.47	119.9	3.99	180	5.0	Clear
1320		14.9	5.49	2285	0.28	122.2	2.09	180	5.0	
1325		14.7	5.49	2383	0.26	121.0	0.92		5.0	
1330		14.7	5.49	2385	0.18	120.0	0.45		5.0	
1335		14.7	5.48	2378	0.16	119.2	0.48			

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

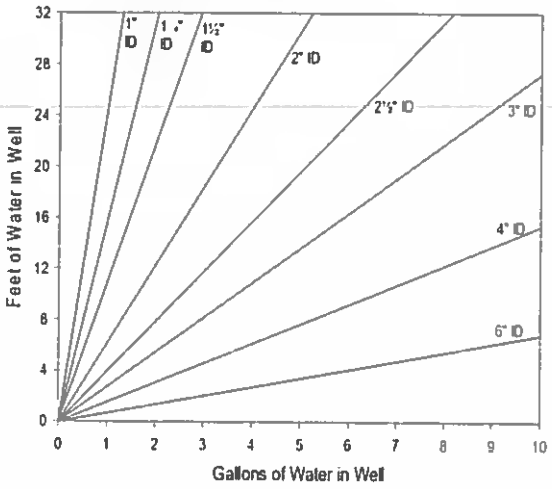
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-EMW10D-1	40mL VOA	3	HCL	VOCs 8260C	1345

Comments

Signature Rose Kelley Date 10/4/22

AECOM

Well ID: EMW-10D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[27 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.537 L ; 0.537 L x 3 well vol. = 1.61 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **GZA-6**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 1445 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): RLL

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 18' c. Screen Length 10 (8' - 18') 2" PVC
b. Water Table Depth 4.5' d. Pump Intake 13'
c. Water Column (a-b) 13.5' e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	20K101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1500		18.3	6.99	577	0.31	69.3	2.2	150	4.55	Clear
1505		17.7	6.48	536	0.09	82.9	0.02		4.56	
1510		17.6	6.38	534	0.02	82.8	0.02		4.56	
1515		17.7	6.38	532	0.0	81.4	0.02		4.56	
1520		17.7	6.36	529	0.0	81.0	0.02	↓	4.56	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

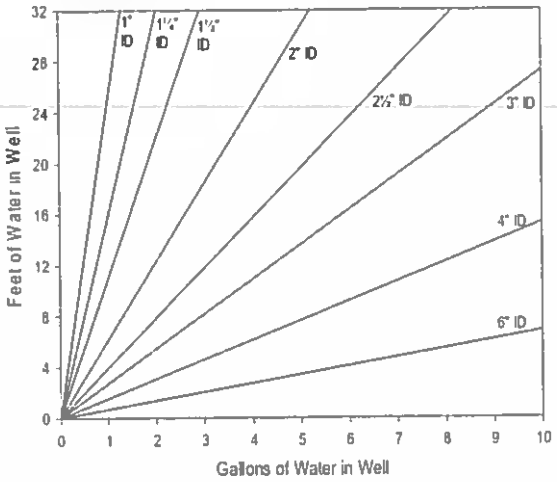
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-GZA6-00622-1	250mL P	1	HNO3	Total (As)	1530
	250mL P	1	HNO3	Diss.(As) FF	1530

Comments _____

Signature Rose Kelley Date 10/6/22

AECOM

Well ID: GZA-6



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[11 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.382 L ; 0.382 L x 3 well vol. = 1.15 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: GZA-10

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/4/22 Time: Start 1340 am/pm
Project No: 60688023 Finish 1436 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Cloudy 60F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 25' (13' - 38') 1.5" PVC
b. Water Table Depth 4.67 d. Pump Intake 25.5'
c. Water Column (a-b) 33.43 e. Calculated System Purge Volume 1.65 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProQuatro Serial Number 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1345	1	14.9	6.60	1758	5.54	82.7	20.72	200	0.01	Slight orange / none
1350	1	14.8	5.87	1737	0.49	127.7	9.82	200	0.01	Clear/none
1355	1	14.8	5.73	1678	0.47	131.9	2.20	200	0.01	Clear/none
1400	1	14.8	5.78	1530	0.28	119.2	0.52	200	0.01	Clear/none
1405	1	14.8	5.86	1379	0.27	90.5	0.79	200	0.01	Clear/none
1410	1	14.7	5.92	1293	0.20	69.9	0.66	200	0.01	Clear/none
1415	1	14.7	5.99	1238	0.18	54.8	0.69	200	0.01	Clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

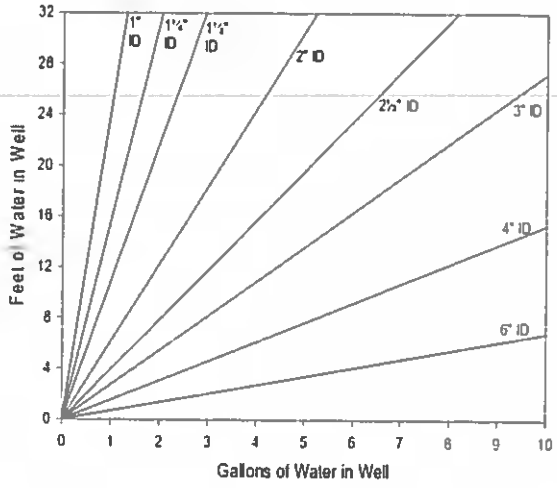
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A GZA10-10/4/22-1	250mL P	1	HNO3	Total (Fe, As, Mn)	1430
	250mL P	1	HNO3	Diss.(Fe, As, Mn) FF	

Comments

Signature [signature] Date 10/4/22

AECOM

Well ID: GZA-10



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[28.5 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.551 L ; 0.551 L x 3 well vol. = 1.65 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1420	1	14.7	6.62	1208	0.16	46.8	1.27	200	0.01	Clear/none
1425	1	14.7	6.03	1214	0.15	46.6	0.04	200	0.01	Clear/none
1430	1	14.7	6.04	1188	0.13	47.2	0.02	200	0.01	Clear/none

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: GZA-12

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/4/22 Time: Start 0845 am/pm
Project No: 60688023 Finish 1030 am/pm
Site Location: 50 Fordham Rd. Wilmington, MA
Weather Conds: Sunny 50°F Collector(s): RLC

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 24.5' c. Screen Length 15 (9.5' - 24.5') 2" PVC Casing
b. Water Table Depth 10.56' d. Pump Intake 17'
c. Water Column (a-b) e. Calculated System Purge Volume 1.40 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Quatro Pro	21k103631

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0900		15.2	6.29	2478	2.82	122.5	3.96	160	10.67	clear
0905		15.2	5.4	2641	1.64	137.8	3.09	160	10.68	↓
0910		15.1	5.27	2562	1.22	139.2	3.00	160	10.69	
0915		15.1	5.24	2573	1.27	140.8	2.63	↓	10.70	
0920		15.1	5.23	2575	1.22	141.6	2.28		10.76	
0926		14.9	5.23	2585	1.16	142.3	1.71		10.70	
0930		14.9	5.23	2588	0.96	142.8	1.71	↓	10.70	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

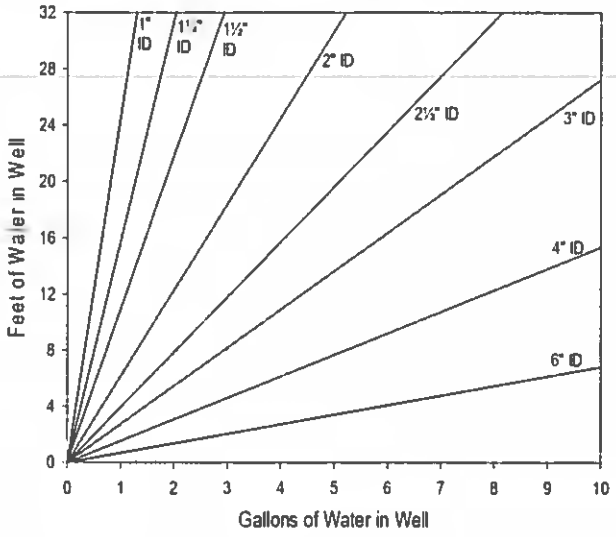
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-GZA12-____1	40mL VOA	3	HCL	VOCs 8260C	0930
	500 mL P	2	HNO3	Total & Diss. As, Fe, Mn	↓
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	250 mL A	1	H3PO4	TOC	
	40mL V	3	TSP	gases (Acet, Prop, Meth, Eth, Etha)	
	250 mL Amber	1	NaHSO4	1,4 dioxane	↓

Comments MS MSD

Signature Rose Kelley Date 10/4/22

AECOM

Well ID: GZA-12



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[20 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.469 L ; 0.469 L x 3 well vol. = 1.41 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **GZA-101R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/4/22 Time: Start 1100 am/pm
Project No: 60688023 Finish 1200 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Cloudy 50°F Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 2 (36' - 38') 0.55" PVC Casing
b. Water Table Depth 12.94 d. Pump Intake 37'
c. Water Column (a-b) 25.06' e. Calculated System Purge Volume 1.90 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Quatro Serial Number 21K103631

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1110		13.9	9.19	1660	1.84	116.5	13.7	160	12.94	clear
1115		13.7	8.60	2489	0.46	-99.8	13.3			
1120		13.8	7.15	2835	0.23	-106.5	2.45			
1125		13.8	6.99	2825	0.21	-96.7	1.10			
1130		13.9	6.95	2834	0.20	-93.3	1.66			
1135		13.7	6.87	2870	0.19	-86.6	1.03			

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below

(continued on back)

3. SAMPLE COLLECTION: Method grab

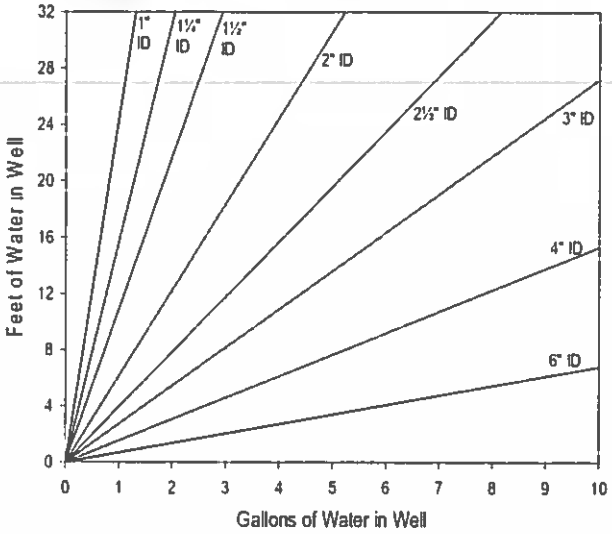
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-GZA101R-[illegible]-1	40mL VOA	3	HCL	VOCs 8260C	1145
	250 mL P	2	HNO3	Total & Diss. As, Fe, Mn	"

Comments

Signature Rose Kelley Date 10/4/22

AECOM

Well ID: GZA-101R



Volume / Linear Ft of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1 4688	5.5600

Purge Volume Calculation

[37 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.634 L ; 0.634 L x 3 well vol. = 1.90 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

Hydrogen Bubble Strip Sampling:

AECOM

Well ID: GZA-102S

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3 Time: Start 0845 am/pm
Project No: 60688023 Finish 1100 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 45°F Partly cloudy Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10 7' c. Screen Length 9' (1.7' - 10.7') 1.5" PVC Casing
b. Water Table Depth 6.29' d. Pump Intake 6.2'
c. Water Column (a-b) 4.41 e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Quatro Pro Serial Number 20A101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0910 [illegible]		17.2	7.11	338	0.63	67.1	2.59	160	6.91	clear
0915		17.5	6.81	437	0.15	-11.2	2.47	160	6.91	
0920		17.7	6.71	565	0.06	-21.7	1.78	160	6.92	
0925		17.6	6.68	677	0.05	-19.5	0.93		6.93	
0930		17.5	6.66	736	0.03	-17.1	1.23		6.95	
0935		17.8	6.66	801	0.03	-13.8	0.91		6.95	
0940		17.8	6.64	842	0.02	-10.7	0.60	↓	6.96	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

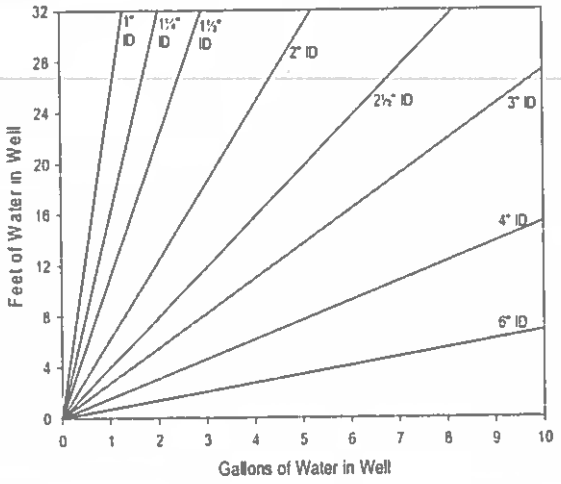
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-GZA102S-100922-1	40mL VOA	3	HCL	VOCs 8260C	1045
	1L A	3	HCl/None	EPH and PAH	
	40mL VOA	2	HCL	VPH	
	250 mL P	2	HNO3	Total/ Diss (Fe, Mn) FF	
	500 mL P	1	None	Cl, SO4, NO2, NO3	
	250 mL P	1	Zn Acetate	Sulfide	
	40 mL VOA	3	TSP	gases (m, ethe, etha, ace, pr)	
22A-GZA102S-100922-2	SAME AS ABOVE				↓

Comments

Signature Rose Kelley Date 10/3/22

AECOM

Well ID: GZA-102S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
0945		18.0	6.64	874	0.01	-8.8	0.29	160	6.96	Clear
0950		18.1	6.63	886	0.01	-7.2	0.26	160	6.96	↓
0955		18.1	6.62	900	0.0	-6.2	0.20	160	6.97	↓
1000		18.0	6.61	920	6.0	-3.0	0.02	160	6.97	↓
Hydrogen Bubble Strip Sampling:										
Purge rate=		Purge Duration=			Sample time=					

AECOM

Well ID: GZA-105D

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 1300 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 75F, Sunny Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 26' c. Screen Length 10 (16' - 26') 1.5" PVC Casing
b. Water Table Depth 5.75' d. Pump Intake 21'
c. Water Column (a-b) 20.25 e. Calculated System Purge Volume 1.52 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20k101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1325		19.5	7.26	2653	0.75	57.4	27.2	170	5.80	Clear
1330		19.3	6.80	2662	0.11	64.8	19.3		5.84	
1335		18.8	6.78	2671	0.06	62.6	18.7		5.84	
1340		18.9	6.78	2671	0.05	61.4	16.4		5.84	
1345		18.8	6.77	2676	0.03	61.0	11.2	↓	5.84	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method grab

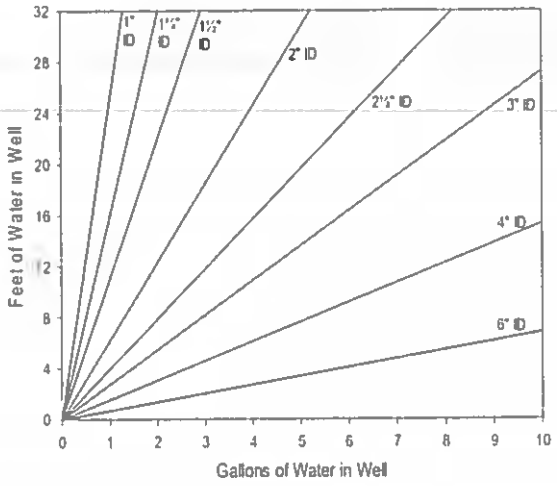
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-GZA105D-_____1	40mL VOA	6	HCL	VOCs 8260C, VPH	1350
	1L A	3	HCL(2), None	EPH and PAH	
	250 mL A	1	NaHSO4	1,4-dioxane	
	~~250mL A~~	~~2~~	~~NaOH~~	~~Total Sulfide~~	

Comments _____

Signature Rose Kelley Date 10/6/22

AECOM

Well ID: GZA-105D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[24 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.508 L ; 0.508 L x 3 well vol. = 1.52 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: GZA-105R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 0850 am/pm
Project No: 60688023 Finish 0950 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 60°F Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 36.5' c. Screen Length 2 (34.5' - 36.5') 0.5" PVC Casing
b. Water Table Depth 5.5' d. Pump Intake 35.5'
c. Water Column (a-b) 31 e. Calculated System Purge Volume 1.93 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Quatro Pro	20K101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
0900		17.2	8.52	1024	0.43	-60.7	1.62	100		clear
0905		16.6	8.14	1040	0.22	-84.4	1.56	100		
0910		16.4	8.08	1043	0.15	-85.9	1.32	100		
0915		16.5	8.01	1050	0.18	-80.8	0.46			
0920		15.7	7.93	1060	0.14	-70.5	0.85			
0925		15.7	7.9	1064	0.15	-64.0	0.37			
0930		15.9	7.9	1064	0.12	-59.7	0.02			

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

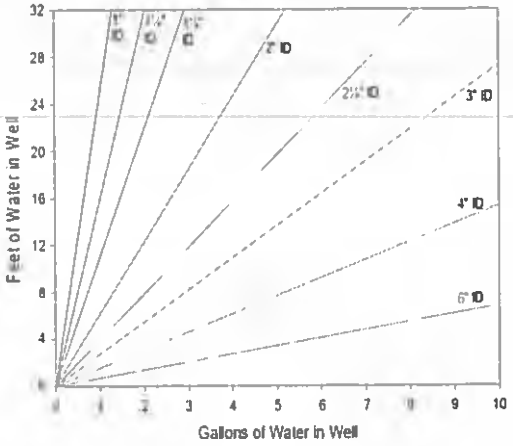
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-GZA105R-100622-1	40mL VOA	3	HCL	VOCs 8260C	0945

Comments

Signature Rose Kelley Date 10/6/22

AECOM

Well ID: GZA-105R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[38 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.644 L ; 0.644 L x 3 well vol. = 1.93 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
0935		16.0	7.89	1066	0.10	-55.1	0.28	100		Clear
0940										

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: GZA-105S

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 0910 am/pm
Project No: 60688023 Finish 1160 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: sunny 65°F Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 14' c. Screen Length 10 (4' - 14') 1.5" PVC Casing
b. Water Table Depth 5.82' d. Pump Intake 9'
c. Water Column (a-b) 8.18 e. Calculated System Purge Volume 1.17 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20K101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1610		20.8	7.32	2256	0.27	-81.6	0.30	100	5.88	Clear
1015		20.9	7.27	2250	0.44	-85.3	0.45		5.89	
1020		20.9	7.21	2248	0.05	-88.4	3.23		5.90	
1025		20.9	7.20	2258	0.09	-89.4	2.63		5.96	
1030		20.9	7.2	2258	0.63	-90.5	3.45		5.90	
1035		20.9	7.2	2256	0.06	-91.2	3.10		6.9	
1040										

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

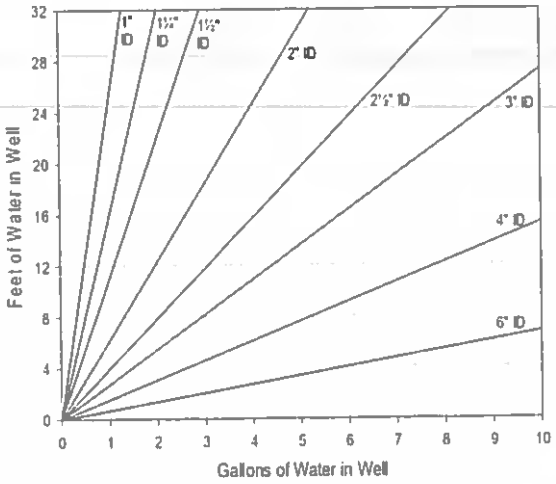
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-GZA105S-100622-1	40mL VOA	5	HCL	VOCs 8260C, VPH ✓	1045
	250mL P	1	HNO3	Total (As) ✓	
	250mL P	1	HNO3	Diss.(As) FF ✓	
	1L A	2	HCL(2), None	EPH and PAH	

Comments

Signature Rose Kelley Date 10/6/22

AECOM

Well ID: GZA-105S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[12 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.391 L ; 0.391 L x 3 well vol. = 1.17 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: IP-1R2

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp Date: 10/3/22 Time: Start 1420 am/pm
Project No: 60688023 Finish 1510 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Cloudy 60°F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 74' c. Screen Length 20 (54' - 74') 2" PVC Casing
b. Water Table Depth 5.66 d. Pump Intake 64'
c. Water Column (a-b) 68.34 e. Calculated System Purge Volume 2.77 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c Field Testing Equipment used. Make: YSI Model: ProQuatro Serial Number: 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1425	1	17.3	7.59	2068	0.28	-90.7	7.71	200	1.52	clear/sulfurous
1430	1	17.3	7.76	2065	0.19	-105.0	6.30	200	2.15	clear/none
1435	1	17.0	7.98	2060	0.15	-117.4	4.82	200	2.95	clear/none
1440	1	16.9	7.99	2058	0.12	-124.5	1.79	200	3.50	clear/none
1445	1	16.7	8.05	2049	0.11	-129.8	5.17	200	4.04	clear/none
1450	1	16.5	8.10	1991	0.10	-122.5	6.86	200	4.52	clear/none
1455	0.5	16.8	8.15	1941	0.10	-126.0	4.57	100	4.25	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

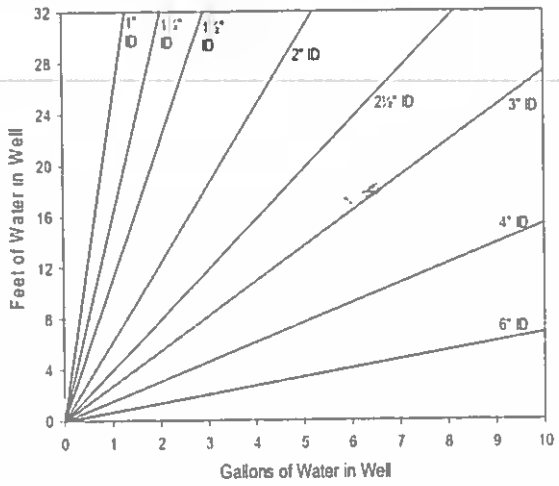
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-IP1R2-1003[illegible]-1	40mL VOA	3	HCL	VOCs 8260C	1510

Comments

Signature Kaleb Jones Date 10/3/22

AECOM

Well ID: IP-1R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[67 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.925 L ; 0.925 L x 3 well vol. = 2.77 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1500	0.5	16.7	8.16	1938	0.10	-122.0	6.22	100	4.11	Clear/none
1505	0.5	16.6	8.13	1932	0.10	-116.5	3.38	100	4.14	Clear/none
1510	0.5	16.5	8.06	1945	0.10	-112.5	1.14	100	4.22	Clear/none

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **MW-4A**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/30/22 Time: Start 0945 am/pm
Project No: 60688023 Finish 1035 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Collector(s): D Potter, K Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 48' c. Screen Length 10 (38' - 48') 1.5" PVC Casing
b. Water Table Depth 2.03 d. Pump Intake 43'
c. Water Column (a-b) e. Calculated System Purge Volume 2.16 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make: YSI Model: Quatro Serial Number: 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0945	1	10.0	7.42	1385	2.96	-62.9	N/M	200	0.01	clear/none
0950	2	9.9	6.57	1379	0.25	-48.8	N/M	200	0.01	clear/none
0955	3	9.9	6.46	1374	0.15	-49.5	N/M	200	0.01	clear/none
1000	4	9.9	6.45	1375	0.13	-49.8	N/M	200	0.01	clear/none
1005	5	9.9	6.43	1372	0.11	-50.1	N/M	200	0.01	clear/none
1010	6	9.9	6.42	1369	0.10	-50.4	N/M	200	0.02	clear/none
1025	7	9.8	6.42	1369	0.08	-50.7	0.02	200	0.03	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

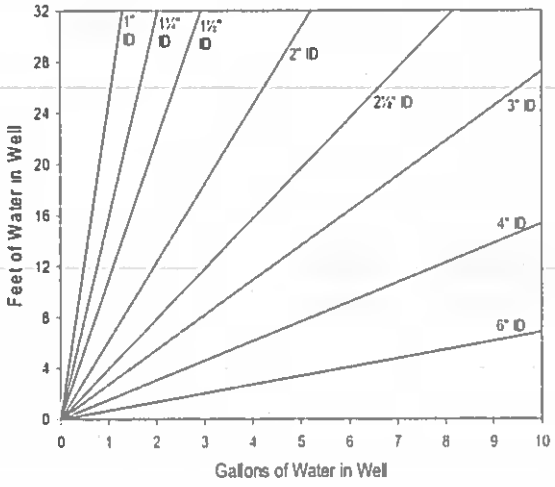
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-MW4A-1	40mL VOA	3	HCL	VOCs 8260C	1030/1035
	250mL P	1	HNO3	Total (As)	↓
	250mL P	1	HNO3	Diss.(As) FF	
	250 mL A	1	NaHSO4	1,4-dioxane	↓
22A-MW4A-2					

Comments

Signature Date 9/30/22

AECOM

Well ID: MW-4A



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[46 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.721 L ; 0.721 L x 3 well vol. = 2.16 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1930	8	9.9	6.42	1369	0.08	-50.7	0.02	200	0.03	clear/none
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **MW-5**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 1030 am/pm
Project No: 60688023 Finish 1115 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: sunny, 60s Collector(s): D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 38' c. Screen Length 10 (28' - 38') 1.5" PVC Casing
b. Water Table Depth 3.48 d. Pump Intake 33'
c. Water Column (a-b) e. Calculated System Purge Volume 1.87 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	21K103637
GeoTech		18043534

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1035	0.75	10.6	6.88	1130	0.48	-70.0	2.43	150	0.00	clear/none
1040	1.5	10.7	6.66	1049	0.37	-81.2	0.02	150	0.00	"
1045	2.1	10.7	6.53	984	0.32	-86.4	0.02	120	0.00	"
1050	2.7	10.6	6.44	913	0.28	-89.4	0.02	120	0.00	"
1055	3.3	10.6	6.41	884	0.26	-91.1	0.02	120	0.00	"
1100	3.9	10.6	6.39	862	0.23	-92.0	0.02	120	0.00	"
1105	4.5	10.6	6.38	854	0.21	-93.1	0.02	120	0.00	"

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

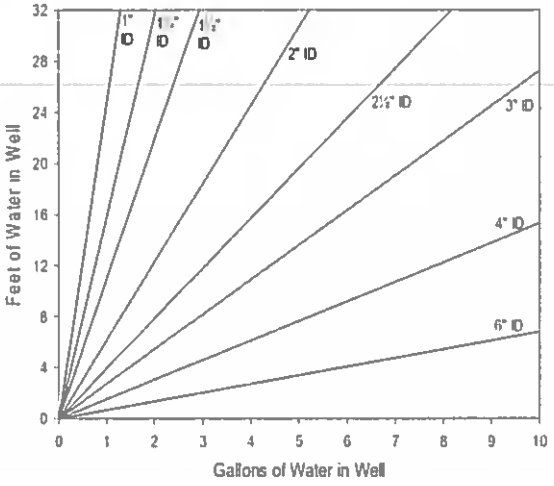
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-MW5-100322-1	40mL VOA	3	HCL	VOCs 8260C	1115

Comments

Signature [signature] Date 10/3/22

AECOM

Well ID: MW-5



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[36 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.624 L ; 0.624 L x 3 well vol. = 1.87 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1110	5.1	10.7	6.38	858	0.22	-93.6	0.02	120	0.00	clear/none

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: MW-7

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 1125 am/pm
Project No: 60688023 Finish 1210 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 60s, sunny Collector(s): D Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 25 c. Screen Length 10 (15' - 25') 1.5" PVC Casing
b. Water Table Depth 4.77 d. Pump Intake 17'
c. Water Column (a-b) e. Calculated System Purge Volume 1.49 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	ProQuatro	21K105837
GeoTech		18043534

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1140	2.25	13.4	5.57	1803	0.24	73.8	47.3	150	0.07	clear/none
1145	3	13.4	5.55	1844	0.20	74.8	40.2	150	0.07	"
1150	3.75	13.4	5.54	1871	0.18	74.4	43.0	150	0.07	"
1155	4.5	13.3	5.53	1891	0.18	73.9	28.8	150	0.07	"
1200	5.25	13.3	5.53	1909	0.19	73.3	26.5	150	0.07	"
1205	6	13.4	5.52	1930	0.20	72.7	26.0	150	0.07	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

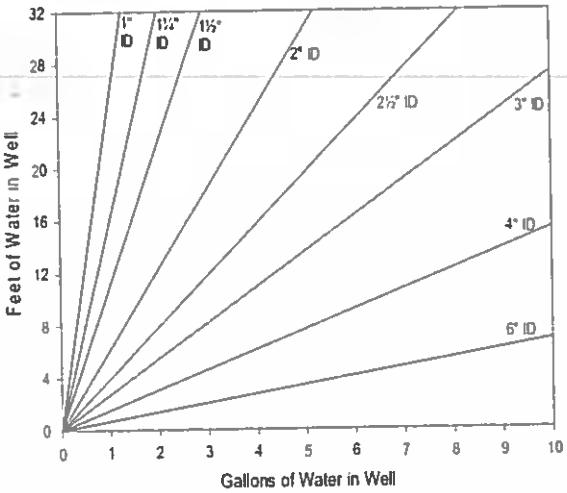
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-MW7-100322-1	40mL VOA	3	HCL	VOCs 8260C	1210

Comments

Signature [signature] Date 10/3/22

AECOM

Well ID: MW-7



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[23 ft (tubing length) x 0.0097 L/ft] + 0 275 L (flow cell vol.) = 0.498 L ; 0.498 L x 3 well vol. = 1.49 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: PS-1D

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1430 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 72°F Collector(s): K. Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 52.5' c. Screen Length 5 (49.25' - 54.25') 0.62" steel
b. Water Table Depth ~~38.74~~ 8.85 d. Pump Intake 52'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.43 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProQuatro	21K103644
	Geotech	Turbidimeter	21063328

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1105	1	11.4	3.97	2249	2.53	163.1	6.89	200	3.05	clear
1110	1	11.3	5.94	2159	0.29	[illegible]	2.63	200	3.05	clear
1115	1	11.3	5.93	2134	0.18	160.9	1.91	200	3.05	clear
1120	1	11.3	5.93	2126	0.13	185.5	0.19	200	3.05	clear
1125	1	11.3	5.93	2122	0.11	182.7		200		clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

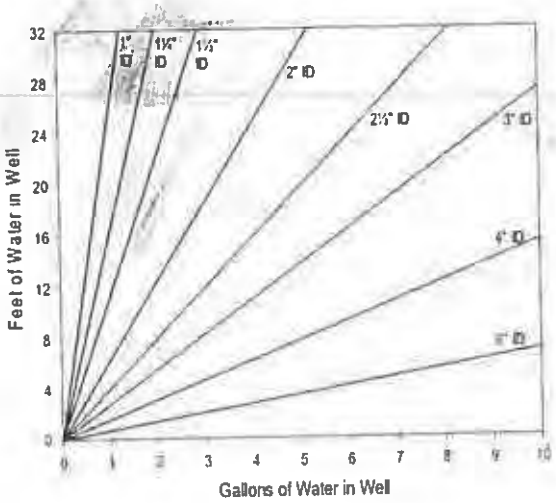
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-PS1D-092922-1	40mL VOA	3	HCL	VOCs 8260C	1505

Comments _____

Signature Kaleb Jones Date 9/30/22

AECOM

Well ID: PS-1D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[55 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.809 L ; 0.809 L x 3 well vol. = 2.43 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1435	1	12.3	6.86	1243	0.30	-101.5	17.3	200	8.90	clear
1440	1	11.4	6.82	1211	0.15	-97.5	14.0	200	8.82	clear
1445	1	12.1	6.77	1208	0.18	-93.3	42.0	200	9.10	clear
1450	1	12.1	6.77	1237	0.17	-96.9	34.3	200	9.12	clear
1455	1	12.3	6.76	1241	0.17	-86.5	27.6	200	9.07	clear
1500	1	12.0	6.74	1246	0.15	-74.1	19.8	200	8.97	clear

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: ~~AE106M~~ PS-1M

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1520 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 75°F Collector(s): K. Jones

1. **WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)**
   a. Total Well Length 40.4 ~~39.9~~ c. Screen Length ~~5 (22.5 - 27.5')~~ 5 (34.25 - 39.25') ~~2" PVC Casing~~ 0.623" steel
   b. Water Table Depth 4.05' d. Pump Intake ~~39~~ 37'
   c. Water Column (a-b) _____ e. Calculated System Purge Volume _____ (calculation on page 2)

2. **WELL PURGE DATA**
   a. Purge Method: peristaltic pump
   b. Acceptance Criteria defined (see workplan)
   - Temperature 3% - D.O. < 0.5 mg/L -Drawdown <0.3 ft
   - pH ± 1.0 unit >0.5 mg/L within 10% -Turbidity <10 NTU
   - Sp. Cond. 3% - ORP ± 10mV >10NTU within 10%
   c. Field Testing Equipment used: Make YSI GeoTech Model ProQuatro Serial Number 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1525	1	12.6	6.73	1658	6.14	-224.5	22.9	200	4.06	Clear
1530	1	11.4	7.12	1831	0.05	-242.1	21.6	200	4.06	Clear
1535	1	11.7	6.75	1805	0.91	-87.6	4.73	200	3.81	Clear
1540	1	11.7	6.46	1873	2.63	-18.6	4.74	200	4.01	Clear
1545	1	11.7	6.44	1871	2.80	-14.2	0.89	200	4.03	Clear
1550	1	11.5	6.39	1856	1.01	-6.5	0.01	200	4.04	Clear
1555	1	11.5	6.37	1858	0.88	-3.1	0.02	200	4.04	Clear

(continued on back)

   d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

   If no or N/A - Explain below.

3. **SAMPLE COLLECTION:** Method: grab

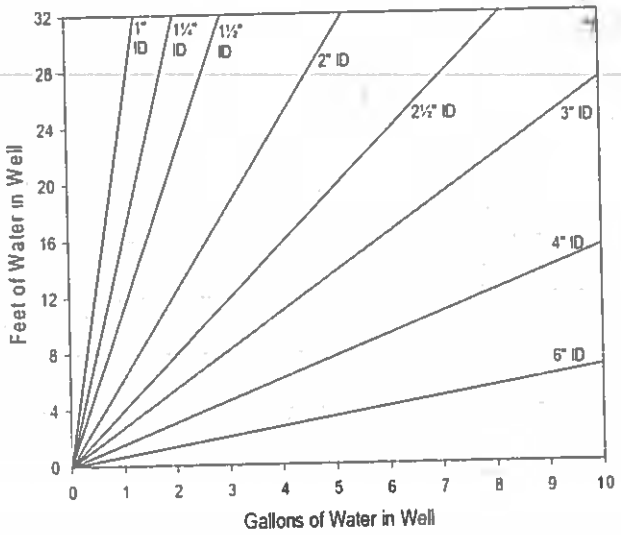
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-AE106M- -1	40mL VOA	3	HCL	VOCs 8260C	
	250 mL P	2	HNO3	Total/ Diss (Fe, Mn) FF	
	500 mL P	1	None	Cl, SO4, NO2, NO3	
	250 mL P	1	Zn acetate	Sulfide	
	250 mL A	1	H3PO4	TOC	
	40 mL VOA	3	TSP	gases (M, ethe, etha, ace, pr)	
22A-AE106M- -2					

Comments 22A-PS1M-092922-1 VOCs 8260C 1625

Signature Kaleb Jones Date 9/29/22

Well ID: PS-1M

AECOM



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0 0408	0 1544
1.25	0.0637	0 2413
1.5	0.0918	0.3475
2	0.1632	0 6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[(tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = L; L x 3 well vol. =

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Co or/Odor
1600	1	11.9	6.35	1853	0.91	-0.7	0.02	200	4.05	clear
1605	1	11.5	6.32	1850	0.58	-0.1	0.25	200	4.05	clear
1610	1	11.3	6.28	1851	0.42	1.4	2.15	200	4.06	clear
1615	1	11.3	6.24	1850	0.33	1.6	0.69	200	4.06	clear
1620	1	11.2	6.22	1848	0.34	2.4	0.51	200	4.07	clear

Hydrogen Bubble Strip Sampling:

Purge rate=

Purge Duration=

Sample time=

AECOM

Well ID: PS-3

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/30/22 Time: Start 1100 am/pm
Project No: 60688023 Finish 1130 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Collector(s): DP / KJ

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.14' c. Screen Length 5 (2.7' - 7.7') 0.62" steel
b. Water Table Depth 1.15 d. Pump Intake 5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.06 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model ProQuatro Serial Number 21K103644

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1105	1	13.3	6.34	627	7.64	-28.9	11.9	200	0.90	clear /
1110	1.6	13.2	6.26	470	6.41	-4.8	6.65	120	0.93	"
1115	2.2	13.2	6.20	415.8	7.48	7.3	2.15	120	0.99	"
1120	2.8	13.2	6.19	413.9	7.48	8.7	0.02	120	1.10	"
1125	3.4	13.2	6.16	408.8	7.44	10.5	0.02	120	1.10	"

1125 small ↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

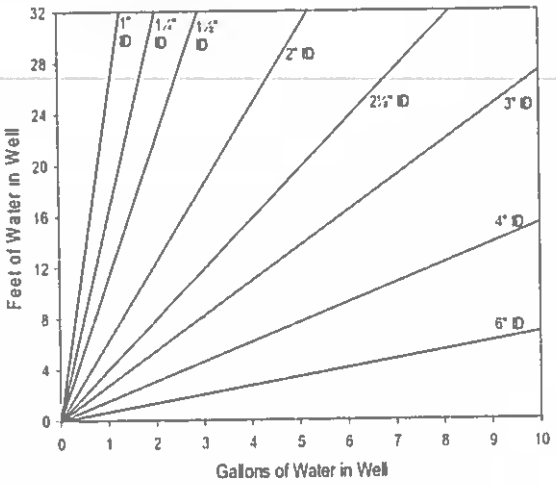
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-PS3-093022-1	40mL VOA	3	HCL	VOCs 8260C	1130

Comments Air coming out of well

Signature Michelle Jones Date 9/30/22

AECOM

Well ID: PS-3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1 3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[8 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.353 L ; 0.353 L x 3 well vol. = 1.06 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **PS-5D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/30/22 Time: Start 1145 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: sunny, 60s Collector(s): D Potter, K Jones

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 29.1' c. Screen Length 5 (24.1' - 29.1') 0.62" steel
b. Water Table Depth 10.40 d. Pump Intake 26.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.67 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model _____ Serial Number _____

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1150	N/A	13.0	7.12	305.6	1.19	-91.9	10.9	N/A	N/A	clear/~~non~~ slight H_2S

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☐	☐	☑

If no or N/A - Explain below.
low-yield

3. SAMPLE COLLECTION: Method: grab

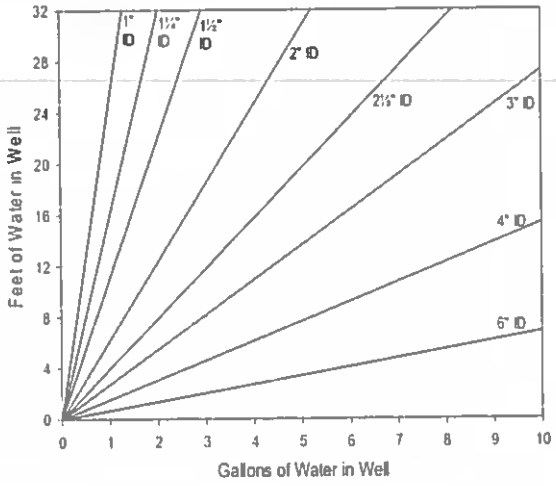
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-PS5D-1	40mL VOA	3	HCL	VOCs 8260C	1150

Comments Low-yield well. Purged dry on 9/29/22 @ 1735

Signature _____ Date _____

AECOM

Well ID: PS-5D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[29 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.556 L ; 0.556 L x 3 well vol. = 1.67 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: **PS-8D**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1559 am/pm
Project No: 60688023 Finish 1630 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny, 70 Collector(s): D. Potter

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 56.8' c. Screen Length 5 (51.8' - 56.8') 0.62" steel
b. Water Table Depth 6.10 d. Pump Intake 57'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.48 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	Quatro	21A13637
	GeoTech		1804353 4

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1600	2	10.7	6.37	355.7	0.58	1.7	0.61	200	0.10	Clear/none
1605	3	10.7	6.23	338.8	0.61	24.8	0.02	200	0.11	"
1610	4	10.7	6.15	336.2	0.64	37.0	0.02	200	0.11	"
1615	5	10.7	6.09	336.3	0.64	45.1	0.02	200	0.11	"
1620	6	10.6	6.06	337.9	0.64	49.4	0.02	200	0.11	"
1625	7	10.6	6.04	337.4	0.67	57.1	0.02	200	0.11	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

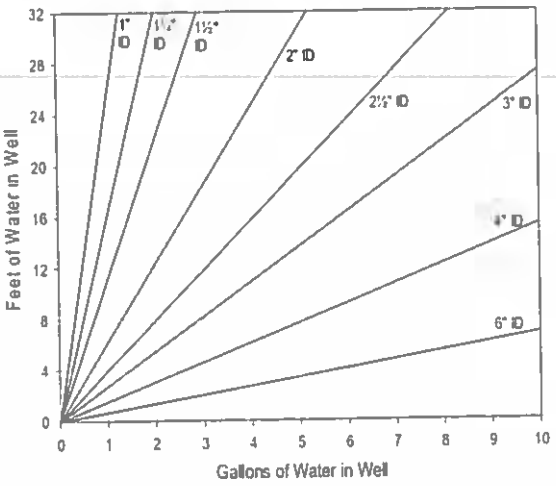
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-PS8D- -1	40mL VOA	3	HCL	VOCs 8260C	1630
	250mL P	1	HNO3	Total (As)	↓
	250mL P	1	HNO3	Diss.(As) FF	↓

Comments _____

Signature _____ Date 9/29/22

AECOM

Well ID: PS-8D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0 375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0 0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0 3672	1.3900
4	0.6528	2.4711
6	1.4688	5 5600

Purge Volume Calculation

[57 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.828 L ; 0.828 L x 3 well vol. = 2.48 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: PZ-2S

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3 Time: Start 0830 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: _____ Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 8.55' c. Screen Length 5' (3.55' - 8.55') 4" PVC Casing
b. Water Table Depth 6.25' d. Pump Intake 6'
c. Water Column (a-b) 2.3' e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Quatro Pro	20k101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1130		18.3	6.71	790	0.84	-33	5.03	100	6.62	Clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☐	☑	☐

(continued on back)

If no or N/A - Explain below.
low yield well

3. SAMPLE COLLECTION: Method: grab

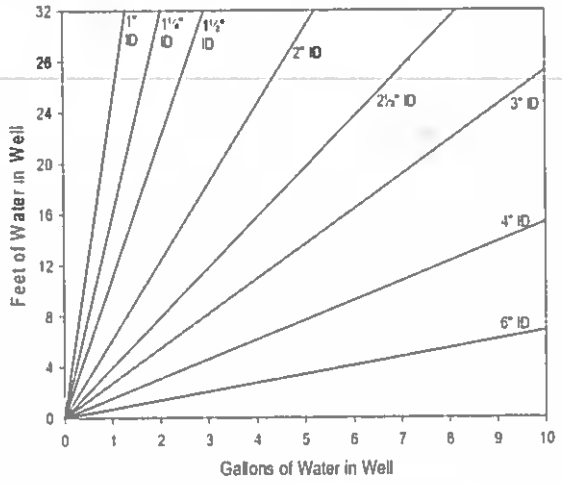
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-PZ2S-____-1	1L A	3	HCL/None	EPH and PAH	1145
	40mL VOA	3	HCL	VPH	1145

Comments purged dry, ~2 gallons

Signature Reese Kelley Date 10/3/22

AECOM

Well ID: PZ-2S



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0 275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: **STM-8D**

Low Flow Ground Water Sample Collection Record

1005

Client: Lockheed Martin Corp.	Date: 10/6/22	Time: Start 1005	am/pm
Project No: 60688023		Finish 1030	am/pm
Site Location: 50 Fordham Rd, Wilmington, MA			
Weather Conds: Sunny 70's	Collector(s): Sean Haggett		

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 39.7' c. Screen Length 5 (34.7' - 39.7') 1" PVC Casing

b. Water Table Depth 5.98 d. Pump Intake 37.2'

c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.99 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	
geotech	turbidimeter	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1005	1	13.0	6.47	913	0.29	23.9	6.81	200	5.97	clear/none
1010	2	13.1	6.15	953	0.24	44.2	4.92	200	5.97	" "
1015	3	13.3	6.10	953	0.23	48.2	3.38	200	5.97	" "
1020	4	13.4	6.09	953	0.22	50.7	2.17	200	5.97	" "
1025	5	13.4	6.08	952	0.22	51.4	2.91	200	5.97	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

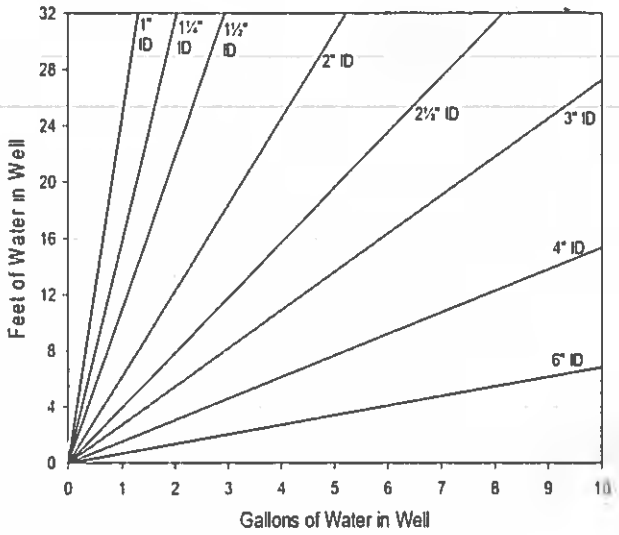
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-STM8D-100622-1	40mL VOA	3	HCL	VOCs 8260C	1030
	250 mL Amber	1	NaHSO4	1,4 dioxane	

Comments _____

Signature _____ Date 10/6/22

AECOM

Well ID: STM-8D



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[40 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.663; 0.663 L x 3 well vol. = 1.99 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **STM-8R**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp Date: 10/6/22 Time: Start 0920 am/pm
Project No: 60688023 Finish 0950 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 51.5' c. Screen Length 5 (46.6' - 51.5') 1" PVC Casing
b. Water Table Depth 6.03 d. Pump Intake 49'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 2.32 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make / Model / Serial Number
YSI Pro Quatro
geotech turbidimeter

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0920	1	13.6	7.76	530	0.45	-78.5	9.76	200	8.51	clear/none
0925	2	13.8	7.43	530	0.30	-66.8	3.91	200	8.11	" "
0930	3	13.8	7.35	529	0.25	-57.4	4.49	200	7.94	" "
0935	4	13.7	7.30	519	0.23	-48.1	2.76	200	7.92	" "
0940	5	13.7	7.29	518	0.23	-46.6	2.31	200	7.90	" "
0945	6	13.7	7.29	517	0.22	-45.1	1.66	200	7.89	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

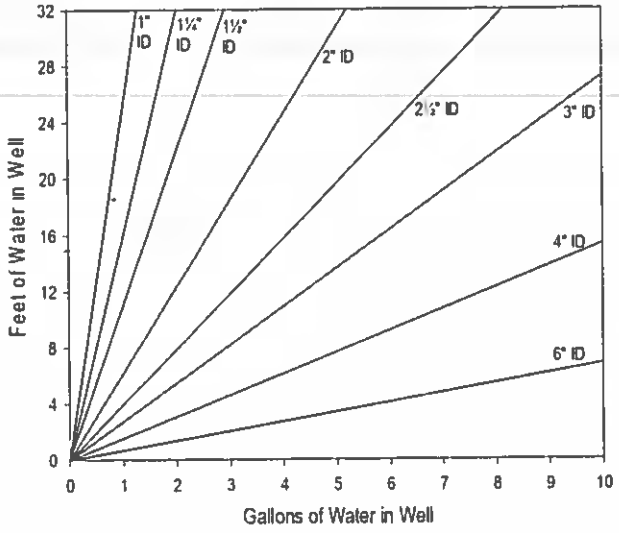
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-STM8R-100622-1	40mL VOA	3	HCL	VOCs 8260C	0950
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	250mL P	2	HNO3	Total & Diss. (Fe, Mn)	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	40mL V	3	TSP	gases (Acet, Prop, Meth, Eth, Etha)	
	250 mL A	1	H3PO4	TOC	

Comments _____

Signature _____ Date 10/6/22

AECOM

Well ID: STM-8R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0 3672	1 3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[51.5 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.7746; 0.7746 L x 3 well vol. = 2.32 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **STM8-R1**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 1100 am/pm
Project No: 60688023 Finish 1130 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggadt

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 92' c. Screen Length 5 (85' - 90') 2" PVC Casing
b. Water Table Depth 15.91 d. Pump Intake 87.5'
c. Water Column (a-b) e. Calculated System Purge Volume 3.44 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump (purge well down to top of screen using submersible pump)

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Serial Number

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (uS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1100	NA	15.0	7.42	494	2.51	80.3	9.76	NA	NA	Clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

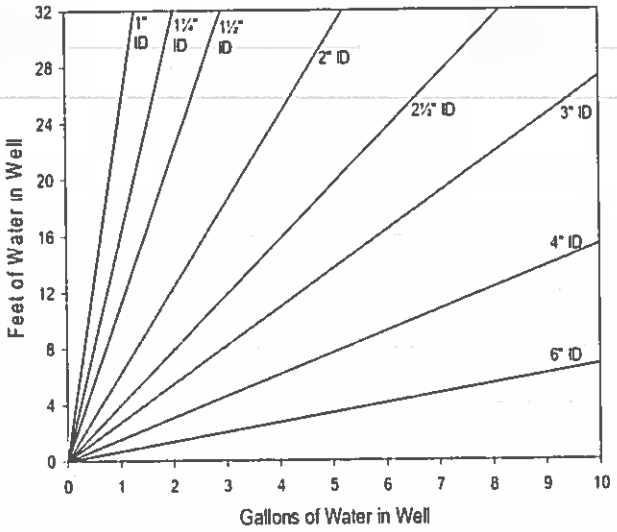
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-STM8R1- -1	40mL VOA	10	HCL	VOCs 8260C, CSIA 13C/12C	1100
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	40mL V	3	TSP	gases (Acet, Prop, Meth, Eth, Etha)	
	250 mL Amber	1	NaHSO4	1,4 dioxane	
	250mL P	2	HNO3	Total & Diss (Fe, As, Mn)	
	250 mL A	1	H3PO4	TOC	
	vial	1	none	Diss. Hydrogen	1100 - 1115

Comments: Due to excessive drawdown, purge water level down to 85 ft using pump and allow to recharge prior to collecting sample.
Hydrogen = 210 ml/min 15 mins

Signature Date 10/6/22

AECOM

Well ID: STM-8R1



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0 0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0 9653
3	0 3672	1.3900
4	0.6528	2.4711
6	1.4688	5 5600

Purge Volume Calculation

[90 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.148; 1.148 L x 3 well vol. = 3.44 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **TRC-101**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/3/22 Time: Start 1330 am/pm
Project No: 60688023 Finish _____ am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 50's Clouds Collector(s): FB

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 10.5' c. Screen Length 10 (1.5' - 10.5') 1.25" PVC
b. Water Table Depth 6.23 d. Pump Intake 6.5'
c. Water Column (a-b) _____ e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro	21K103653

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1340	0	21.5	6.60	2698	0.53	-49.8	6.2	200	0	clear/none
1345	1	21.7	6.52	2757	0.15	-55.6	2.3	200	0	"
1350	2	21.7	6.52	2763	0.13	-55.4	2.3	200	0	"
1355	3	21.7	6.52	2762	0.13	-55.2	2.2	200	0	"

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

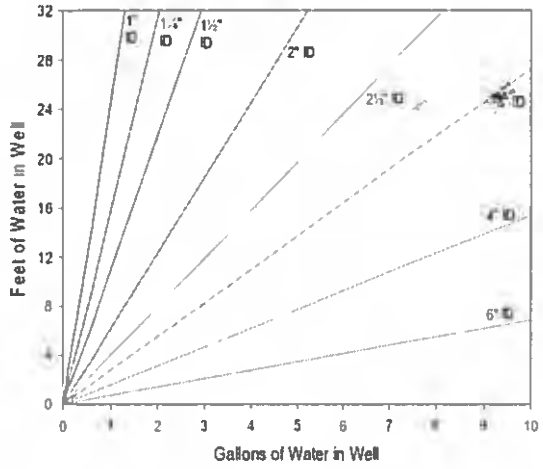
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-TRC101-100322					1400
	40mL V	3	HCL	VPH	
	1L A	3	HCL/None	EPH and PAH	

Comments

Signature FmBE Date 10/3/22

AECOM

Well ID: TRC-101



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

AECOM

Well ID: **TRC-102**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/30/22 Time: Start 1215 am/pm
Project No: 60688023 Finish 1330 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 75°F Sunny Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 12.25' c. Screen Length 10 (2.25' - 12.25') 1.25" PVC
b. Water Table Depth 4.88 d. Pump Intake 7.25'
c. Water Column (a-b) 7.37 e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model YSI QuatroPro Serial Number 20L101673

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1230		21.4	6.19	2913	0.73	-12.6	174	190	5.2	orange tint
1235		21.4	6.15	2505	0.64	-12.7	116	190	5.2	↓
1240		21.2	6.08	2532	0.32	-15.9	58	190	5.2	↓
1245		21.2	6.08	2595	0.26	-12.1	47.4	190	5.2	↓
1250		21.2	6.06	2494	0.15	-12.3	36.2	190	5.2	↓
1255		21.2	6.05	2482	0.10	-13.2	27.9	190	5.2	Clear
1300		21.2	6.05	2489	0.05	-14.3	14.4	190	5.2	Clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: grab

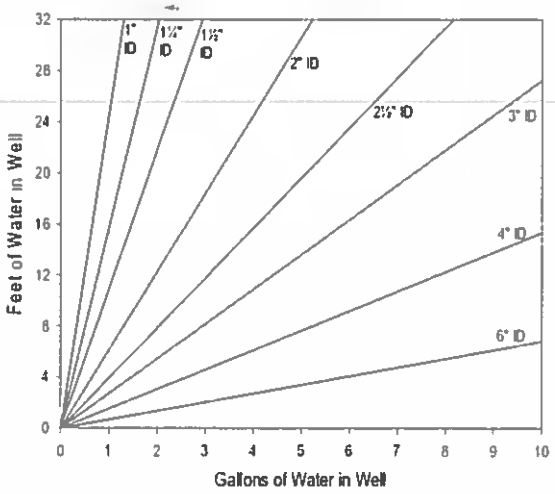
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-TRC102-[redacted]1	40mL VOA	3	HCL	VOCs 8260C	1315
	40mL V	3	HCL	VPH	
	1L A	3	HCL(2), None	EPH	
	250mL P	1	HNO3	Total (As)	
	250mL P	1	HNO3	Diss. (As) FF	

Comments

Signature Rose Kelley Date 9/30/22

AECOM

Well ID: TRC-102



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1305		21.1	6.05	2489	0.06	-15.4	10.5	170	5.2	Clear
1310		21.1	6.05	2488	0.04	-16.2	8.3	190	5.2	Clear
1315	8.55	21.1	6.05	2491	0.03	-16.9	7.7	190	5.2	Clear

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: **TRC-103**

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/30/22 Time: Start 0900 am/pm
Project No: 60688023 Finish 1180 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: Sunny 50°F Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 11.25' c. Screen Length 10 (1.25' - 11.25') 1.25" PVC
b. Water Table Depth 5.9 d. Pump Intake 6.25'
c. Water Column (a-b) 5.35 e. Calculated System Purge Volume 1.12 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3%
- pH ± 1.0 unit
- Sp. Cond. 3%
- D.O. < 0.5 mg/L; >0.5 mg/L within 10%
- ORP ± 10mV
- Drawdown <0.3 ft
- Turbidity <10 NTU; >10NTU within 10%

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	Pro Quatro	20H101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0930		22.5	6.81	2503	0.32	-116.8	84.6	160	6.08	light brown
0935		22.4	6.63	2448	0.11	-112.9	80.2	160	6.09	↓
0940		22.3	6.55	2420	0.02	-103.7	76.3	160	6.09	
0945		22.4	6.53	2414	0.01	-102.3	66.3	160	6.09	
0950		22.4	6.52	2381	0.00	-96.2	93.9	160	6.09	
0955		22.2	6.52	2232	0.00	-90.5	172	160	6.09	
1000		22.2	6.50	2350	0.00	-88.4	166	160	6.09	↓

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

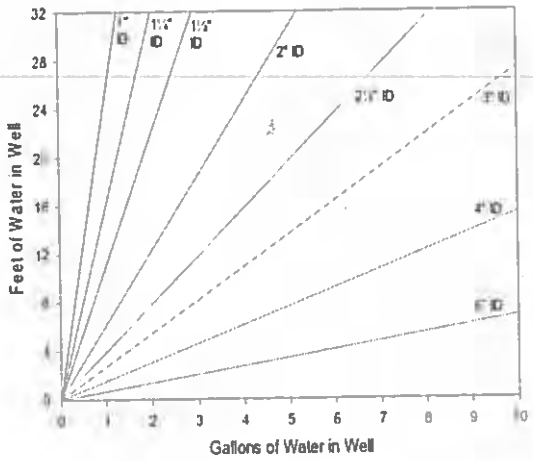
Sample ID 22A-TRC103-____-1	Container Type	No.	Preservation	Analysis Req.	Time 1115
	40mL V	3	HCL	VPH	
	1L A	2	HCL/None	EPH and PAH	↓

Comments

Signature Rose Kelley Date 9/30/22

AECOM

Well ID: TRC-103



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[10 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 0.372 L ; 0.372 L x 3 well vol. = 1.12 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1005		22.3	6.5	2347	0.6	-85.7	100	160	6.09	light brown
1010		22.4	6.49	2346	0.0	-83.5	85.9	160	6.09	↓
1015		22.4	6.48	2346	0.0	-68.4	59.8	160	6.09	
1020		22.3	6.48	2346	0.0	-70.5	34.4	160	6.09	↓
1025		22.3	6.47	2351	0.0	-73.2	33.7	160	6.09	Tinted
1030		22.2	6.46	2350	0.0	-72.7	29.0	160	6.09	
1035		22.2	6.46	2350	0.0	-72.3	22.3	160	6.09	
1040		22.4	6.46	2352	0.0	-72.3	20.6	160	6.09	↓
1045		22.4	6.45	2351	0.0	-71.9	18.1	160	6.09	Clear
1050		22.4	6.45	2352	0.0	-71.2	16.9	160	6.09	
1055		22.4	6.45	2356	0.0	-70.4	14.5	160	6.09	
1100		22.4	6.45	2356	0.0	-70.4	13.0	160	6.09	
1105		22.4	6.44	2357	0.0	-69.1	12.3	160	6.09	
1110	16.64	22.4	6.44	2357	0.0	-68.8	12.8	160	6.09	↓

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=

AECOM

Well ID: TRC-201R

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 10/6/22 Time: Start 1350 am/pm
Project No: 60688023 Finish 1426 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: Sunny 70's Collector(s): Sean Haggett

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 169.11 c. Screen Length open bedrock 4.75" open bedrock
b. Water Table Depth 8.26 d. Pump Intake 111.5'
c. Water Column (a-b) e. Calculated System Purge Volume 4.17 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: Bladder pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	ProQuatro	
	geotech	turbidimeter	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1350	1	18.3	7.55	947	0.36	42.1	10.78	200	8.26	clear/none
1355	2	18.4	7.57	964	0.31	-19.7	6.31	200	8.26	" "
1400	3	18.5	7.59	979	0.26	[illegible]	6.11	200	8.26	" "
1405	4	18.3	7.61	984	0.21	-19.9	4.38	200	8.26	" "
1410	5	18.2	7.63	987	0.20	-20.4	3.94	200	8.26	" "
1415	6	18.3	7.62	989	0.21	-22.6	2.66	200	8.26	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

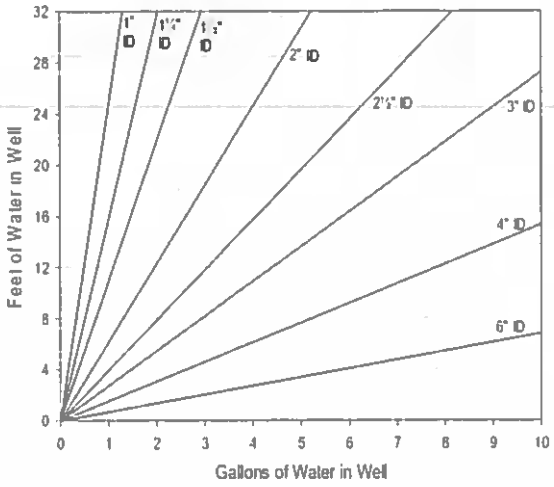
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-TRC201R-100622-1	40mL VOA	3	HCL	VOCs 8260C	1420

Comments

Signature Date 10/6/22

AECOM

Well ID: TRC-201R



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[115 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.39 L ; 1.39 L x 3 well vol. = 4.17 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: TRC-301R1

Low Flow Ground Water Sample Collection Record

RK 1630

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start ~~1635~~ am/pm
Project No: 60688023 Finish ~~1705~~ 1730 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70°F Sunny Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 103' c. Screen Length 4 (96.5' - 100.5') 0.5" CMT Channel
b. Water Table Depth 3.05' d. Pump Intake 98.5'
c. Water Column (a-b) 99.95' e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Quatro Serial Number 20K101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1635		11.7	7.70	757	3.32	-39.8	20.8	180		Clear
1640		11.3	7.4	749	0.58	-68.2	34.3	180		Clear
1645		11.3	7.46	747	0.48	-79.2	5.71	180		Clear
1650		11.3	7.56	749	0.38	-99.9	6.36	180		Clear
1655		11.2	7.6	748	0.33	-107.8	0.76	180		Clear
1700		11.2	7.62	748	0.30	-111.4	0.02	180		Clear
1705	5.406	11.2	7.64	748	0.26	-114.9	0.02	180		Clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

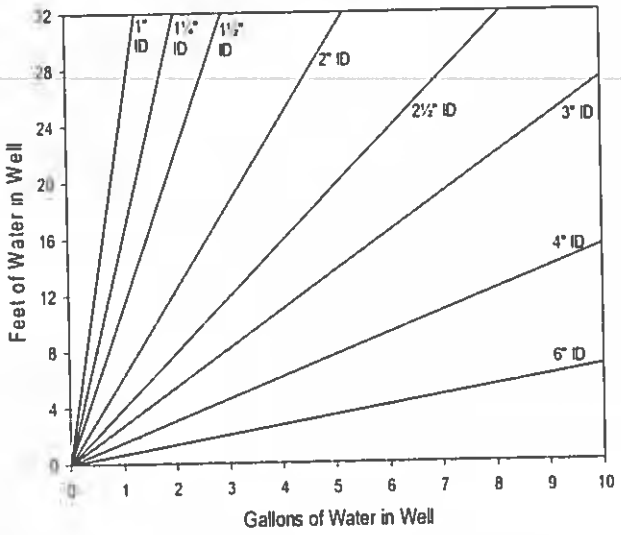
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A TRC301R1 ____ 1	40mL VOA	3	HCL	VOCs 8260C	1710

Comments

Signature Rea Kelly Date 9/29/22

AECOM

Well ID: TRC-301R1



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
Hydrogen Bubble Strip Sampling:										
Purge rate=				Purge Duration=			Sample time=			

AECOM

Well ID: TRC-301R2

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1525 am/pm
Project No: 60688023 Finish 1615 am/pm
Site Location: 50 Fordham Rd. Wilmington, MA
Weather Conds: 70°F Sunny Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 85.5' c. Screen Length 4 (81.5' - 85.5') 0.5" CMT Channel
b. Water Table Depth 6.69 d. Pump Intake 83.5'
c. Water Column (a-b) 78.81 e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	±1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Pro Quatro Serial Number 20K101870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1530		11.5	7.56	755	1.09	-71.5	0.37	180		Clear
1535		11.4	7.5	745	0.96	-72.4	0.02	180		Clear
1540		11.3	7.44	707	0.78	-79.4	0.02	180		Clear
1545		11.3	7.49	678	0.62	-100.1	0.02	180		Clear
1550		11.2	7.57	682	0.52	-112.4	0.02	180		Clear
1555		11.3	7.63	656	0.45	-120.5	0.02	180		Clear
1600		11.2	7.65	645	0.42	-122.2	0.02	180		Clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

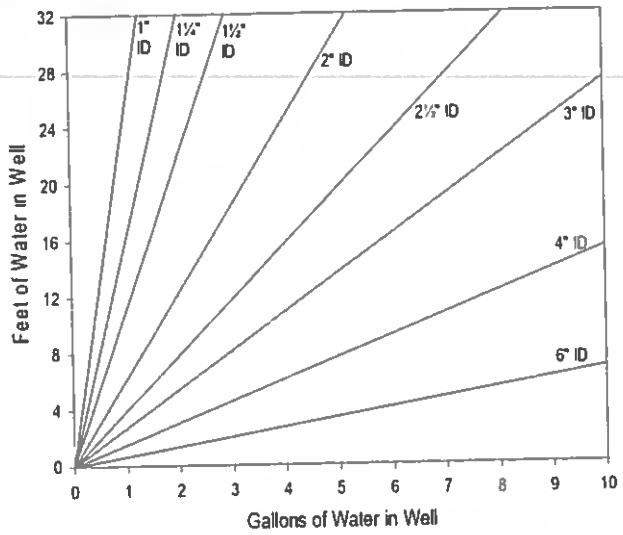
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-TRC301R2-[ ]-1	40mL VOA	3	HCL	VOCs 8260C	1615

Comments

Signature Rose Kelley Date 9/29/22

AECOM

Well ID: TRC-301R2



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0 0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1605	6.3	11.2	7.67	645	0.38	-125.8	0.02	180		Clear

AECOM

Well ID: TRC-301R3

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/21 Time: Start 1405 am/pm
Project No: 60688023 Finish 1515 am/pm
Site Location: 50 Fordham Rd Site, Wilmington, MA
Weather Conds: 70°F Sunny Collector(s): RL

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 79.5' c. Screen Length 4 (75.5' - 79.5') 0.5" CMT Channel
b. Water Table Depth 3.13 d. Pump Intake 77.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1.29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0.5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Serial Number

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1420		12	7.13	860	1.77	-46.8	0.02	190		Clear
1425		11.8	7.41	882	0.83	-70.6	0.02	190		Clear
1430		11.8	7.63	847	0.66	-122.9	0.02	190		Clear
1435		11.6	7.81	784	0.51	-141.9	0.02	190		Clear
1440		11.6	7.86	756	0.47	-146.4	0.02	190		Clear
1445		11.4	7.9	723	0.43	-152.1	0.02	190		Clear
1450		11.5	7.94	701	0.38	-156.6	0.02	190		Clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

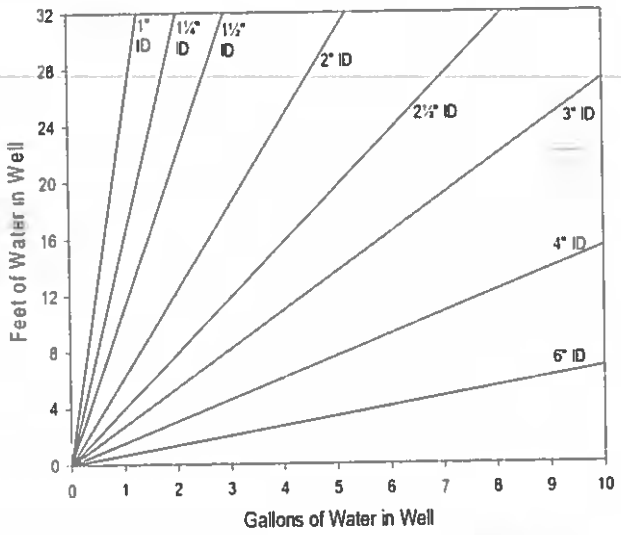
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-TRC301R3 1	40mL VOA	3	HCL	VOCs 8260C	1520

Comments

Signature Date

AECOM

Well ID: TRC-301R3



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0 1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1455		11.5	7.98	685	0.34	-157.8	0.02	190		Clear
1500		11.5	8.00	674	0.31	-159.6	0.02	190		Clear
1505		11.3	8.01	661	0.28	-160.7	0.02	190		Clear
1510	9.5	11.3	8.02	655	0.27	-160.8	0.02	190		Clear

CHEMetrics Kit Results:

Parameter	Kit ID	Range	Time	Results (ppm)
Manganese	K-6502	0-2 ppm		
Manganese	K-6502D	0-60 ppm		
Total Iron	K-6210	0-10 ppm		
Soluble Iron	K-6210	0-10 ppm		
Total Iron	K-6210D	0-300 ppm		x1.5=
Soluble Iron	K-6210D	0-300 ppm		

Hydrogen Bubble Strip Sampling:

Purge rate=	Purge Duration=	Sample time=	

AECOM

Well ID: TRC-301R4

Low Flow Ground Water Sample Collection Record

Client: Lockheed Martin Corp. Date: 9/29/22 Time: Start 1030 am/pm
Project No: 60688023 Finish 1145 am/pm
Site Location: 50 Fordham Rd, Wilmington, MA
Weather Conds: 70°F Sunny Collector(s): RK

1. WELL & WATER LEVEL DATA: (measured in feet from Top of Casing unless noted)

a. Total Well Length 69.5' c. Screen Length 4 (65 5' - 69.5') 0.5" CMT Channel
b. Water Table Depth 3.05 d. Pump Intake 67.5'
c. Water Column (a-b) e. Calculated System Purge Volume 1 29 L (calculation on page 2)

2. WELL PURGE DATA

a. Purge Method: peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	< 0 5 mg/L	-Drawdown	<0.3 ft
- pH	± 1.0 unit		>0.5 mg/L within 10%	-Turbidity	<10 NTU
- Sp. Cond.	3%	- ORP	± 10mV		>10NTU within 10%

c. Field Testing Equipment used: Make YSI Model Quatro Pro Serial Number 20K/01870

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color Odor
1055		12.1	8.24	735	1.62	-82.8	0.02	150		Clear
1100		11.8	8.20	733	0.71	-193.1	0.02	150		Clear
1105		11.7	8.18	737	0.54	-195.7	0.02	150		Clear
1110		11.6	7.94	762	0.44	-181.7	0.02	150		Clear
1115		11.7	7.99	790	0.36	-170.7	0.02	150		Clear
1120		11.7	7.27	805	0.33	-162.7	0.02	150		Clear
1125		11.7	7.15	815	0.32	-156.3	0.02	150		Clear

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: grab

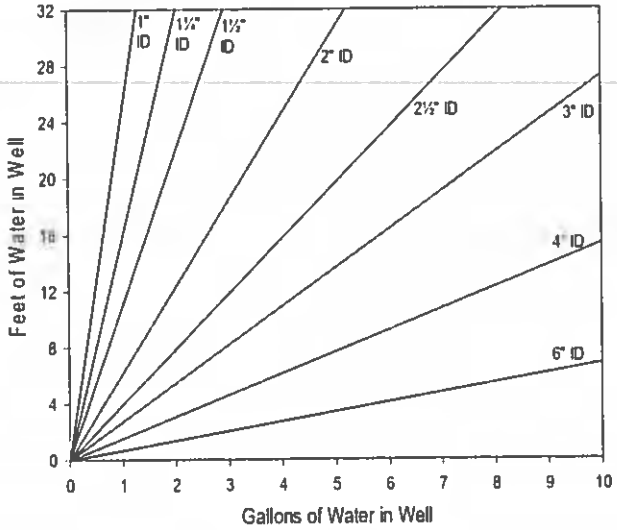
Sample ID	Container Type	No.	Preservation	Analysis Req.	Time
22A-TRC301R4- -1	40mL VOA	3	HCL	VOCs 8260C	1200
	250 mL P	2	HNO3	Total & Diss. As, Fe, Mn	
	500mL P	1	none	Cl, NO2, NO3, SO4	
	250mL P	1	zinc acetate	Sulfide	
	40mL V	3	TSP	gases (Acet, Prop, Meth, Eth, Etha)	
	250 mL A	1	H3PO4	TOC	
	vial	1	none	Diss. Hydrogen	
	40mL VOA	4	HCL	CSIA 13C/12C	
	filter	1	none	Microbial Analysis: Quantaray	

Comments

Signature Ron Kelley Date 9/29/22

AECOM

Well ID: TRC-301R4



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

Purge Volume Calculation

[105 ft (tubing length) x 0.0097 L/ft] + 0.275 L (flow cell vol.) = 1.29 L

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
1130		11.7	7.06	836	0.29	-149.2	0.02	150		Clear
1135		11.6	7.03	849	0.25	-146.1	0.02	150		Clear
1140	6.75	11.6	7.04	848	0.23	-145.6	0.02	150		Clear

16 Location LMC Wilmington Date 9/26/22

Project / Client LMC

60688023

0815- DPotter, SHaygath on site.

Scope: Purge Flute wells

Weather: 60s, sunny

Well ID	Purge time
AE-100R	1201-1210
AE-102RR	1120-1125
AE-103R	1059-1103
AE-104R	1031-1037
AE-105R	1412-1418
AE-106R	1447-1453
AE-108R	1221-1227
AE-109R	1009-1013
AE-110R	0951-0956
AE-111R	0926-0931
AE-112R	0901-0906

1245-1315 Lunch then to wetlands. Refer to purge times in table above

1615- SH off site

1650- US Environmental drops off equipment

1705- All off site.

Location LMC Wilmington Date 9/27/22

Project / Client LMC

60688023

0700- Dylan Potter, Floyd Burton on site
Scope: Synoptic gauging
Weather: cloudy, 50s
Team: DPotter, FBurton, Sam Huggett, Kaleb Jones, Roger Kelley, Adam Grossman

0715- Calibrate PIDs

S/N	Fresh Air	Isobutylene
1000-1558	0.0	99.3
1000-1559	0.0	100.0
T-111235	0.0	99.8

0800- KJones, RKelley on site. Held tailgate meeting

0830- AGrossman on site. Filled in AG on safety meeting. Split into teams to begin gauging. See gauging records

1800- Gauging complete. All off site

Return the Rain

Location LMC Wilmington Date 9/28/22

Project / Client LMC

60688023 pg 1 of 2

0645- D. Potter on site. Begin prep work

Task: EPL sampling

Weather: 60s, sunny

Team: Dylan Potter, Sean Haggett, Rose Kelley, Kaleb Jones

0730- Team on site. Finish prep and mob tasks.

Well ID		Sample Time
AE-103R1		1350
AE-103R2		1355
AE-103R3		1400
AE-103R4	(MS/MSD)	1405
AE-103R5		1410
AE-103R7		1415
AE-102RR1		1305
R2		1310
R4		1315
R5	(Duplicate)	1320/1325
R6		1330
AE-104R1		1505
R3		1510
R5		1515
AE-108R1		1330
R3		1340
R5		1350

Location LMC Wilmington Date 9/28/22

Project / Client LMC

60688023 pg 2 of 2

1430- Samples off site with courier. Some samples to be picked up tomorrow

Dissolved Hydrogen Samples

AE-103RS 1600-1615 @ 210 mL/min

AE-102RR1

1730- RK off site

1800- All off site

Location LMC Wilmington Date 9/29/22

Project / Client LMC

60688023 pg 1 of 2

0650 - D Potter on site. Begin Prep

Weather: Sunny, 60s

Task: Wetland wells GW sampling

Team: F Burton, R Kelley, K Jones, S Haggerth

0730 - Team on site. Calibrate and hold tailgate meeting

0830 - End calibration. Mobilize to Stickney Road

Well ID	T.O.S
TRC 301 R1	1710
R2	1615
R3	1520
R4	1200
AE 105 R2	1455
R3	1430
R4	1435
R5	1440
AE-105 D	1130
AE-105 S	1515
AE-106 R1	1305
R3	1300
R5	1310
AE 106 M	1059/DUP 1055

Location LMC Wilmington Date 9/29/22

Project / Client LMC

60688023 pg 2 of 2

ID	TOS
PS-1M	1625
PS-1D	1505

1800- Demob and prep coolers for shipment. Pace courier picked up some samples at 1430. ~~DR to stock to purge~~ DD 9/29/22

1850- All off site

* PS-8D sampled at 1630

22 Location LMC Wilmington Date 9/30/22

Project / Client LMC

60688023 pg 1 of 1

0655 - D. Potter on site

Task: GW sampling + island wells

Weather: Sunny, 60s

Team: DPotter, K Jones, F Burton, K Kelley

0730 - Team on site. Prep and calibrate. Hold tailgate meeting

0830 - Calibration complete. Mobilize to wells. DP and KJ to island

Well ID	Time of Sample
MW-4A	1030/1035 (Dup)
PS-3	1130
PS-5	1150 Grab
AE-3	1040 MS/MSD
AE-4	0950
TRC-102	1315
TRC-103	1115

1400 - courier arrives to pick up samples. All past ~~cutt~~ DD - cal

1430 - Team off site. DP awaits US environmental

1445 - US Env. drops off equipment. DP off site.

Location LMC Wilmington Date 10/3/22

Project / Client LMC

60688023

Pg 1 of 2

0730 - D. Potter on site

Task: GW Sampling, ~~Bid 1 wells~~ 10/3/22

Weather: sunny, 60s

Team: DPotter, KJones, RKelley, F. Burton

0730 - Team on site. Prep, calibrate, and hold tailgate

0815 - Calibration complete. Mobilize to wells

ID	Time of Sample
AE-101R2	0910
AE-101R4	1000
AE-101R6	1100
AE-102M	0915
AE-104D (Duplicate)	1500/1500
AE-103D	1050
AE-103S	1005
GZA-102S (duplicate)	1015/1015
PZ-2S	1145
MW-5	1115
MW-7	1210

1245 - Phoenix courier on site to pick up samples

~~1530 Post-cal and de-mob~~

~~1615 off site.~~

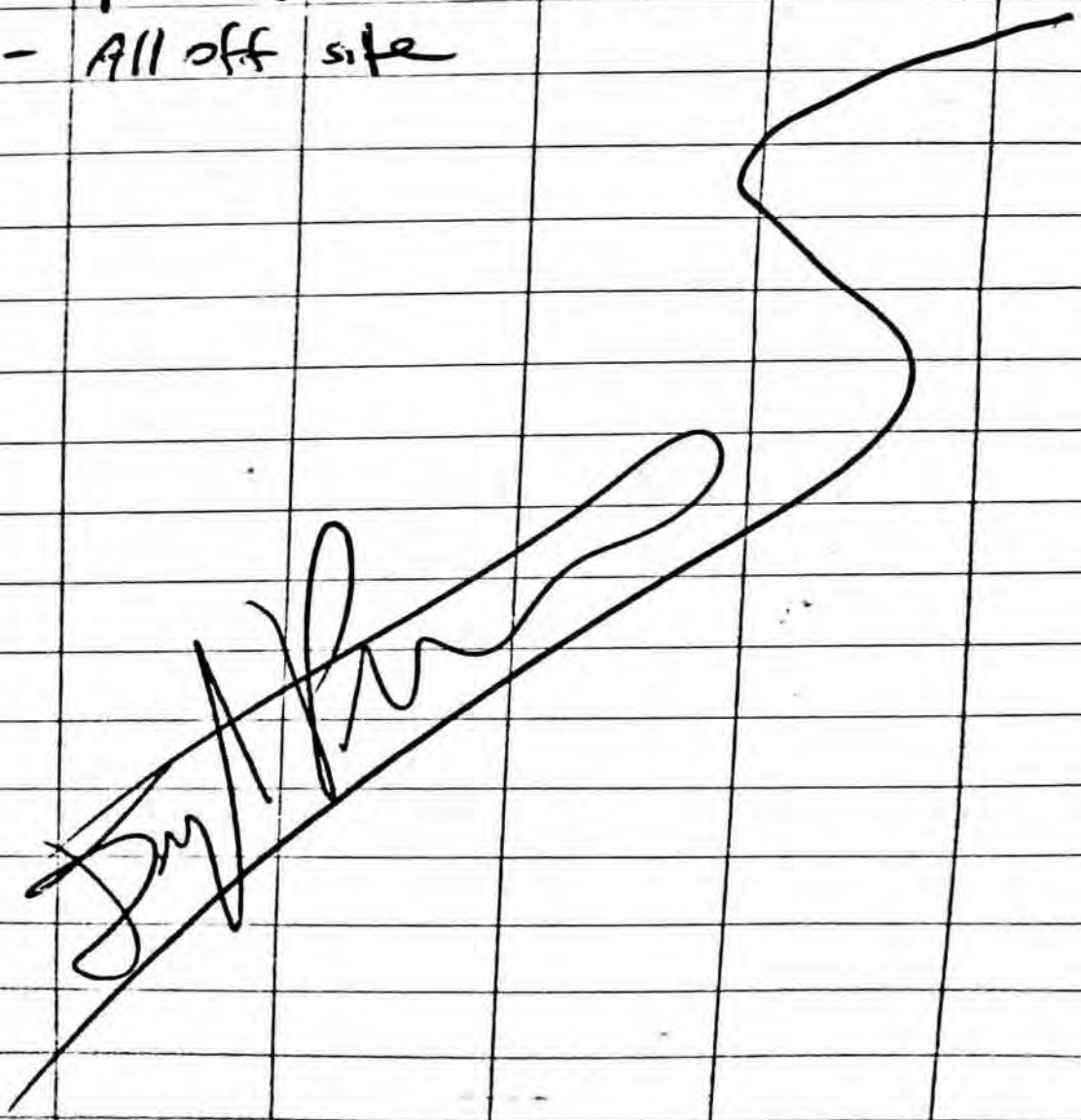
10/3/22

Location LMC Wilmington Date 10/3/22

Project / Client LMC

60688023 Pg 2 of 2

1510-	Additional samples collected after courier leaves site:	
	ID	Time of Sample
	TRC-101	1400
	EP-1R2	1510
	AE-2R	1545
1545-	Post-cal and de-mob	
1615-	All off site	



Location LMC Wilmington Date 10/4/22

Project / Client LMC

60688023 pg 1 of 1

0700- D. Potter, F. Burton on site.
Task: GW sampling
Weather: cloudy, 50s
Team: D. Potter, F Burton, K Jones, R. Kelley
0730- K Jones, R Kelley on site. Hold tailgate meeting and calibrate
0830- Mobilize to wells

ID	Time of Sample
AE-100R2	1105
AE-100R3	1115
AE-100R4	1125
AE-100R5	1140
GZA-12	0930
GZA-101R	1145
AE-29R1	0842
AE-29R3	0945
AE-29R5	1023
AE-29R6	1108
* AE-100R1	1035
EMW-10D	1345

1415- Bst-Cal and prep for tomorrow
1615- off site

Location LMC Wilmington Date 10/5/22

Project / Client LMC

60688023 pg 1 of 2

0640 - D. Potter on site

Task: GW sampling - Bldg 1

Weather: Steady rain, clearing in the afternoon

Team: D. Potter, S. Haggett, R. Kelley, K. Jones, F. Burton

0730 - Team on site. Calibrate, prep, and hold morning tailgate

0850 - Mobilize to wells once UPS trucks leave Building 1

	ID	Time of Sample
10/4	~~22A~~ AE-109R1	1350
	AE-109R2	1355
	AE-109R4	1400
	AE-109R6 (MS/MSD)	1345
	AE-109R8	1405

Note: Above samples were sampled on 10/4 but not added to the field book

10/5/22	AE-26R1	1010
	AE-26R4	1135
	AE-26R5	1410
	AE-26S	1335
	AE-27R	1015
	AE-24 (duplicate)	1015/1020

Location LMC Wilmington Date 10/5/22

Project / Client LMC

60688023

ID	Time of Sample
AE-23S	1030
AE-23R	1345
AE-28R1	1015
AE-28R2	1045
AE-28R3	1400
AE-28R4	1500
AE-110R1	1410
AE-110R2	1415
AE-110R5	1420
AE-110R7	1425

1350- Phoenix courier picks up samples

1500- Post-Cal and demob

1600- All off site

28 Location LMC Wilmington Date 10/6/22

Project / Client LMC

60688023 pg 1 of 2

0645- D. Potter on site

Task: GW sampling

Weather: sunny, 60s

Team: D. Potter, F. Burton, S. Haggett, K Sosas, R Kelley

0730- Team on site. Calibrate and hold tailgate meeting

0815- Calibration complete. Mobilize to wells

ID	Time of Sample
STM-8R	0950
STM-8D	1030
STM-8R1 (Grab)	1100
AE-111R1	1125
AE-111R2 (MS/MSD)	1130
AE-111R6	1135
AE-112D	1000
AE-109D	1100
AE-112R1	1120
AE-112R3	1130
AE-112R5	1150
G2A-105D	1350
G2A-105S	1045
G2A-105R	0945

Location LMC Wilmington Date 10/6/22

Project / Client LMC

60688023

pg 2 of 2

ID	Time of Sample
AE-101D	1410
GZA-6	1530
TRC-201R	1420

1530- Post-cal and clean up site.

1630- All off site. DP to bring equipment to the office. SH to ship samples. Phoenix picked up samples at 1405

APPENDIX B
WASTE MANIFESTS

TK#5435

Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material. Form Approved. OMB No. 2050-0039

Please print or type.

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MAD985290873	1	(800) 483-3718	017755822 FLE

5. Generator's Name and Mailing Address
Lockheed Martin Corporation
6801 Rockledge Drive MP CCT 246
Bethesda, MD 20817
Generator's Phone: (240) 676-5392 ATTN: Paul Calligan

Generator's Site Address (if different than mailing address)
50 Fordham Road
Wilmington, MA 01887

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc. — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Clean Harbors of Braintree Inc
1 Hill Avenue
Braintree, MA 02184
Facility's Phone: (781) 380-7100
U.S. EPA ID Number: MAD053452637

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHYLENE TETRACHLOROETHYLENE), 9, PG III	004	DM	220	G	D039 D040
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1 CH1563550 ERG#171 4x55

Contract retained by generator confers [illegible] authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience, [illegible]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: BRANDON KENG As Agent For Lockheed Martin — Signature: [signature] — Month 03 Day 27 Year 23

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Samuel DiCicco — Signature: [signature] — Month 3 Day 27 Year 23
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Huyen Hoang — Signature: [signature] — Month 3 Day 28 Year 23

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

0-22 (Rev. 12-17) Previous editions are obsolete. [illegible] and will accept the waste the generator is shipping.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM
RI 2202384566-001

CleanHarbors
ENVIRONMENTAL SERVICES®

Land Disposal Restriction Notification Form

Printed Date :Dec 28, 2022

MANIFEST INFORMATION

Generator : Lockheed Martin Corporation

Address: 50 Fordham Road
Wilmington,MA 01887

EPA ID #: M A D 9 8 5 2 9 0 8 7 3

Manifest Tracking Info.

017755822FLE

Sales Order No: 2202384568-001

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category
1.	1	CH1563550	NON-WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
D039 D040	NONE

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
1,1,1-TRICHLOROETHANE	Y	N	N
1,1,2-TRICHLORETHANE	Y	N	N
1,1-DICHLOROETHANE	Y	N	N
1,1-Dichloroethylene	Y	N	N
1,4-DIOXANE	Y	N	N
ACETONE	Y	N	N
Tetrachloroethylene	Y	N	N
TOLUENE	Y	N	N
TRANS-1,2-DICHLOROETHYLENE	Y	N	N
TRICHLOROETHYLENE	Y	N	N
VINYL CHLORIDE	Y	N	N

Certification	Applies to Manifest Line Items
Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268.	1.

Waste analysis data, where available, is attached.

Signature : [signature] Print Name BRANDON KING

Title : As Agent for Lockheed Martin Date : ~~04/04/2023~~ 03/27/2023

APPENDIX C
LABORATORY ANALYTICAL AND DATA VALIDATION REPORTS

PHOENIX
Environmental Laboratories, Inc.

Wednesday, October 12, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60688023.02.2**
SDG ID: **GCM44228**
Sample ID#s: CM44228 - CM44238

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 12, 2022

SDG I.D.: GCM44228

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-AE102RR1-092822-1	CM44228	GROUND WATER
22A-AE102RR2-092822-1	CM44229	GROUND WATER
22A-AE102RR4-092822-1	CM44230	GROUND WATER
22A-AE103R1-092822-1	CM44231	GROUND WATER
22A-AE103R2-092822-1	CM44232	GROUND WATER
22A-AE103R3-092822-1	CM44233	GROUND WATER
22A-AE103R5-092822-1	CM44234	GROUND WATER
22A-AE108R1-092822-1	CM44235	GROUND WATER
22A-AE108R3-092822-1	CM44236	GROUND WATER
22A-AE108R5-092822-1	CM44237	GROUND WATER
22A-TB01-092822-1	CM44238	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44228

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.231	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	0.734	0.001	mg/L	1	09/30/22	TH	SW6010D
Iron	0.440	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	0.746	0.001	mg/L	1	10/04/22	TH	SW6010D
Chloride	105	10.0	mg/L	2	09/30/22	CL/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	09/29/22 08:08	CL/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/29/22 08:08	CL/GD	E300.0
Sulfate	12.5	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	0.07	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	11	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44228

Client ID: 22A-AE102RR1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	410	20	ug/L	20	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	6.6	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44228
Client ID: 22A-AE102RR1-092822-1

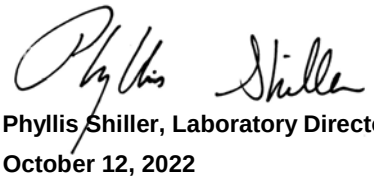
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	100	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	50	5.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	102		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/09/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	10/09/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	98		%	20	10/09/22	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44229

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	13	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44229

Client ID: 22A-AE102RR2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	190	20	ug/L	20	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	130	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	460	20	ug/L	20	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	13	5.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	102		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	96		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	100		%	5	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/09/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	10/09/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	10/09/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	5.4	0.20	ug/l	1	09/30/22	KCA	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	82		%	1	09/30/22	KCA	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/29/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44230

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR4-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	11	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	70	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	300	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	480	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	104		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	97		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	99		%	5	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	10/10/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44230
Client ID: 22A-AE102RR4-092822-1

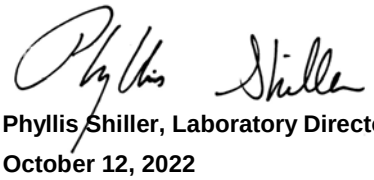
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44231

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/04/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/30/22	TH	SW6010D
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44232

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	2.53	0.011	mg/L	10	10/07/22	TH	SW6010D
Iron	0.017	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	2.49	0.010	mg/L	10	10/07/22	TH	SW6010D
Chloride	763	125	mg/L	25	09/29/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	09/29/22 21:12	C/E/G	E300.0
Nitrate as Nitrogen	3.96	0.50	mg/L	10	09/29/22 21:12	C/E/G	E300.0
Sulfate	36.4	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethane	34	20	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethene	9.7	7.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44232

Client ID: 22A-AE103R2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/11/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/11/22	MH	SW8260C
Benzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	190	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/11/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Tetrachloroethene	1500	400	ug/L	400	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/11/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44232
Client ID: 22A-AE103R2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Trichloroethene	2100	400	ug/L	400	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Vinyl chloride	12	5.0	ug/L	20	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	10/11/22	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	102		%	400	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (400x)	98		%	400	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (400x)	95		%	400	10/10/22	MH	70 - 130 %
% Toluene-d8 (400x)	100		%	400	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)

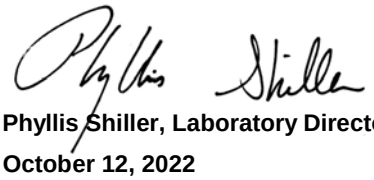
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44233

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,1-Dichloroethane	34	20	ug/L	20	10/10/22	MH	SW8260C
1,1-Dichloroethene	7.7	7.0	ug/L	20	10/10/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/10/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/10/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/10/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/10/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/10/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/10/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/10/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/10/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/10/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,2-Dichloroethene	210	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/10/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/10/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/10/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/10/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/10/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/10/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/10/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Tetrachloroethene	1200	200	ug/L	200	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/10/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/10/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Trichloroethene	1900	200	ug/L	200	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Vinyl chloride	38	20	ug/L	20	10/10/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	10/10/22	MH	70 - 130 %
% Toluene-d8 (20x)	103		%	20	10/10/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	102		%	200	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (200x)	94		%	200	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (200x)	95		%	200	10/11/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	96		%	200	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/10/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44234

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.205	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	0.989	0.001	mg/L	1	09/30/22	TH	SW6010D
Iron	0.225	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	0.899	0.001	mg/L	1	10/04/22	TH	SW6010D
Chloride	279	25.0	mg/L	5	09/29/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	09/29/22 21:28	C/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/29/22 08:26	CL/GD	E300.0
Sulfate	36.6	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethane	110	50	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethene	31	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44234

Client ID: 22A-AE103R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Hexanone	ND	100	ug/L	50	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/11/22	MH	SW8260C
Acetone	ND	1300	ug/L	50	10/11/22	MH	SW8260C
Benzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromodichloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromoform	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	13	ug/L	50	10/11/22	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	1000	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromochloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	50	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methylene chloride	ND	25	ug/L	50	10/11/22	MH	SW8260C
Naphthalene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
o-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Styrene	ND	50	ug/L	50	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Tetrachloroethene	5700	400	ug/L	400	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/11/22	MH	SW8260C
Toluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	50	ug/L	50	10/11/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Trichloroethene	8300	400	ug/L	400	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Vinyl chloride	130	50	ug/L	50	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	102		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	95		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	94		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	102		%	50	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	103		%	400	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (400x)	99		%	400	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (400x)	97		%	400	10/10/22	MH	70 - 130 %
% Toluene-d8 (400x)	99		%	400	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	29	0.20	ug/l	1	10/03/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	10/03/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/03/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44235

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE108R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.515	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	0.428	0.001	mg/L	1	09/30/22	TH	SW6010D
Iron	1.42	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	0.771	0.001	mg/L	1	10/04/22	TH	SW6010D
Chloride	799	125	mg/L	25	09/29/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	09/29/22 21:51	C/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/29/22 08:35	CL/GD	E300.0
Sulfate	< 5.0	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	5.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44235

Client ID: 22A-AE108R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	7.2	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	1.5	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44236

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE108R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44236

Client ID: 22A-AE108R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	12	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	30	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	23	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

Ver 1

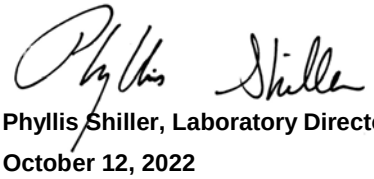
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44236
Client ID: 22A-AE108R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44237

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE108R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44237
Client ID: 22A-AE108R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	36	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	13	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	32	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	102		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

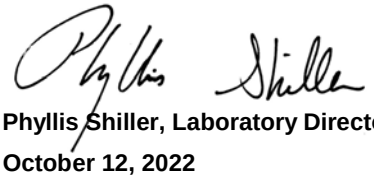
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44237
Client ID: 22A-AE108R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	9:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44238

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TB01-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44238
Client ID: 22A-TB01-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44238
Client ID: 22A-TB01-092822-1

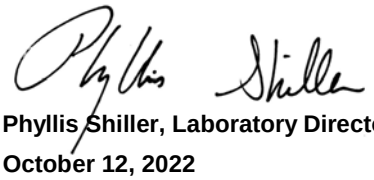
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 12, 2022

QA/QC Data

SDG I.D.: GCM44228

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 644727 (mg/L), QC Sample No: CM43976 (CM44228, CM44231, CM44232, CM44234, CM44235)														
ICP Metals - Aqueous														
Arsenic	BRL	0.004	0.021	0.023	9.10	95.2	97.2	2.1	102			80 - 120	20	
Iron	BRL	0.010	5.06	5.38	6.10	102	104	1.9	NC			80 - 120	20	
Manganese	BRL	0.001	3.28	3.37	2.70	98.7	101	2.3	128			80 - 120	20	m
Comment:														
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.														
QA/QC Batch 644359 (mg/L), QC Sample No: CM44228 (CM44228, CM44231, CM44232, CM44234, CM44235)														
ICP Metals - Dissolved														
Arsenic	BRL	0.004	<0.004	<0.004	NC	87.3	85.3	2.3	89.1			80 - 120	20	
Iron	BRL	0.011	0.231	0.228	1.30	89.8	88.1	1.9	93.9			80 - 120	20	
Manganese	BRL	0.001	0.734	0.723	1.50	92.7	90.7	2.2	90.0			80 - 120	20	
Comment:														
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.														

m = This parameter is outside laboratory MS/MSD specified recovery limits.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 12, 2022

QA/QC Data

SDG I.D.: GCM44228

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 644448 (mg/L), QC Sample No: CM43877 (CM44228, CM44232, CM44234, CM44235)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	100			95.8			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 644963 (mg/L), QC Sample No: CM44374 (CM44228, CM44232, CM44234, CM44235)													
Total Organic Carbon	BRL	1.0	3.1	3.1	NC	97.0			98.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 645171 (mg/L), QC Sample No: CM42811 (CM44232, CM44234)													
Chloride	BRL	5.0	38.4	37.8	1.60	96.0			91.9			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.735	0.73	NC	94.3			89.6			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	102			101			90 - 110	20
Sulfate	BRL	5.0	10.4	10.1	NC	95.4			93.5			90 - 110	20
QA/QC Batch 644517 (mg/L), QC Sample No: CM43986 (CM44228, CM44232, CM44234, CM44235)													
Chloride	BRL	5.0	49.9	50.0	0.20	97.8			98.4			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	1.72	1.68	2.40	99.2			101			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	0.45	0.47	4.30	96.7			95.2			90 - 110	20
Sulfate	BRL	5.0	23.3	23.2	NC	99.0			99.5			90 - 110	20
QA/QC Batch 644786 (mg/L), QC Sample No: CM44573 (CM44228)													
Chloride	BRL	5.0	13.3	13.3	NC	97.5			100			90 - 110	20
Sulfate	BRL	5.0	<5.0	<5.0	NC	98.8			101			90 - 110	20
QA/QC Batch 645174 (mg/L), QC Sample No: CM45628 (CM44235)													
Chloride	BRL	5.0	34.5	34.0	1.50	93.8			92.0			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.02	<0.05	NC	93.2			95.6			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	99.3			92.2			90 - 110	20
Sulfate	BRL	5.0	<3.0	<5.0	NC	95.2			102			90 - 110	20
QA/QC Batch 644786 (mg/L), QC Sample No: CM44573 (CM44228)													
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	93.6			110			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 12, 2022

QA/QC Data

SDG I.D.: GCM44228

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 644571 (ug/l), QC Sample No: CM44051 (CM44229)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	81	80	1.2	83			70 - 130	20
% 1,4-dioxane-d8	93	%	83	78	6.2	79			70 - 130	20
QA/QC Batch 644959 (ug/l), QC Sample No: CM46914 (CM44234)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	91	88	3.4	87	81	7.1	70 - 130	20
% 1,4-dioxane-d8	82	%	84	94	11.2	85	85	0.0	70 - 130	20
QA/QC Batch 646250 (ug/L), QC Sample No: CM44238 (CM44228 (20X) , CM44229 (20X) , CM44230 (20X) , CM44232 (400X) , CM44233 (20X) , CM44234 (400X) , CM44235, CM44236, CM44238)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	116	120	3.4				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	109	112	2.7				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	104	110	5.6				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	104	114	9.2				70 - 130	20
1,1-Dichloroethane	ND	1.0	109	112	2.7				70 - 130	20
1,1-Dichloroethene	ND	1.0	115	118	2.6				70 - 130	20
1,1-Dichloropropene	ND	1.0	122	122	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	114	122	6.8				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	99	106	6.8				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	118	123	4.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	117	117	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	119	124	4.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	109	114	4.5				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	109	112	2.7				70 - 130	20
1,2-Dichloroethane	ND	1.0	101	110	8.5				70 - 130	20
1,2-Dichloropropane	ND	1.0	106	113	6.4				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	119	119	0.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	113	115	1.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	108	114	5.4				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	112	114	1.8				70 - 130	20
1,4-dioxane	ND	100	113	109	3.6				40 - 160	20
2,2-Dichloropropane	ND	1.0	120	122	1.7				70 - 130	20
2-Chlorotoluene	ND	1.0	117	119	1.7				70 - 130	20
2-Hexanone	ND	5.0	99	109	9.6				40 - 160	20
4-Chlorotoluene	ND	1.0	117	118	0.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	95	109	13.7				40 - 160	20
Acetone	ND	5.0	92	108	16.0				40 - 160	20
Benzene	ND	0.70	111	115	3.5				70 - 130	20
Bromobenzene	ND	1.0	114	117	2.6				70 - 130	20
Bromochloromethane	ND	1.0	104	113	8.3				70 - 130	20
Bromodichloromethane	ND	0.50	108	115	6.3				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromoform	ND	1.0	115	121	5.1				70 - 130	20
Bromomethane	ND	1.0	116	118	1.7				40 - 160	20
Carbon Disulfide	ND	1.0	109	111	1.8				70 - 130	20
Carbon tetrachloride	ND	1.0	115	116	0.9				70 - 130	20
Chlorobenzene	ND	1.0	110	113	2.7				70 - 130	20
Chloroethane	ND	1.0	112	113	0.9				70 - 130	20
Chloroform	ND	1.0	102	108	5.7				70 - 130	20
Chloromethane	ND	1.0	102	105	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	111	116	4.4				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	113	121	6.8				70 - 130	20
Dibromochloromethane	ND	0.50	115	121	5.1				70 - 130	20
Dibromomethane	ND	1.0	107	117	8.9				70 - 130	20
Dichlorodifluoromethane	ND	1.0	97	96	1.0				40 - 160	20
Di-isopropyl ether	ND	1.0	104	113	8.3				70 - 130	20
Ethyl ether	ND	1.0	93	103	10.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	114	10.1				70 - 130	20
Ethylbenzene	ND	1.0	117	118	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	128	124	3.2				70 - 130	20
Isopropylbenzene	ND	1.0	120	121	0.8				70 - 130	20
m&p-Xylene	ND	1.0	116	117	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	111	7.5				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	116	11.9				70 - 130	20
Methylene chloride	ND	1.0	96	102	6.1				70 - 130	20
Naphthalene	ND	1.0	115	124	7.5				70 - 130	20
n-Butylbenzene	ND	1.0	126	126	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	121	120	0.8				70 - 130	20
o-Xylene	ND	1.0	112	115	2.6				70 - 130	20
p-Isopropyltoluene	ND	1.0	123	123	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	122	123	0.8				70 - 130	20
Styrene	ND	1.0	115	118	2.6				70 - 130	20
tert-amyl methyl ether	ND	1.0	105	115	9.1				70 - 130	20
tert-Butylbenzene	ND	1.0	121	121	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	116	118	1.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	83	93	11.4				70 - 130	20
Toluene	ND	1.0	112	116	3.5				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	113	115	1.8				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	112	122	8.5				70 - 130	20
Trichloroethene	ND	1.0	113	116	2.6				70 - 130	20
Trichlorofluoromethane	ND	1.0	113	113	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	105	105	0.0				70 - 130	20
Vinyl chloride	ND	1.0	115	117	1.7				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	99	101	2.0				70 - 130	20
% Bromofluorobenzene	97	%	98	100	2.0				70 - 130	20
% Dibromofluoromethane	97	%	92	95	3.2				70 - 130	20
% Toluene-d8	99	%	100	101	1.0				70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646504 (ug/L), QC Sample No: CM45646 (CM44228 (5X) , CM44229 (5X) , CM44230 (5X) , CM44232 (20X) , CM44233 (200X) , CM44234 (50X) , CM44237 (5X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	116	121	4.2	122	123	0.8	70 - 130	20

QA/QC Data

SDG I.D.: GCM44228

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1,1-Trichloroethane	ND	1.0	104	104	0.0	112	112	0.0	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	114	117	2.6	115	118	2.6	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	106	109	2.8	114	115	0.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	100	105	4.9	109	110	0.9	70 - 130	20	
1,1-Dichloroethene	ND	1.0	106	111	4.6	115	120	4.3	70 - 130	20	
1,1-Dichloropropene	ND	1.0	114	105	8.2	126	129	2.4	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	122	127	4.0	128	133	3.8	70 - 130	20	m
1,2,3-Trichloropropane	ND	1.0	116	114	1.7	114	116	1.7	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	121	126	4.0	125	130	3.9	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	119	121	1.7	121	124	2.4	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	119	129	8.1	118	125	5.8	70 - 130	20	
1,2-Dibromoethane	ND	1.0	113	116	2.6	117	118	0.9	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	113	117	3.5	117	120	2.5	70 - 130	20	
1,2-Dichloroethane	ND	1.0	104	108	3.8	115	115	0.0	70 - 130	20	
1,2-Dichloropropane	ND	1.0	102	106	3.8	112	112	0.0	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	119	121	1.7	123	125	1.6	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	114	117	2.6	117	119	1.7	70 - 130	20	
1,3-Dichloropropane	ND	1.0	113	115	1.8	117	119	1.7	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	114	116	1.7	116	119	2.6	70 - 130	20	
1,4-dioxane	ND	100	107	109	1.9	97	103	6.0	40 - 160	20	
2,2-Dichloropropane	ND	1.0	104	107	2.8	104	107	2.8	70 - 130	20	
2-Chlorotoluene	ND	1.0	117	120	2.5	121	124	2.4	70 - 130	20	
2-Hexanone	ND	5.0	110	112	1.8	109	111	1.8	40 - 160	20	
4-Chlorotoluene	ND	1.0	118	120	1.7	121	123	1.6	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	102	110	7.5	108	106	1.9	40 - 160	20	
Acetone	ND	5.0	99	103	4.0	112	117	4.4	40 - 160	20	
Benzene	ND	0.70	104	108	3.8	115	117	1.7	70 - 130	20	
Bromobenzene	ND	1.0	115	118	2.6	117	120	2.5	70 - 130	20	
Bromochloromethane	ND	1.0	104	107	2.8	108	110	1.8	70 - 130	20	
Bromodichloromethane	ND	0.50	106	109	2.8	115	117	1.7	70 - 130	20	
Bromoform	ND	1.0	115	119	3.4	116	121	4.2	70 - 130	20	
Bromomethane	ND	1.0	101	105	3.9	70	95	30.3	40 - 160	20	r
Carbon Disulfide	ND	1.0	98	103	5.0	104	110	5.6	70 - 130	20	
Carbon tetrachloride	ND	1.0	106	111	4.6	119	121	1.7	70 - 130	20	
Chlorobenzene	ND	1.0	109	114	4.5	115	117	1.7	70 - 130	20	
Chloroethane	ND	1.0	102	106	3.8	109	113	3.6	70 - 130	20	
Chloroform	ND	1.0	98	101	3.0	107	107	0.0	70 - 130	20	
Chloromethane	ND	1.0	93	98	5.2	101	103	2.0	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	102	107	4.8	113	111	1.8	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	107	111	3.7	115	116	0.9	70 - 130	20	
Dibromochloromethane	ND	0.50	118	120	1.7	120	124	3.3	70 - 130	20	
Dibromomethane	ND	1.0	108	112	3.6	117	117	0.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	97	101	4.0	107	108	0.9	40 - 160	20	
Di-isopropyl ether	ND	1.0	102	107	4.8	108	110	1.8	70 - 130	20	
Ethyl ether	ND	1.0	97	103	6.0	102	105	2.9	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	103	108	4.7	109	110	0.9	70 - 130	20	
Ethylbenzene	ND	1.0	114	116	1.7	121	122	0.8	70 - 130	20	
Hexachlorobutadiene	ND	0.40	118	125	5.8	134	134	0.0	70 - 130	20	m
Isopropylbenzene	ND	1.0	118	122	3.3	123	126	2.4	70 - 130	20	
m&p-Xylene	ND	1.0	114	116	1.7	120	121	0.8	70 - 130	20	
Methyl ethyl ketone	ND	5.0	110	102	7.5	115	116	0.9	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	108	4.7	106	109	2.8	70 - 130	20	
Methylene chloride	ND	1.0	93	98	5.2	100	102	2.0	70 - 130	20	

QA/QC Data

SDG I.D.: GCM44228

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Naphthalene	ND	1.0	125	130	3.9	127	132	3.9	70 - 130	20	m
n-Butylbenzene	ND	1.0	127	132	3.9	135	137	1.5	70 - 130	20	l,m
n-Propylbenzene	ND	1.0	119	121	1.7	124	126	1.6	70 - 130	20	
o-Xylene	ND	1.0	112	114	1.8	117	118	0.9	70 - 130	20	
p-Isopropyltoluene	ND	1.0	123	126	2.4	129	131	1.5	70 - 130	20	m
sec-Butylbenzene	ND	1.0	123	126	2.4	131	133	1.5	70 - 130	20	m
Styrene	ND	1.0	115	117	1.7	121	122	0.8	70 - 130	20	
tert-amyl methyl ether	ND	1.0	105	109	3.7	112	114	1.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	120	123	2.5	126	129	2.4	70 - 130	20	
Tetrachloroethene	ND	1.0	106	110	3.7	NC	NC	NC	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	87	90	3.4	90	93	3.3	70 - 130	20	
Toluene	ND	1.0	105	109	3.7	116	116	0.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	101	106	4.8	109	113	3.6	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	109	114	4.5	114	116	1.7	70 - 130	20	
Trichloroethene	ND	1.0	106	109	2.8	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	107	111	3.7	122	124	1.6	70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	99	100	1.0	109	110	0.9	70 - 130	20	
Vinyl chloride	ND	1.0	107	113	5.5	118	121	2.5	70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	101	102	1.0	102	102	0.0	70 - 130	20	
% Bromofluorobenzene	92	%	96	97	1.0	98	97	1.0	70 - 130	20	
% Dibromofluoromethane	94	%	92	92	0.0	93	91	2.2	70 - 130	20	
% Toluene-d8	95	%	97	97	0.0	101	100	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 12, 2022

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44228	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44228	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM44228	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM44228	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44228	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM44228	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	410	20	20	20	ug/L
CM44228	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	100	5.0	5	5	ug/L
CM44228	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	50	5.0	2	2	ug/L
CM44228	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	6.6	5.0	5	5	ug/L
CM44228	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM44228	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.6	5.0	5	5	ug/L
CM44228	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	5.0	5	5	ug/L
CM44228	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM44228	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44228	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44228	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	50	5.0	2	2	ug/L
CM44228	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	410	20	20	20	ug/L
CM44228	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM44228	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	50	5.0	2	2	ug/L
CM44228	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	100	5.0	5	5	ug/L
CM44228	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	410	20	20	20	ug/L
CM44228	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM44228	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	100	5.0	5	5	ug/L
CM44228	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	410	20	70	70	ug/L
CM44228	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM44228	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	50	5.0	2	2	ug/L
CM44228	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.6	5.0	5	5	ug/L
CM44228	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	50	5.0	2	2	ug/L
CM44228	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	410	20	20	20	ug/L
CM44228	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	100	5.0	5	5	ug/L
CM44228	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM44228	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CM44228	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CM44228	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.734	0.001	0.43	0.43	mg/L
CM44228	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.746	0.001	0.43	0.43	mg/L
CM44229	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	13	5.0	2	2	ug/L
CM44229	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM44229	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM44229	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44229	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	130	5.0	5	5	ug/L
CM44229	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	460	20	5	5	ug/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44229	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	190	20	20	20	ug/L
CM44229	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM44229	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM44229	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44229	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	190	20	20	20	ug/L
CM44229	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44229	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM44229	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	460	20	5	5	ug/L
CM44229	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	5.0	5	5	ug/L
CM44229	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	5.0	2	2	ug/L
CM44229	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44229	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM44229	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	5.0	2	2	ug/L
CM44229	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	460	20	5	5	ug/L
CM44229	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	190	20	20	20	ug/L
CM44229	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	5.0	50	50	ug/L
CM44229	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	5.0	2	2	ug/L
CM44229	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM44229	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	190	20	70	70	ug/L
CM44229	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM44229	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	5.0	5	5	ug/L
CM44229	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	460	20	5	5	ug/L
CM44229	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	460	20	5	5	ug/L
CM44229	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	190	20	20	20	ug/L
CM44229	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	5.0	50	50	ug/L
CM44229	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	5.0	2	2	ug/L
CM44229	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	5.4	0.20	0.3	0.3	ug/l
CM44229	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.4	0.20	0.3	0.3	ug/l
CM44229	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	5.4	0.20	0.3	0.3	ug/l
CM44229	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM44230	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44230	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	480	20	5	5	ug/L
CM44230	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44230	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	300	20	5	5	ug/L
CM44230	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM44230	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	70	5.0	20	20	ug/L
CM44230	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM44230	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM44230	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM44230	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	480	20	5	5	ug/L
CM44230	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	70	5.0	20	20	ug/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44230	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44230	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44230	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM44230	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM44230	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	300	20	5	5	ug/L
CM44230	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	480	20	5	5	ug/L
CM44230	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	300	20	50	50	ug/L
CM44230	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	70	5.0	20	20	ug/L
CM44230	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM44230	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM44230	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	480	20	5	5	ug/L
CM44230	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	300	20	5	5	ug/L
CM44230	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	300	20	50	50	ug/L
CM44230	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	70	5.0	20	20	ug/L
CM44230	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	480	20	5	5	ug/L
CM44230	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM44230	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CM44230	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CM44232	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM44232	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM44232	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM44232	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM44232	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM44232	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM44232	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1500	400	5	5	ug/L
CM44232	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM44232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	190	20	20	20	ug/L
CM44232	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2100	400	5	5	ug/L
CM44232	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM44232	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM44232	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM44232	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	12	5.0	2	2	ug/L
CM44232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM44232	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM44232	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM44232	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM44232	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44232	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	400	5	5	ug/L
CM44232	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM44232	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	400	5	5	ug/L
CM44232	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM44232	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM44232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	190	20	20	20	ug/L
CM44232	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.7	7.0	7	7	ug/L
CM44232	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM44232	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM44232	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM44232	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	400	5	5	ug/L
CM44232	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1500	400	50	50	ug/L
CM44232	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	12	5.0	2	2	ug/L
CM44232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	190	20	20	20	ug/L
CM44232	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM44232	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9.7	7.0	7	7	ug/L
CM44232	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	12	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	400	5	5	ug/L
CM44232	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM44232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	190	20	70	70	ug/L
CM44232	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1500	400	5	5	ug/L
CM44232	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM44232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM44232	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM44232	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM44232	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1500	400	50	50	ug/L
CM44232	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM44232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	190	20	20	20	ug/L
CM44232	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	12	5.0	2	2	ug/L
CM44232	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	400	5	5	ug/L
CM44232	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	800	0.3	0.3	ug/L
CM44232	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	800	0.3	0.3	ug/L
CM44232	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	800	0.3	0.3	ug/L
CM44232	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.53	0.011	0.43	0.43	mg/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44232	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.49	0.010	0.43	0.43	mg/L
CM44233	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM44233	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM44233	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM44233	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM44233	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM44233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1200	200	5	5	ug/L
CM44233	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM44233	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM44233	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM44233	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM44233	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1900	200	5	5	ug/L
CM44233	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM44233	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM44233	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	38	20	2	2	ug/L
CM44233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	210	20	20	20	ug/L
CM44233	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM44233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	210	20	20	20	ug/L
CM44233	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM44233	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM44233	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM44233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1200	200	5	5	ug/L
CM44233	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM44233	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM44233	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	38	20	2	2	ug/L
CM44233	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM44233	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM44233	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM44233	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1900	200	5	5	ug/L
CM44233	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.7	7.0	7	7	ug/L
CM44233	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM44233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	210	20	20	20	ug/L
CM44233	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1200	200	50	50	ug/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44233	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1900	200	5	5	ug/L
CM44233	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	38	20	2	2	ug/L
CM44233	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM44233	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.7	7.0	7	7	ug/L
CM44233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	38	20	2	2	ug/L
CM44233	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM44233	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM44233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	210	20	70	70	ug/L
CM44233	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1900	200	5	5	ug/L
CM44233	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM44233	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM44233	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1200	200	5	5	ug/L
CM44233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	210	20	20	20	ug/L
CM44233	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1900	200	5	5	ug/L
CM44233	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM44233	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1200	200	50	50	ug/L
CM44233	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM44233	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	38	20	2	2	ug/L
CM44233	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	800	0.3	0.3	ug/L
CM44233	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	800	0.3	0.3	ug/L
CM44233	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	800	0.3	0.3	ug/L
CM44234	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L
CM44234	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM44234	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	4	4	ug/L
CM44234	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L
CM44234	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	8300	400	5	5	ug/L
CM44234	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM44234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1000	50	20	20	ug/L
CM44234	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM44234	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.6	0.6	ug/L
CM44234	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM44234	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM44234	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.0075	0.0075	ug/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44234	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM44234	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	8.3	8.3	ug/L
CM44234	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	130	50	2	2	ug/L
CM44234	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	5700	400	5	5	ug/L
CM44234	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.00033	0.00033	ug/L
CM44234	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM44234	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	110	50	70	70	ug/L
CM44234	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.00075	0.00075	ug/L
CM44234	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	4	4	ug/L
CM44234	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1000	50	20	20	ug/L
CM44234	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5700	400	5	5	ug/L
CM44234	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L
CM44234	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	7	7	ug/L
CM44234	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	50	70	70	ug/L
CM44234	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM44234	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM44234	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	13	7	7	ug/L
CM44234	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8300	400	5	5	ug/L
CM44234	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L
CM44234	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.6	0.6	ug/L
CM44234	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	50	2	2	ug/L
CM44234	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM44234	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.02	0.02	ug/L
CM44234	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1000	50	20	20	ug/L
CM44234	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	9	9	ug/L
CM44234	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	50	2	2	ug/L
CM44234	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	3	3	ug/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44234	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	10	10	ug/L
CM44234	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	6	6	ug/L
CM44234	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5700	400	50	50	ug/L
CM44234	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	7	7	ug/L
CM44234	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8300	400	5	5	ug/L
CM44234	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.6	0.6	ug/L
CM44234	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5700	400	5	5	ug/L
CM44234	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8300	400	5	5	ug/L
CM44234	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM44234	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	10	10	ug/L
CM44234	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	110	50	70	70	ug/L
CM44234	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	13	4	4	ug/L
CM44234	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	31	13	7	7	ug/L
CM44234	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	3	3	ug/L
CM44234	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	130	50	2	2	ug/L
CM44234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1000	50	70	70	ug/L
CM44234	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.02	0.02	ug/L
CM44234	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	130	50	2	2	ug/L
CM44234	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	3	3	ug/L
CM44234	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	5	5	ug/L
CM44234	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM44234	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	6	6	ug/L
CM44234	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	7	7	ug/L
CM44234	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8300	400	5	5	ug/L
CM44234	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	10	10	ug/L
CM44234	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1000	50	20	20	ug/L
CM44234	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	9	9	ug/L
CM44234	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	5700	400	50	50	ug/L
CM44234	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	8300	400	5000	5000	ug/L
CM44234	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	29	0.20	0.3	0.3	ug/l
CM44234	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	29	0.20	0.3	0.3	ug/l

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44234	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	29	0.20	0.3	0.3	ug/l
CM44234	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2000	0.3	0.3	ug/L
CM44234	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.989	0.001	0.43	0.43	mg/L
CM44234	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.899	0.001	0.43	0.43	mg/L
CM44235	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM44235	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM44235	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM44235	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM44235	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM44235	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM44235	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM44235	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM44235	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.771	0.001	0.43	0.43	mg/L
CM44236	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	30	1.0	5	5	ug/L
CM44236	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM44236	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM44236	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM44236	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	23	1.0	5	5	ug/L
CM44236	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	1.0	5	5	ug/L
CM44236	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM44236	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	1.0	5	5	ug/L
CM44236	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	1.0	5	5	ug/L
CM44236	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	30	1.0	5	5	ug/L
CM44236	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM44236	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	23	1.0	5	5	ug/L
CM44236	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	23	1.0	5	5	ug/L
CM44236	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM44236	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM44236	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM44237	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44237	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM44237	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	32	5.0	5	5	ug/L
CM44237	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM44237	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	13	5.0	5	5	ug/L
CM44237	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM44237	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM44237	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM44237	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	36	5.0	20	20	ug/L
CM44237	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	32	5.0	5	5	ug/L
CM44237	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	36	5.0	20	20	ug/L

Wednesday, October 12, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM44228 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM44237	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44237	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	5.0	5	5	ug/L
CM44237	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM44237	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM44237	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM44237	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	32	5.0	5	5	ug/L
CM44237	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	36	5.0	20	20	ug/L
CM44237	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	13	5.0	5	5	ug/L
CM44237	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM44237	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	32	5.0	5	5	ug/L
CM44237	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM44237	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	32	5.0	5	5	ug/L
CM44237	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	36	5.0	20	20	ug/L
CM44237	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM44237	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CM44237	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CM44238	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM44238	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM44238	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM44238	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM44238	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM44238	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM44238	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM44238	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM44228, CM44229, CM44230, CM44231, CM44232, CM44233, CM44234, CM44235, CM44236, CM44237, CM44238

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

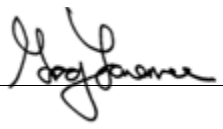
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, October 12, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2022

SDG I.D.: GCM44228

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 09/29/22-1 Keith Aloisa, Chemist 09/29/22

CM44229 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/0930_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 10/03/22-1 Adam Werner, Chemist 10/03/22

CM44234 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1003_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 644571 (CM44051)

CM44229

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2022

SDG I.D.: GCM44228

522 - DIOXANE

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Batch 644959 (CM46914)

CM44234

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 09/29/22-1 Greg Danielewski, Chemist 09/29/22

CM44228 , CM44232 , CM44234 , CM44235

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 644448 (CM43877)

CM44228, CM44232, CM44234, CM44235

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 644963 (CM44374)

CM44228, CM44232, CM44234, CM44235

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/28/22-2 Catherine Lundigan, Greg Danielewski, Chemist 09/28/22

CM44228 , CM44232 , CM44234 , CM44235

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2022

SDG I.D.: GCM44228

IC

IC 09/29/22-1 Catherine Lundigan, Greg Danielewski, Chemist 09/29/22

CM44228

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/29/22-2 Estephany Guzman, Chemist 09/29/22

CM44232 , CM44234 , CM44235

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 644517 (CM43986)

CM44228, CM44232, CM44234, CM44235

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 644786 (CM44573)

CM44228

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 645171 (CM42811)

CM44232, CM44234

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 645174 (CM45628)

CM44235

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 09/30/22 07:58 Tina Hall, Chemist 09/30/22

CM44228, CM44231, CM44232, CM44234, CM44235

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

October 12, 2022

SDG I.D.: GCM44228

ICP Metals Narration

ARCOS 10/04/22 08:25 Tina Hall, Chemist 10/04/22

CM44228, CM44231, CM44232, CM44234, CM44235

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/07/22 08:03 Tina Hall, Chemist 10/07/22

CM44232

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 644359 (CM44228)

CM44228, CM44231, CM44232, CM44234, CM44235

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 644727 (CM43976)

CM44228, CM44231, CM44232, CM44234, CM44235

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646504 (Samples: CM44228, CM44229, CM44230, CM44232, CM44233, CM44234, CM44237): -----

The QC recovery for one analyte is above the upper range but was not reported in the sample(s), therefore no significant bias is suspected. (n-Butylbenzene)

Instrument:

CHEM17 10/09/22-1 Michael Hahn, Chemist 10/09/22

CM44228 (20X), CM44229 (20X), CM44230 (20X), CM44232 (400X), CM44233 (20X), CM44234 (400X), CM44235 (1X), CM44236 (1X),

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2022

SDG I.D.: GCM44228

VOA Narration

CM44238 (1X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: Dibromochloromethane 22% (20%), 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1009_02-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Hexachlorobutadiene 29%H (20%), 2,2-Dichloropropane 22%H (20%), n-Butylbenzene 23%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2,2-Tetrachloroethane 0.272 (0.3), 1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.083 (0.1), Acetone 0.032 (0.1), Bromoform 0.075 (0.1), Methyl ethyl ketone 0.062 (0.1), Tetrahydrofuran (THF) 0.036 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

CHEM17 10/11/22-1 Michael Hahn, Chemist 10/11/22

CM44228 (5X), CM44229 (5X), CM44230 (5X), CM44232 (20X), CM44233 (200X), CM44234 (50X), CM44237 (5X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1011_01-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
93% of target compounds met criteria.
The following compounds did not meet % deviation criteria: n-Butylbenzene 27%H (20%), n-Propylbenzene 22%H (20%), p-Isopropyltoluene 23%H (20%), sec-Butylbenzene 23%H (20%), tert-Butylbenzene 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2,2-Tetrachloroethane 0.294 (0.3),

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 12, 2022

SDG I.D.: GCM44228

VOA Narration

1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.082 (0.1), Acetone 0.035 (0.1), Bromoform 0.073 (0.1), Methyl ethyl ketone 0.061 (0.1), Tetrahydrofuran (THF) 0.037 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

QC (Batch Specific):

Batch 646250 (CM44238) CHEM17 10/9/2022-1

CM44228(20X), CM44229(20X), CM44230(20X), CM44232(400X), CM44233(20X), CM44234(400X), CM44235(1X), CM44236(1X), CM44238(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646504 (CM45646) CHEM17 10/11/2022-1

CM44228(5X), CM44229(5X), CM44230(5X), CM44232(20X), CM44233(200X), CM44234(50X), CM44237(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: n-Butylbenzene(132%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.1 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/28/22

Client Sample - Information - Identification

Matrix Codes:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] Au (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
44228	22A-AE102RR1-092822-1	GW	9/28/22	1320	3	1		4				X					X	X	X	X	
44229	22A-AE102RR2-092822-1	GW	9/28/22	1312	3	1						X	X								
44230	22A-AE102RR4-092822-1	GW	9/28/22	1315	3							X									
~~—~~	~~22A-AE102RR5-092822-1~~	GW	9/28/22		3							X									(D) 092822
~~—~~	~~22A-AE102RR5-092822-2~~	GW	9/28/22		3							X									(D) 092822
~~—~~	~~22A-AE102RR6-092822-1~~	GW	9/28/22		3	2		4				X	X				X	X	X	X	(D) 092822
44231	22A-AE103R1-092822-1	GW	9/28/22	1350				2								X					
44232	22A-AE103R2-092822-1	GW	9/28/22	1355	3	1		4				X					X	X	X	X	
44233	22A-AE103R3-092822-1	GW	9/28/22	1400	3							X									
~~—~~	~~22A-AE103R4-092822-1~~	GW	9/28/22		6	3						X	X								MS/MSD (D) 9/28/22
44234	22A-AE103R5-092822-1	GW	9/28/22	1410	3	1		4				X	X (D) 9/28/22				X	X	X	X	
~~—~~	~~22A-AE103R7-092822-1~~	GW	9/28/22		3							X									(D) 9/28/22

Relinquished by:	Accepted by:	Date:	Time:
	[signature]	9/28/22	2:30
[signature]	[signature]	9/29	16:55

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp [ ] °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-848-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/29/22

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water L=Liquid
RW=Raw Water **SE**=Sediment **SL**=Sludge S=Soil **SD**=Solid W=Wipe **OIL**=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
~~44235~~	~~22A-AE108R1-092822-1~~	~~GW~~	~~9/28/22~~		~~3~~	~~1~~						~~X~~	~~X~~								~~ND~~ 9/29/22
~~44236~~	~~22A-AE108R3-092822-1~~	~~GW~~	~~9/28/22~~		~~3~~	~~1~~						~~X~~	~~X~~								~~ND~~ 9/29/22
~~44237~~	~~22A-AE108R5-092822-1~~	~~GW~~	~~9/28/22~~		~~3~~	~~2~~	~~4~~					~~X~~	~~X~~				~~X~~	~~X~~	~~X~~	~~X~~	~~ND~~ 9/29/22
44235	22A-AE108R1-092822-1	GW	9/28/22	1330	3	2		4				X					X	X	X	X	
44236	22A-AE108R3-092822-1	GW	9/28/22	1340	3							X									
44237	22A-AE108R5-092822-1	GW	9/28/22	1350	3							X									
44238	22A-TB01-092822-1	W	9/28/22	0900	2							X									
~~44239~~	22A-																				

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9/28/22	2:30
[signature]	[signature]	9/28	16:55

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Monday, November 07, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60688023.02.2**
SDG ID: **GCM45643**
Sample ID#s: CM45643 - CM45655

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

November 07, 2022

SDG I.D.: GCM45643

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Version 2 - Added comment for the cause of the interference of the 1,4-Dioxane surrogate. Phoenix Lab ID CM45646.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

November 07, 2022

SDG I.D.: GCM45643

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-TB02-092822-1	CM45643	GROUND WATER
22A-AE102RR5-092822-1	CM45644	GROUND WATER
22A-AE102RR5-092822-2	CM45645	GROUND WATER
22A-AE103R4-092822-1	CM45646	GROUND WATER
22A-AE103R7-092822-1	CM45647	GROUND WATER
22A-AE104R1-092822-1	CM45648	GROUND WATER
22A-AE104R3-092822-1	CM45649	GROUND WATER
22A-AE104R5-092822-1	CM45650	GROUND WATER
22A-AE105D-092922-1	CM45651	GROUND WATER
22A-AE106M-092922-1	CM45652	GROUND WATER
22A-TRC301R4-092922-1	CM45653	GROUND WATER
22A-AE106M-092922-2	CM45654	GROUND WATER
22A-AE102RR6-092822-1	CM45655	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	9:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45643

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TB02-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45643

Client ID: 22A-TB02-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45643
Client ID: 22A-TB02-092822-1

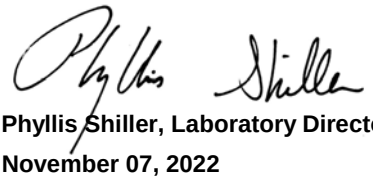
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45644

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethane	39	20	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethene	9.6	7.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/11/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45644

Client ID: 22A-AE102RR5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	180	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/11/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Tetrachloroethene	1500	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/11/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Trichloroethene	2100	100	ug/L	100	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Vinyl chloride	7.4	5.0	ug/L	20	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	94		%	20	10/11/22	MH	70 - 130 %
% Toluene-d8 (20x)	99		%	20	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	102		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	98		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45645

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR5-092822-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethane	39	20	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethene	9.6	7.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/11/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/11/22	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45645

Client ID: 22A-AE102RR5-092822-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	180	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/11/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Tetrachloroethene	1400	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/11/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Trichloroethene	2100	100	ug/L	100	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Vinyl chloride	7.5	5.0	ug/L	20	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	93		%	20	10/11/22	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	98		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	99		%	100	10/10/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45645
Client ID: 22A-AE102RR5-092822-2

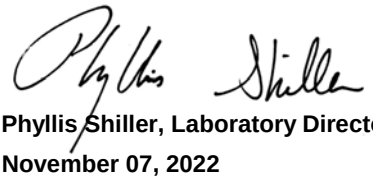
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45646

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R4-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/11/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,1-Dichloroethane	110	100	ug/L	100	10/11/22	MH	SW8260C
1,1-Dichloroethene	28	25	ug/L	100	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	100	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
2-Hexanone	ND	200	ug/L	100	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	350	ug/L	100	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45646

Client ID: 22A-AE103R4-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	2500	ug/L	100	10/11/22	MH	SW8260C
Benzene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	10/11/22	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	10/11/22	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Bromoform	ND	25	ug/L	100	10/11/22	MH	SW8260C
Bromomethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	100	10/11/22	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	100	10/11/22	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	840	100	ug/L	100	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Dibromomethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	100	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	10/11/22	MH	SW8260C
Methylene chloride	ND	50	ug/L	100	10/11/22	MH	SW8260C
Naphthalene	ND	100	ug/L	100	10/11/22	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Styrene	ND	100	ug/L	100	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Tetrachloroethene	4600	500	ug/L	500	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	10/11/22	MH	SW8260C
Toluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	80	ug/L	100	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Trichloroethene	7400	500	ug/L	500	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Vinyl chloride	100	100	ug/L	100	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	104		%	100	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	10/11/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	103		%	500	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/11/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (500x)	98		%	500	10/11/22	MH	70 - 130 %
% Toluene-d8 (500x)	96		%	500	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	100	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	30	0.20	ug/l	1	10/07/22	PS	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	Interference		%	1	10/07/22	PS	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

Dioxane:
Due to matrix interference from non target compounds in the sample, surrogate could not be reported.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45647

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R7-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,1-Dichloroethane	71	40	ug/L	40	10/11/22	MH	SW8260C
1,1-Dichloroethene	18	10	ug/L	40	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	40	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
2-Hexanone	ND	80	ug/L	40	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	10/11/22	MH	SW8260C
Acetone	ND	1000	ug/L	40	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45647

Client ID: 22A-AE103R7-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Bromoform	ND	10	ug/L	40	10/11/22	MH	SW8260C
Bromomethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	40	10/11/22	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Chloroethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Chloroform	ND	40	ug/L	40	10/11/22	MH	SW8260C
Chloromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	310	40	ug/L	40	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Dibromomethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	80	ug/L	40	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	10/11/22	MH	SW8260C
Methylene chloride	ND	20	ug/L	40	10/11/22	MH	SW8260C
Naphthalene	ND	40	ug/L	40	10/11/22	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
o-Xylene	ND	40	ug/L	40	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Styrene	ND	40	ug/L	40	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Tetrachloroethene	3300	500	ug/L	500	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	10/11/22	MH	SW8260C
Toluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Trichloroethene	5200	500	ug/L	500	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Vinyl chloride	28	10	ug/L	40	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	101		%	40	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (40x)	95		%	40	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (40x)	95		%	40	10/11/22	MH	70 - 130 %
% Toluene-d8 (40x)	100		%	40	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	103		%	500	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	94		%	500	10/11/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	96		%	500	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1600	ug/L	40	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	15:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45648

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1-Dichloroethane	38	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1-Dichloroethene	6.7	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45648

Client ID: 22A-AE104R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	10/12/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	250	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Tetrachloroethene	320	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	11	2.0	ug/L	2	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
Trichloroethene	1100	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Vinyl chloride	40	2.0	ug/L	2	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	102		%	2	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	87		%	2	10/12/22	MH	70 - 130 %
% Toluene-d8 (2x)	119		%	2	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	102		%	20	10/10/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	103		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	93		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	94		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	96		%	50	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.3	0.20	ug/l	1	10/03/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	10/03/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/03/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	15:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45649

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	45	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	11	7.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45649

Client ID: 22A-AE104R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	220	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	1300	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	2700	100	ug/L	100	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	14	5.0	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	93		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	98		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	100		%	100	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	8.3	0.20	ug/l	1	10/03/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	77		%	1	10/03/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/03/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	15:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45650

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.147	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	0.275	0.001	mg/L	1	10/06/22	TH	SW6010D
Iron	0.156	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	0.270	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	248	25.0	mg/L	5	10/01/22	CL/GD	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	09/30/22 03:11	CL/GD	E300.0
Nitrate as Nitrogen	0.05	0.05	mg/L	1	09/30/22 03:11	C/E/G	E300.0
Sulfate	23.6	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	0.16	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	2.4	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	64	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	14	7.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45650

Client ID: 22A-AE104R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	680	100	ug/L	100	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	1700	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	22	20	ug/L	20	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	4200	500	ug/L	500	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	78	20	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	104		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	97		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	10/10/22	MH	70 - 130 %
% Toluene-d8 (100x)	100		%	100	10/10/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	101		%	500	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	92		%	500	10/12/22	MH	70 - 130 %
% Toluene-d8 (500x)	95		%	500	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	14	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	88		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

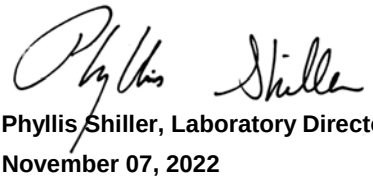
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45651

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE105D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	35.9	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	3.21	0.011	mg/L	10	10/11/22	TH	SW6010D
Iron	35.7	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	3.09	0.010	mg/L	10	10/13/22	TH	SW6010D
Chloride	175	25.0	mg/L	5	09/30/22	C/E/G	E300.0
Nitrite as Nitrogen	0.64	0.05	mg/L	5	09/30/22 07:42	C/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/30/22 03:19	C/E/G	E300.0
Sulfate	18.0	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45651

Client ID: 22A-AE105D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	23	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.4	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	21	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.97	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	88		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	10:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45652

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106M-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/06/22	TH	SW6010D
Iron (Dissolved)	0.024	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	1.47	0.001	mg/L	1	10/06/22	TH	SW6010D
Iron	0.075	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	1.45	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	616	50.0	mg/L	10	09/30/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	09/30/22 07:49	C/E/G	E300.0
Nitrate as Nitrogen	1.55	0.05	mg/L	1	09/30/22 03:27	C/E/G	E300.0
Sulfate	27.7	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45652

Client ID: 22A-AE106M-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	8.0	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	27	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45652
Client ID: 22A-AE106M-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	33	5.0	ug/L	5	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	91		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	12:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45653

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC301R4-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.019	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	0.018	0.004	mg/L	1	10/06/22	TH	SW6010D
Iron (Dissolved)	10.1	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	2.01	0.001	mg/L	1	10/06/22	TH	SW6010D
Iron	9.90	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	1.97	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	281	25.0	mg/L	5	09/30/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	09/30/22 07:57	C/E/G	E300.0
Nitrate as Nitrogen	0.06	0.05	mg/L	1	09/30/22 03:34	C/E/G	E300.0
Sulfate	153	25.0	mg/L	5	09/30/22	C/E/G	E300.0
Sulfide	0.15	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.3	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethane	1.2	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45653

Client ID: 22A-TRC301R4-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	21	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	5.7	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	11	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	30	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	7.3	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	10:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45654

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106M-092922-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/06/22	TH	SW6010D
Iron (Dissolved)	0.018	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	1.48	0.001	mg/L	1	10/06/22	TH	SW6010D
Iron	0.040	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	1.45	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	735	50.0	mg/L	10	10/01/22	CL/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/01/22 05:30	CL/GD	E300.0
Nitrate as Nitrogen	1.52	0.05	mg/L	1	09/30/22 03:42	C/E/G	E300.0
Sulfate	27.4	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45654

Client ID: 22A-AE106M-092922-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	8.7	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	28	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45654
Client ID: 22A-AE106M-092922-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	33	5.0	ug/L	5	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	101		%	5	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45655

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR6-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.611	0.011	mg/L	1	10/05/22	TH	SW6010D
Manganese (Dissolved)	0.608	0.001	mg/L	1	10/05/22	TH	SW6010D
Iron	0.674	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	0.647	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	139	25.0	mg/L	5	09/30/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	09/30/22 03:50	CL/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/30/22 03:50	C/E/G	E300.0
Sulfate	26.4	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,1-Dichloroethane	68	40	ug/L	40	10/12/22	MH	SW8260C
1,1-Dichloroethene	18	10	ug/L	40	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	40	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45655

Client ID: 22A-AE102RR6-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	40	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
2-Hexanone	ND	80	ug/L	40	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	10/12/22	MH	SW8260C
Acetone	ND	1000	ug/L	40	10/12/22	MH	SW8260C
Benzene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Bromoform	ND	10	ug/L	40	10/12/22	MH	SW8260C
Bromomethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	40	10/12/22	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Chloroethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Chloroform	ND	40	ug/L	40	10/12/22	MH	SW8260C
Chloromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	140	40	ug/L	40	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Dibromomethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	80	ug/L	40	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	10/12/22	MH	SW8260C
Methylene chloride	ND	20	ug/L	40	10/12/22	MH	SW8260C
Naphthalene	ND	40	ug/L	40	10/12/22	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
o-Xylene	ND	40	ug/L	40	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Styrene	ND	40	ug/L	40	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Tetrachloroethene	3900	500	ug/L	500	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	10/12/22	MH	SW8260C
Toluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Trichloroethene	4900	500	ug/L	500	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Vinyl chloride	ND	10	ug/L	40	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	102		%	40	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (40x)	95		%	40	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (40x)	94		%	40	10/12/22	MH	70 - 130 %
% Toluene-d8 (40x)	101		%	40	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	102		%	500	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	95		%	500	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	93		%	500	10/12/22	MH	70 - 130 %
% Toluene-d8 (500x)	96		%	500	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1600	ug/L	40	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	20	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	96		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

November 07, 2022

QA/QC Data

SDG I.D.: GCM45643

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 644590 (mg/L), QC Sample No: CM34312 (CM45650, CM45651, CM45652, CM45653, CM45654)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.006	0.007	NC	96.7	102	5.3	107			80 - 120	20
Iron	BRL	0.011	2.78	2.74	1.40	95.6	101	5.5	93.6			80 - 120	20
Manganese	BRL	0.001	35.8	38.8	8.00	96.2	103	6.8	NC			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645251 (mg/L), QC Sample No: CM45650 (CM45650, CM45651, CM45652, CM45653, CM45654, CM45655)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	0.007	NC	98.4	102	3.6	97.2			80 - 120	20
Iron	BRL	0.010	0.156	0.171	9.20	100	103	3.0	98.0			80 - 120	20
Manganese	BRL	0.001	0.270	0.268	0.70	99.5	102	2.5	97.0			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645089 (mg/L), QC Sample No: CM46668 (CM45655)													
ICP Metals - Dissolved													
Iron	BRL	0.011	7.60	7.42	2.40	94.1	86.9	8.0	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	1.20	1.18	1.70	91.7	86.2	6.2	95.8	93.6	2.3	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

November 07, 2022

QA/QC Data

SDG I.D.: GCM45643

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645186 (mg/L), QC Sample No: CM45601 (CM45650, CM45651, CM45652, CM45653, CM45654, CM45655)													
Total Organic Carbon	BRL	1.0	4.4	4.3	NC	107			98.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 645407 (mg/L), QC Sample No: CM49151 (CM45650, CM45651, CM45652, CM45653, CM45654, CM45655)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	92.3			102			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 645172 (mg/L), QC Sample No: CM44592 (CM45650, CM45651, CM45652, CM45653, CM45654, CM45655)													
Chloride	BRL	5.0	21.4	6.3	NC	95.3			95.0			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	1.71	1.69	1.20	97.4			91.3			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	103			94.8			90 - 110	20
Sulfate	BRL	5.0	10.9	10.8	NC	94.8			93.4			90 - 110	20
QA/QC Batch 645173 (mg/L), QC Sample No: CM45140 (CM45651, CM45652, CM45653, CM45655)													
Chloride	BRL	5.0	64.0	65.2	1.90	95.3			105			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.69	0.67	2.90	97.4			100			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	103			94.1			90 - 110	20
Sulfate	BRL	5.0	13.1	13.2	NC	94.8			97.9			90 - 110	20
QA/QC Batch 645633 (mg/L), QC Sample No: CM46519 (CM45650, CM45654, CM45655)													
Chloride	BRL	5.0	49.3	48.1	2.50	97.3			102			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	97.2			102			90 - 110	20
Sulfate	BRL	5.0	17.1	16.4	NC	99.1			100			90 - 110	20
QA/QC Batch 645633 (mg/L), QC Sample No: CM46519 (CM45650, CM45654, CM45655)													
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	94.8			101			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

November 07, 2022

QA/QC Data

SDG I.D.: GCM45643

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645140 (ug/l), QC Sample No: CM45650 (CM45650, CM45651, CM45655)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	89	85	4.6	NC			70 - 130	20
% 1,4-dioxane-d8	84	%	93	89	4.4	87			70 - 130	20
QA/QC Batch 644959 (ug/l), QC Sample No: CM46914 (CM45648, CM45649)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	91	88	3.4	87	81	7.1	70 - 130	20
% 1,4-dioxane-d8	82	%	84	94	11.2	85	85	0.0	70 - 130	20
QA/QC Batch 646215 (ug/l), QC Sample No: CM50906 (CM45646)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	75	83	10.1	87	85	2.3	70 - 130	20
% 1,4-dioxane-d8	80	%	82	90	9.3	71	70	1.4	70 - 130	20
QA/QC Batch 646250 (ug/L), QC Sample No: CM44238 (CM45643, CM45644 (100X) , CM45645 (100X) , CM45648 (20X) , CM45649 (100X) , CM45650 (100X) , CM45651)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	116	120	3.4				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	109	112	2.7				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	104	110	5.6				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	104	114	9.2				70 - 130	20
1,1-Dichloroethane	ND	1.0	109	112	2.7				70 - 130	20
1,1-Dichloroethene	ND	1.0	115	118	2.6				70 - 130	20
1,1-Dichloropropene	ND	1.0	122	122	0.0				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	114	122	6.8				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	99	106	6.8				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	118	123	4.1				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	117	117	0.0				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	119	124	4.1				70 - 130	20
1,2-Dibromoethane	ND	1.0	109	114	4.5				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	109	112	2.7				70 - 130	20
1,2-Dichloroethane	ND	1.0	101	110	8.5				70 - 130	20
1,2-Dichloropropane	ND	1.0	106	113	6.4				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	119	119	0.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	113	115	1.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	108	114	5.4				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	112	114	1.8				70 - 130	20
1,4-dioxane	ND	100	113	109	3.6				40 - 160	20
2,2-Dichloropropane	ND	1.0	120	122	1.7				70 - 130	20
2-Chlorotoluene	ND	1.0	117	119	1.7				70 - 130	20
2-Hexanone	ND	5.0	99	109	9.6				40 - 160	20
4-Chlorotoluene	ND	1.0	117	118	0.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	95	109	13.7				40 - 160	20
Acetone	ND	5.0	92	108	16.0				40 - 160	20

QA/QC Data

SDG I.D.: GCM45643

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzene	ND	0.70	111	115	3.5				70 - 130	20
Bromobenzene	ND	1.0	114	117	2.6				70 - 130	20
Bromochloromethane	ND	1.0	104	113	8.3				70 - 130	20
Bromodichloromethane	ND	0.50	108	115	6.3				70 - 130	20
Bromoform	ND	1.0	115	121	5.1				70 - 130	20
Bromomethane	ND	1.0	116	118	1.7				40 - 160	20
Carbon Disulfide	ND	1.0	109	111	1.8				70 - 130	20
Carbon tetrachloride	ND	1.0	115	116	0.9				70 - 130	20
Chlorobenzene	ND	1.0	110	113	2.7				70 - 130	20
Chloroethane	ND	1.0	112	113	0.9				70 - 130	20
Chloroform	ND	1.0	102	108	5.7				70 - 130	20
Chloromethane	ND	1.0	102	105	2.9				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	111	116	4.4				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	113	121	6.8				70 - 130	20
Dibromochloromethane	ND	0.50	115	121	5.1				70 - 130	20
Dibromomethane	ND	1.0	107	117	8.9				70 - 130	20
Dichlorodifluoromethane	ND	1.0	97	96	1.0				40 - 160	20
Di-isopropyl ether	ND	1.0	104	113	8.3				70 - 130	20
Ethyl ether	ND	1.0	93	103	10.2				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	103	114	10.1				70 - 130	20
Ethylbenzene	ND	1.0	117	118	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	128	124	3.2				70 - 130	20
Isopropylbenzene	ND	1.0	120	121	0.8				70 - 130	20
m&p-Xylene	ND	1.0	116	117	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	103	111	7.5				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	103	116	11.9				70 - 130	20
Methylene chloride	ND	1.0	96	102	6.1				70 - 130	20
Naphthalene	ND	1.0	115	124	7.5				70 - 130	20
n-Butylbenzene	ND	1.0	126	126	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	121	120	0.8				70 - 130	20
o-Xylene	ND	1.0	112	115	2.6				70 - 130	20
p-Isopropyltoluene	ND	1.0	123	123	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	122	123	0.8				70 - 130	20
Styrene	ND	1.0	115	118	2.6				70 - 130	20
tert-amyl methyl ether	ND	1.0	105	115	9.1				70 - 130	20
tert-Butylbenzene	ND	1.0	121	121	0.0				70 - 130	20
Tetrachloroethene	ND	1.0	116	118	1.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	83	93	11.4				70 - 130	20
Toluene	ND	1.0	112	116	3.5				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	113	115	1.8				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	112	122	8.5				70 - 130	20
Trichloroethene	ND	1.0	113	116	2.6				70 - 130	20
Trichlorofluoromethane	ND	1.0	113	113	0.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	105	105	0.0				70 - 130	20
Vinyl chloride	ND	1.0	115	117	1.7				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	99	101	2.0				70 - 130	20
% Bromofluorobenzene	97	%	98	100	2.0				70 - 130	20
% Dibromofluoromethane	97	%	92	95	3.2				70 - 130	20
% Toluene-d8	99	%	100	101	1.0				70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 646504 (ug/L), QC Sample No: CM45646 (CM45644 (20X) , CM45645 (20X) , CM45646 (100X, 500X) , CM45647 (40X, 500X) , CM45648 (50X) , CM45652, CM45653, CM45654)											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	116	121	4.2	122	123	0.8	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	104	104	0.0	112	112	0.0	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	114	117	2.6	115	118	2.6	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	106	109	2.8	114	115	0.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	100	105	4.9	109	110	0.9	70 - 130	20	
1,1-Dichloroethene	ND	1.0	106	111	4.6	115	120	4.3	70 - 130	20	
1,1-Dichloropropene	ND	1.0	114	105	8.2	126	129	2.4	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	122	127	4.0	128	133	3.8	70 - 130	20	m
1,2,3-Trichloropropane	ND	1.0	116	114	1.7	114	116	1.7	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	121	126	4.0	125	130	3.9	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	119	121	1.7	121	124	2.4	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	119	129	8.1	118	125	5.8	70 - 130	20	
1,2-Dibromoethane	ND	1.0	113	116	2.6	117	118	0.9	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	113	117	3.5	117	120	2.5	70 - 130	20	
1,2-Dichloroethane	ND	1.0	104	108	3.8	115	115	0.0	70 - 130	20	
1,2-Dichloropropane	ND	1.0	102	106	3.8	112	112	0.0	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	119	121	1.7	123	125	1.6	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	114	117	2.6	117	119	1.7	70 - 130	20	
1,3-Dichloropropane	ND	1.0	113	115	1.8	117	119	1.7	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	114	116	1.7	116	119	2.6	70 - 130	20	
1,4-dioxane	ND	100	107	109	1.9	97	103	6.0	40 - 160	20	
2,2-Dichloropropane	ND	1.0	104	107	2.8	104	107	2.8	70 - 130	20	
2-Chlorotoluene	ND	1.0	117	120	2.5	121	124	2.4	70 - 130	20	
2-Hexanone	ND	5.0	110	112	1.8	109	111	1.8	40 - 160	20	
4-Chlorotoluene	ND	1.0	118	120	1.7	121	123	1.6	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	102	110	7.5	108	106	1.9	40 - 160	20	
Acetone	ND	5.0	99	103	4.0	112	117	4.4	40 - 160	20	
Benzene	ND	0.70	104	108	3.8	115	117	1.7	70 - 130	20	
Bromobenzene	ND	1.0	115	118	2.6	117	120	2.5	70 - 130	20	
Bromochloromethane	ND	1.0	104	107	2.8	108	110	1.8	70 - 130	20	
Bromodichloromethane	ND	0.50	106	109	2.8	115	117	1.7	70 - 130	20	
Bromoform	ND	1.0	115	119	3.4	116	121	4.2	70 - 130	20	
Bromomethane	ND	1.0	101	105	3.9	70	95	30.3	40 - 160	20	r
Carbon Disulfide	ND	1.0	98	103	5.0	104	110	5.6	70 - 130	20	
Carbon tetrachloride	ND	1.0	106	111	4.6	119	121	1.7	70 - 130	20	
Chlorobenzene	ND	1.0	109	114	4.5	115	117	1.7	70 - 130	20	
Chloroethane	ND	1.0	102	106	3.8	109	113	3.6	70 - 130	20	
Chloroform	ND	1.0	98	101	3.0	107	107	0.0	70 - 130	20	
Chloromethane	ND	1.0	93	98	5.2	101	103	2.0	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	102	107	4.8	113	111	1.8	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	107	111	3.7	115	116	0.9	70 - 130	20	
Dibromochloromethane	ND	0.50	118	120	1.7	120	124	3.3	70 - 130	20	
Dibromomethane	ND	1.0	108	112	3.6	117	117	0.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	97	101	4.0	107	108	0.9	40 - 160	20	
Di-isopropyl ether	ND	1.0	102	107	4.8	108	110	1.8	70 - 130	20	
Ethyl ether	ND	1.0	97	103	6.0	102	105	2.9	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	103	108	4.7	109	110	0.9	70 - 130	20	
Ethylbenzene	ND	1.0	114	116	1.7	121	122	0.8	70 - 130	20	
Hexachlorobutadiene	ND	0.40	118	125	5.8	134	134	0.0	70 - 130	20	m

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Isopropylbenzene	ND	1.0	118	122	3.3	123	126	2.4	70 - 130	20	
m&p-Xylene	ND	1.0	114	116	1.7	120	121	0.8	70 - 130	20	
Methyl ethyl ketone	ND	5.0	110	102	7.5	115	116	0.9	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	108	4.7	106	109	2.8	70 - 130	20	
Methylene chloride	ND	1.0	93	98	5.2	100	102	2.0	70 - 130	20	
Naphthalene	ND	1.0	125	130	3.9	127	132	3.9	70 - 130	20	m
n-Butylbenzene	ND	1.0	127	132	3.9	135	137	1.5	70 - 130	20	l,m
n-Propylbenzene	ND	1.0	119	121	1.7	124	126	1.6	70 - 130	20	
o-Xylene	ND	1.0	112	114	1.8	117	118	0.9	70 - 130	20	
p-Isopropyltoluene	ND	1.0	123	126	2.4	129	131	1.5	70 - 130	20	m
sec-Butylbenzene	ND	1.0	123	126	2.4	131	133	1.5	70 - 130	20	m
Styrene	ND	1.0	115	117	1.7	121	122	0.8	70 - 130	20	
tert-amyl methyl ether	ND	1.0	105	109	3.7	112	114	1.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	120	123	2.5	126	129	2.4	70 - 130	20	
Tetrachloroethene	ND	1.0	106	110	3.7	NC	NC	NC	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	87	90	3.4	90	93	3.3	70 - 130	20	
Toluene	ND	1.0	105	109	3.7	116	116	0.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	101	106	4.8	109	113	3.6	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	109	114	4.5	114	116	1.7	70 - 130	20	
Trichloroethene	ND	1.0	106	109	2.8	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	107	111	3.7	122	124	1.6	70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	99	100	1.0	109	110	0.9	70 - 130	20	
Vinyl chloride	ND	1.0	107	113	5.5	118	121	2.5	70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	101	102	1.0	102	102	0.0	70 - 130	20	
% Bromofluorobenzene	92	%	96	97	1.0	98	97	1.0	70 - 130	20	
% Dibromofluoromethane	94	%	92	92	0.0	93	91	2.2	70 - 130	20	
% Toluene-d8	95	%	97	97	0.0	101	100	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646742 (ug/L), QC Sample No: CM46914 (CM45648 (2X) , CM45649 (20X) , CM45650 (20X, 500X) , CM45652 (5X) , CM45654 (5X) , CM45655 (40X, 500X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	120	120	0.0	105	120	13.3	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	102	105	2.9	102	122	17.9	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	120	120	0.0	97	111	13.5	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	109	111	1.8	91	104	13.3	70 - 130	20	
1,1-Dichloroethane	ND	1.0	103	105	1.9	98	108	9.7	70 - 130	20	
1,1-Dichloroethene	ND	1.0	104	106	1.9	105	116	10.0	70 - 130	20	
1,1-Dichloropropene	ND	1.0	113	116	2.6	106	127	18.0	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	131	133	1.5	109	125	13.7	70 - 130	20	l
1,2,3-Trichloropropane	ND	1.0	119	119	0.0	104	116	10.9	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	127	128	0.8	109	126	14.5	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	119	120	0.8	113	106	6.4	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	128	126	1.6	103	116	11.9	70 - 130	20	
1,2-Dibromoethane	ND	1.0	117	119	1.7	97	112	14.4	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	116	117	0.9	104	116	10.9	70 - 130	20	
1,2-Dichloroethane	ND	1.0	109	110	0.9	92	103	11.3	70 - 130	20	
1,2-Dichloropropane	ND	1.0	104	106	1.9	93	105	12.1	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	119	121	1.7	118	131	10.4	70 - 130	20	m
1,3-Dichlorobenzene	ND	1.0	115	117	1.7	107	119	10.6	70 - 130	20	
1,3-Dichloropropane	ND	1.0	116	116	0.0	98	111	12.4	70 - 130	20	

QA/QC Data

SDG I.D.: GCM45643

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,4-Dichlorobenzene	ND	1.0	115	117	1.7	105	118	11.7	70 - 130	20	
1,4-dioxane	ND	100	109	107	1.9	90	103	13.5	40 - 160	20	
2,2-Dichloropropane	ND	1.0	105	107	1.9	101	108	6.7	70 - 130	20	
2-Chlorotoluene	ND	1.0	119	119	0.0	113	126	10.9	70 - 130	20	
2-Hexanone	ND	5.0	115	117	1.7	92	106	14.1	40 - 160	20	
4-Chlorotoluene	ND	1.0	119	120	0.8	113	127	11.7	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	109	113	3.6	85	98	14.2	40 - 160	20	
Acetone	ND	5.0	106	106	0.0	119	133	11.1	40 - 160	20	
Benzene	ND	0.70	105	107	1.9	100	111	10.4	70 - 130	20	
Bromobenzene	ND	1.0	117	119	1.7	105	119	12.5	70 - 130	20	
Bromochloromethane	ND	1.0	106	107	0.9	92	100	8.3	70 - 130	20	
Bromodichloromethane	ND	0.50	108	112	3.6	95	107	11.9	70 - 130	20	
Bromoform	ND	1.0	118	118	0.0	95	107	11.9	70 - 130	20	
Bromomethane	ND	1.0	96	98	2.1	61	91	39.5	40 - 160	20	r
Carbon Disulfide	ND	1.0	96	98	2.1	94	105	11.1	70 - 130	20	
Carbon tetrachloride	ND	1.0	109	111	1.8	110	126	13.6	70 - 130	20	
Chlorobenzene	ND	1.0	111	112	0.9	103	115	11.0	70 - 130	20	
Chloroethane	ND	1.0	101	101	0.0	101	109	7.6	70 - 130	20	
Chloroform	ND	1.0	108	102	5.7	101	103	2.0	70 - 130	20	
Chloromethane	ND	1.0	88	90	2.2	84	92	9.1	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	105	106	0.9	98	108	9.7	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	111	112	0.9	94	107	12.9	70 - 130	20	
Dibromochloromethane	ND	0.50	120	121	0.8	102	116	12.8	70 - 130	20	
Dibromomethane	ND	1.0	112	113	0.9	94	107	12.9	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	83	83	0.0	83	88	5.8	40 - 160	20	
Di-isopropyl ether	ND	1.0	107	107	0.0	91	103	12.4	70 - 130	20	
Ethyl ether	ND	1.0	101	104	2.9	82	92	11.5	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	108	109	0.9	89	101	12.6	70 - 130	20	
Ethylbenzene	ND	1.0	114	115	0.9	111	127	13.4	70 - 130	20	
Hexachlorobutadiene	ND	0.40	126	129	2.4	118	142	18.5	70 - 130	20	m
Isopropylbenzene	ND	1.0	119	121	1.7	121	134	10.2	70 - 130	20	m
m&p-Xylene	ND	1.0	114	116	1.7	107	120	11.5	70 - 130	20	
Methyl ethyl ketone	ND	5.0	118	113	4.3	95	111	15.5	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	110	110	0.0	86	100	15.1	70 - 130	20	
Methylene chloride	ND	1.0	95	97	2.1	85	94	10.1	70 - 130	20	
Naphthalene	ND	1.0	134	134	0.0	109	129	16.8	70 - 130	20	l
n-Butylbenzene	ND	1.0	128	132	3.1	130	145	10.9	70 - 130	20	l,m
n-Propylbenzene	ND	1.0	120	122	1.7	120	137	13.2	70 - 130	20	m
o-Xylene	ND	1.0	112	114	1.8	108	120	10.5	70 - 130	20	
p-Isopropyltoluene	ND	1.0	122	125	2.4	127	141	10.4	70 - 130	20	m
sec-Butylbenzene	ND	1.0	124	126	1.6	124	139	11.4	70 - 130	20	m
Styrene	ND	1.0	116	117	0.9	105	119	12.5	70 - 130	20	
tert-amyl methyl ether	ND	1.0	110	111	0.9	88	101	13.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	120	122	1.7	122	135	10.1	70 - 130	20	m
Tetrachloroethene	ND	1.0	105	108	2.8	103	116	11.9	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	93	93	0.0	71	93	26.8	70 - 130	20	r
Toluene	ND	1.0	105	108	2.8	100	112	11.3	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	102	103	1.0	100	110	9.5	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	113	114	0.9	92	105	13.2	70 - 130	20	
Trichloroethene	ND	1.0	105	108	2.8	102	114	11.1	70 - 130	20	
Trichlorofluoromethane	ND	1.0	107	107	0.0	107	116	8.1	70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	98	97	1.0	98	107	8.8	70 - 130	20	
Vinyl chloride	ND	1.0	102	105	2.9	102	112	9.3	70 - 130	20	

QA/QC Data

SDG I.D.: GCM45643

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 1,2-dichlorobenzene-d4	102	%		102	101	1.0	99	99	0.0	70 - 130	20
% Bromofluorobenzene	95	%		95	97	2.1	96	97	1.0	70 - 130	20
% Dibromofluoromethane	91	%		91	92	1.1	88	102	14.7	70 - 130	20
% Toluene-d8	95	%		97	98	1.0	97	97	0.0	70 - 130	20

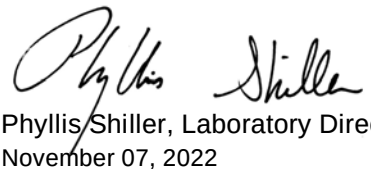
Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
November 07, 2022

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45643	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM45643	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM45643	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM45643	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM45643	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM45643	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM45643	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM45643	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM45644	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM45644	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1500	100	5	5	ug/L
CM45644	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45644	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45644	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM45644	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	180	20	20	20	ug/L
CM45644	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM45644	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM45644	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45644	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM45644	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM45644	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45644	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM45644	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45644	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	7.4	5.0	2	2	ug/L
CM45644	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2100	100	5	5	ug/L
CM45644	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45644	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	20	20	20	ug/L
CM45644	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM45644	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45644	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45644	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	100	5	5	ug/L
CM45644	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.4	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1500	100	5	5	ug/L
CM45644	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.6	7.0	7	7	ug/L
CM45644	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45644	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM45644	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45644	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45644	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.4	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	100	5	5	ug/L
CM45644	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1500	100	50	50	ug/L
CM45644	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM45644	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	20	20	20	ug/L
CM45644	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9.6	7.0	7	7	ug/L
CM45644	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	7.4	5.0	2	2	ug/L
CM45644	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM45644	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45644	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM45644	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM45644	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	20	70	70	ug/L
CM45644	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM45644	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	100	5	5	ug/L
CM45644	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1500	100	5	5	ug/L
CM45644	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1500	100	50	50	ug/L
CM45644	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM45644	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45644	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	100	5	5	ug/L
CM45644	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	20	20	20	ug/L
CM45644	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	7.4	5.0	2	2	ug/L
CM45644	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	800	0.3	0.3	ug/L
CM45644	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	800	0.3	0.3	ug/L
CM45644	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	800	0.3	0.3	ug/L
CM45645	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45645	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM45645	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	180	20	20	20	ug/L
CM45645	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45645	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45645	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1400	100	5	5	ug/L
CM45645	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45645	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2100	100	5	5	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45645	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	7.5	5.0	2	2	ug/L
CM45645	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM45645	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45645	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM45645	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM45645	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM45645	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM45645	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM45645	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM45645	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45645	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45645	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1400	100	5	5	ug/L
CM45645	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM45645	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.6	7.0	7	7	ug/L
CM45645	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45645	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45645	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	100	5	5	ug/L
CM45645	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.5	5.0	2	2	ug/L
CM45645	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM45645	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45645	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	20	20	20	ug/L
CM45645	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1400	100	50	50	ug/L
CM45645	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	20	20	20	ug/L
CM45645	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.5	5.0	2	2	ug/L
CM45645	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	100	5	5	ug/L
CM45645	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM45645	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	100	5	5	ug/L
CM45645	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1400	100	5	5	ug/L
CM45645	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	7.5	5.0	2	2	ug/L
CM45645	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM45645	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45645	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM45645	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	20	70	70	ug/L
CM45645	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45645	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM45645	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9.6	7.0	7	7	ug/L
CM45645	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM45645	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	7.5	5.0	2	2	ug/L
CM45645	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45645	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	20	20	20	ug/L
CM45645	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1400	100	50	50	ug/L
CM45645	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	100	5	5	ug/L
CM45645	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	800	0.3	0.3	ug/L
CM45645	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	800	0.3	0.3	ug/L
CM45645	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	800	0.3	0.3	ug/L
CM45646	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	7	7	ug/L
CM45646	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.00075	0.00075	ug/L
CM45646	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.00033	0.00033	ug/L
CM45646	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	3	3	ug/L
CM45646	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.0075	0.0075	ug/L
CM45646	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	4	4	ug/L
CM45646	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.47	0.47	ug/L
CM45646	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	840	100	20	20	ug/L
CM45646	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	3	3	ug/L
CM45646	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	7	7	ug/L
CM45646	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.6	0.6	ug/L
CM45646	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	8.3	8.3	ug/L
CM45646	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	38	38	ug/L
CM45646	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	5	5	ug/L
CM45646	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	110	100	70	70	ug/L
CM45646	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4600	500	5	5	ug/L
CM45646	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.47	0.47	ug/L
CM45646	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	38	38	ug/L
CM45646	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	7400	500	5	5	ug/L
CM45646	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	100	100	2	2	ug/L
CM45646	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45646	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	4	4	ug/L
CM45646	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	100	100	2	2	ug/L
CM45646	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CM45646	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7400	500	5	5	ug/L
CM45646	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CM45646	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	840	100	20	20	ug/L
CM45646	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.6	0.6	ug/L
CM45646	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CM45646	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CM45646	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4600	500	5	5	ug/L
CM45646	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	100	70	70	ug/L
CM45646	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CM45646	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	28	25	7	7	ug/L
CM45646	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.02	0.02	ug/L
CM45646	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	9	9	ug/L
CM45646	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	20	20	ug/L
CM45646	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	840	100	20	20	ug/L
CM45646	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4600	500	50	50	ug/L
CM45646	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	10	10	ug/L
CM45646	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	7400	500	5	5	ug/L
CM45646	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	7	7	ug/L
CM45646	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	3	3	ug/L
CM45646	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	6	6	ug/L
CM45646	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	100	100	2	2	ug/L
CM45646	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.6	0.6	ug/L
CM45646	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	110	100	70	70	ug/L
CM45646	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	100	100	2	2	ug/L
CM45646	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45646	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CM45646	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	7400	500	5	5	ug/L
CM45646	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4600	500	5	5	ug/L
CM45646	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	28	25	7	7	ug/L
CM45646	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	10	10	ug/L
CM45646	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	25	4	4	ug/L
CM45646	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	840	100	70	70	ug/L
CM45646	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.02	0.02	ug/L
CM45646	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	3	3	ug/L
CM45646	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	3	3	ug/L
CM45646	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	10	10	ug/L
CM45646	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	6	6	ug/L
CM45646	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	7400	500	5	5	ug/L
CM45646	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	100	100	2	2	ug/L
CM45646	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	9	9	ug/L
CM45646	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	7	7	ug/L
CM45646	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	5	5	ug/L
CM45646	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CM45646	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4600	500	50	50	ug/L
CM45646	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	20	20	ug/L
CM45646	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	840	100	20	20	ug/L
CM45646	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	7400	500	5000	5000	ug/L
CM45646	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	30	0.20	0.3	0.3	ug/l
CM45646	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	0.20	0.3	0.3	ug/l
CM45646	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	30	0.20	0.3	0.3	ug/l
CM45646	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	4000	0.3	0.3	ug/L
CM45647	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.47	0.47	ug/L
CM45647	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.0075	0.0075	ug/L
CM45647	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	5200	500	5	5	ug/L
CM45647	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	20	0.00033	0.00033	ug/L
CM45647	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00075	0.00075	ug/L
CM45647	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	7	7	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45647	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	4	4	ug/L
CM45647	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	3	3	ug/L
CM45647	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	3300	500	5	5	ug/L
CM45647	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	38	38	ug/L
CM45647	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	7	7	ug/L
CM45647	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.47	0.47	ug/L
CM45647	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	3	3	ug/L
CM45647	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	20	5	5	ug/L
CM45647	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.6	0.6	ug/L
CM45647	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	28	10	2	2	ug/L
CM45647	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	8.3	8.3	ug/L
CM45647	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	310	40	20	20	ug/L
CM45647	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	71	40	70	70	ug/L
CM45647	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	38	38	ug/L
CM45647	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3300	500	5	5	ug/L
CM45647	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CM45647	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CM45647	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CM45647	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CM45647	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	310	40	20	20	ug/L
CM45647	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CM45647	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CM45647	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CM45647	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5200	500	5	5	ug/L
CM45647	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CM45647	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	71	40	70	70	ug/L
CM45647	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	28	10	2	2	ug/L
CM45647	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	10	7	7	ug/L
CM45647	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45647	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	310	40	20	20	ug/L
CM45647	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CM45647	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	28	10	2	2	ug/L
CM45647	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5200	500	5	5	ug/L
CM45647	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3300	500	50	50	ug/L
CM45647	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CM45647	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CM45647	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CM45647	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CM45647	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5200	500	5	5	ug/L
CM45647	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CM45647	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3300	500	5	5	ug/L
CM45647	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	28	10	2	2	ug/L
CM45647	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	18	10	7	7	ug/L
CM45647	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	71	40	70	70	ug/L
CM45647	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CM45647	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CM45647	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	310	40	70	70	ug/L
CM45647	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CM45647	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45647	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	310	40	20	20	ug/L
CM45647	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5200	500	5	5	ug/L
CM45647	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CM45647	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CM45647	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CM45647	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45647	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CM45647	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3300	500	50	50	ug/L
CM45647	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CM45647	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	28	10	2	2	ug/L
CM45647	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	5200	500	5000	5000	ug/L
CM45647	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1600	0.3	0.3	ug/L
CM45647	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1600	0.3	0.3	ug/L
CM45647	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	1600	0.3	0.3	ug/L
CM45648	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1100	50	5	5	ug/L
CM45648	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	320	20	5	5	ug/L
CM45648	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM45648	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	250	20	20	20	ug/L
CM45648	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	40	2.0	2	2	ug/L
CM45648	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM45648	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM45648	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM45648	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM45648	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM45648	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	250	20	20	20	ug/L
CM45648	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	40	2.0	2	2	ug/L
CM45648	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	320	20	5	5	ug/L
CM45648	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	50	5	5	ug/L
CM45648	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	40	2.0	2	2	ug/L
CM45648	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	250	20	20	20	ug/L
CM45648	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	320	20	50	50	ug/L
CM45648	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1100	50	5	5	ug/L
CM45648	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	40	2.0	2	2	ug/L
CM45648	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1100	50	5	5	ug/L
CM45648	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	320	20	5	5	ug/L
CM45648	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM45648	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	250	20	70	70	ug/L
CM45648	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1100	50	5	5	ug/L
CM45648	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	250	20	20	20	ug/L
CM45648	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	40	2.0	2	2	ug/L
CM45648	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	320	20	50	50	ug/L
CM45648	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	9.3	0.20	0.3	0.3	ug/l
CM45648	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.3	0.20	0.3	0.3	ug/l
CM45648	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	9.3	0.20	0.3	0.3	ug/l
CM45648	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	0.3	0.3	ug/L
CM45649	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45649	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45649	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45649	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45649	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM45649	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM45649	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45649	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1300	100	5	5	ug/L
CM45649	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	14	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	220	20	20	20	ug/L
CM45649	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45649	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM45649	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM45649	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM45649	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM45649	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2700	100	5	5	ug/L
CM45649	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	220	20	20	20	ug/L
CM45649	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45649	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2700	100	5	5	ug/L
CM45649	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM45649	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1300	100	5	5	ug/L
CM45649	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45649	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45649	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45649	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM45649	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM45649	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	7.0	7	7	ug/L
CM45649	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45649	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	220	20	20	20	ug/L
CM45649	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	14	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1300	100	50	50	ug/L
CM45649	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2700	100	5	5	ug/L
CM45649	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM45649	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	7.0	7	7	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45649	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1300	100	5	5	ug/L
CM45649	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	14	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2700	100	5	5	ug/L
CM45649	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM45649	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	220	20	70	70	ug/L
CM45649	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45649	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM45649	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM45649	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM45649	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	14	5.0	2	2	ug/L
CM45649	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	220	20	20	20	ug/L
CM45649	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2700	100	5	5	ug/L
CM45649	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM45649	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45649	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1300	100	50	50	ug/L
CM45649	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	8.3	0.20	0.3	0.3	ug/l
CM45649	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	8.3	0.20	0.3	0.3	ug/l
CM45649	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	8.3	0.20	0.3	0.3	ug/l
CM45649	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	800	0.3	0.3	ug/L
CM45650	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM45650	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM45650	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	680	100	20	20	ug/L
CM45650	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45650	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45650	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM45650	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM45650	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45650	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1700	100	5	5	ug/L
CM45650	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM45650	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4200	500	5	5	ug/L
CM45650	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	78	20	2	2	ug/L
CM45650	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM45650	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM45650	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM45650	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45650	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45650	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	7.0	7	7	ug/L
CM45650	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM45650	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45650	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM45650	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1700	100	5	5	ug/L
CM45650	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM45650	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	78	20	2	2	ug/L
CM45650	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4200	500	5	5	ug/L
CM45650	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45650	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM45650	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM45650	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	680	100	20	20	ug/L
CM45650	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1700	100	50	50	ug/L
CM45650	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM45650	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	680	100	20	20	ug/L
CM45650	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	78	20	2	2	ug/L
CM45650	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4200	500	5	5	ug/L
CM45650	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4200	500	5	5	ug/L
CM45650	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1700	100	5	5	ug/L
CM45650	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	78	20	2	2	ug/L
CM45650	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM45650	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM45650	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45650	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	7.0	7	7	ug/L
CM45650	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	680	100	70	70	ug/L
CM45650	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM45650	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM45650	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	78	20	2	2	ug/L
CM45650	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM45650	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4200	500	5	5	ug/L
CM45650	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM45650	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	680	100	20	20	ug/L
CM45650	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1700	100	50	50	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45650	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	14	0.20	0.3	0.3	ug/l
CM45650	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	0.20	0.3	0.3	ug/l
CM45650	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	14	0.20	0.3	0.3	ug/l
CM45650	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	800	0.3	0.3	ug/L
CM45651	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	21	1.0	5	5	ug/L
CM45651	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM45651	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM45651	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	23	1.0	20	20	ug/L
CM45651	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM45651	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM45651	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	1.0	5	5	ug/L
CM45651	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	23	1.0	20	20	ug/L
CM45651	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	1.0	5	5	ug/L
CM45651	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	23	1.0	20	20	ug/L
CM45651	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM45651	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	21	1.0	5	5	ug/L
CM45651	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	21	1.0	5	5	ug/L
CM45651	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	23	1.0	20	20	ug/L
CM45651	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.97	0.20	0.3	0.3	ug/l
CM45651	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.97	0.20	0.3	0.3	ug/l
CM45651	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.97	0.20	0.3	0.3	ug/l
CM45651	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM45651	D-FE	Iron (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	35.9	0.011	14	14	mg/L
CM45651	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	3.21	0.011	0.43	0.43	mg/L
CM45651	FE-WM	Iron	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	35.7	0.010	14	14	mg/L
CM45651	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	3.09	0.010	0.43	0.43	mg/L
CM45652	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	27	1.0	5	5	ug/L
CM45652	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM45652	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM45652	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM45652	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	33	5.0	5	5	ug/L
CM45652	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	5.0	5	5	ug/L
CM45652	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	5	5	ug/L
CM45652	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM45652	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	5.0	5	5	ug/L
CM45652	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	27	1.0	5	5	ug/L
CM45652	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	33	5.0	5	5	ug/L
CM45652	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM45652	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	5.0	5	5	ug/L
CM45652	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45652	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM45652	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM45652	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.47	0.001	0.43	0.43	mg/L
CM45652	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.45	0.001	0.43	0.43	mg/L
CM45653	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	21	1.0	20	20	ug/L
CM45653	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	30	1.0	5	5	ug/L
CM45653	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM45653	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM45653	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM45653	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	11	1.0	5	5	ug/L
CM45653	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	7.3	1.0	2	2	ug/L
CM45653	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	5	5	ug/L
CM45653	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.3	1.0	2	2	ug/L
CM45653	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	1.0	20	20	ug/L
CM45653	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM45653	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	1.0	5	5	ug/L
CM45653	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	30	1.0	5	5	ug/L
CM45653	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	7.3	1.0	2	2	ug/L
CM45653	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	1.0	20	20	ug/L
CM45653	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	30	1.0	5	5	ug/L
CM45653	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM45653	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	7.3	1.0	2	2	ug/L
CM45653	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	1.0	5	5	ug/L
CM45653	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	30	1.0	5	5	ug/L
CM45653	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	21	1.0	20	20	ug/L
CM45653	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	7.3	1.0	2	2	ug/L
CM45653	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM45653	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM45653	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM45653	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.019	0.004	0.01	0.01	mg/L
CM45653	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.019	0.004	0.01	0.01	mg/L
CM45653	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.019	0.004	0.01	0.01	mg/L
CM45653	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.018	0.004	0.01	0.01	mg/L
CM45653	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.018	0.004	0.01	0.01	mg/L
CM45653	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.018	0.004	0.01	0.01	mg/L
CM45653	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.01	0.001	0.43	0.43	mg/L
CM45653	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.97	0.001	0.43	0.43	mg/L
CM45654	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM45654	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	28	1.0	5	5	ug/L
CM45654	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	33	5.0	5	5	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45654	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM45654	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM45654	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM45654	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	28	1.0	5	5	ug/L
CM45654	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	33	5.0	5	5	ug/L
CM45654	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	33	5.0	5	5	ug/L
CM45654	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM45654	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	28	1.0	5	5	ug/L
CM45654	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	33	5.0	5	5	ug/L
CM45654	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	33	5.0	5	5	ug/L
CM45654	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM45654	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM45654	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM45654	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.48	0.001	0.43	0.43	mg/L
CM45654	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.45	0.001	0.43	0.43	mg/L
CM45655	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.47	0.47	ug/L
CM45655	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.6	0.6	ug/L
CM45655	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	38	38	ug/L
CM45655	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	8.3	8.3	ug/L
CM45655	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	3	3	ug/L
CM45655	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	140	40	20	20	ug/L
CM45655	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	7	7	ug/L
CM45655	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.0075	0.0075	ug/L
CM45655	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	7	7	ug/L
CM45655	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	4	4	ug/L
CM45655	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	38	38	ug/L
CM45655	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.47	0.47	ug/L
CM45655	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00075	0.00075	ug/L
CM45655	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	3	3	ug/L
CM45655	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	20	5	5	ug/L
CM45655	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	3900	500	5	5	ug/L
CM45655	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	20	0.00033	0.00033	ug/L
CM45655	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	2	2	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45655	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4900	500	5	5	ug/L
CM45655	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CM45655	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4900	500	5	5	ug/L
CM45655	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CM45655	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	40	20	20	ug/L
CM45655	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3900	500	5	5	ug/L
CM45655	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CM45655	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	20	5	5	ug/L
CM45655	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CM45655	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CM45655	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CM45655	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	10	7	7	ug/L
CM45655	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CM45655	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CM45655	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CM45655	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3900	500	50	50	ug/L
CM45655	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	40	20	20	ug/L
CM45655	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CM45655	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CM45655	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4900	500	5	5	ug/L
CM45655	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CM45655	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3900	500	5	5	ug/L
CM45655	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	20	5	5	ug/L
CM45655	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4900	500	5	5	ug/L
CM45655	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM45643 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM45655	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CM45655	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CM45655	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	40	70	70	ug/L
CM45655	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CM45655	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	18	10	7	7	ug/L
CM45655	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CM45655	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CM45655	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4900	500	5	5	ug/L
CM45655	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CM45655	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3900	500	50	50	ug/L
CM45655	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	40	20	20	ug/L
CM45655	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CM45655	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CM45655	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CM45655	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CM45655	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	20	0.20	0.3	0.3	ug/l
CM45655	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	0.20	0.3	0.3	ug/l
CM45655	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	20	0.20	0.3	0.3	ug/l
CM45655	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1600	0.3	0.3	ug/L
CM45655	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.608	0.001	0.43	0.43	mg/L
CM45655	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.647	0.001	0.43	0.43	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM45643, CM45644, CM45645, CM45646, CM45647, CM45648, CM45649, CM45650, CM45651, CM45652, CM45653, CM45654, CM45655

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

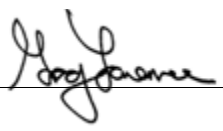
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Monday, November 07, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/03/22-1 Adam Werner, Chemist 10/03/22

CM45648 (1X), CM45649 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1003_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 10/05/22-1 Adam Werner, Chemist 10/05/22

CM45650 (1X), CM45651 (1X), CM45655 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1005_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 10/07/22-1 Adam Werner, Chemist 10/07/22

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

522 - DIOXANE

CM45646 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1007_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 644959 (CM46914)

CM45648, CM45649

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Batch 645140 (CM45650)

CM45650, CM45651, CM45655

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Batch 646215 (CM50906)

CM45646

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/05/22-1 Greg Danielewski, Chemist 10/05/22

CM45650 , CM45651 , CM45652 , CM45653 , CM45654 , CM45655

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

Wet Chemistry Analysis

QC (Batch Specific):

Batch 645186 (CM45601)

CM45650, CM45651, CM45652, CM45653, CM45654, CM45655

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 645407 (CM49151)

CM45650, CM45651, CM45652, CM45653, CM45654, CM45655

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/29/22-2 Estephany Guzman, Chemist 09/29/22

CM45650 , CM45651 , CM45652 , CM45653 , CM45654 , CM45655

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 09/30/22-2 Catherine Lundigan, Greg Danielewski, Chemist 09/30/22

CM45650 , CM45654 , CM45655

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645172 (CM44592)

CM45650, CM45651, CM45652, CM45653, CM45654, CM45655

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 645173 (CM45140)

CM45651, CM45652, CM45653, CM45655

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 645633 (CM46519)

CM45650, CM45654, CM45655

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

IC

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 10/05/22 09:03 Tina Hall, Chemist 10/05/22

CM45655

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 10/06/22 08:36 Tina Hall, Chemist 10/06/22

CM45650, CM45651, CM45652, CM45653, CM45654

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS-2 10/08/22 08:30 Tina Hall, Chemist 10/08/22

CM45650, CM45651, CM45652, CM45653, CM45654, CM45655

The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/11/22 08:00 Tina Hall, Chemist 10/11/22

CM45651

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/12/22 09:40 Tina Hall, Chemist 10/12/22

CM45651

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

November 07, 2022

SDG I.D.: GCM45643

ICP Metals Narration

range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 644590 (CM34312)

CM45650, CM45651, CM45652, CM45653, CM45654

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645089 (CM46668)

CM45655

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645251 (CM45650)

CM45650, CM45651, CM45652, CM45653, CM45654, CM45655

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

VOA Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646504 (Samples: CM45644, CM45645, CM45646, CM45647, CM45648, CM45652, CM45653, CM45654): -----

The MS and/or the MSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2,3-Trichlorobenzene, Hexachlorobutadiene, Naphthalene, p-Isopropyltoluene, sec-Butylbenzene)

The MS/MSD RPD exceeds the method criteria for one analyte, therefore there may be variability in the reported result. (Bromomethane)

The QC recovery for one analyte are above the upper range but was not reported in the sample(s), therefore no significant bias is suspected. (n-Butylbenzene)

QC Batch 646742 (Samples: CM45648, CM45649, CM45650, CM45652, CM45654, CM45655): -----

The LCS/LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2,3-Trichlorobenzene, Naphthalene)

The MS/MSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Bromomethane, Tetrahydrofuran (THF))

The QC recovery for one analyte is above the upper range but was not reported in the sample(s), therefore no significant bias is suspected. (n-Butylbenzene)

Instrument:

CHEM17 10/09/22-1 Michael Hahn, Chemist 10/09/22

CM45643 (1X), CM45644 (100X), CM45645 (100X), CM45648 (20X), CM45649 (100X), CM45650 (100X), CM45651 (1X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1009_02-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
95% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 2,2-Dichloropropane 22%H (20%), Hexachlorobutadiene 29%H (20%), n-Butylbenzene 23%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2,2-Tetrachloroethane 0.272 (0.3),

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

VOA Narration

1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.083 (0.1), Acetone 0.032 (0.1), Bromoform 0.075 (0.1), Methyl ethyl ketone 0.062 (0.1), Tetrahydrofuran (THF) 0.036 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

CHEM17 10/11/22-1 Michael Hahn, Chemist 10/11/22

CM45644 (20X), CM45645 (20X), CM45646 (1X, 100X, 500X), CM45647 (40X, 500X), CM45648 (50X), CM45652 (1X), CM45653 (1X), CM45654 (1X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1011_01-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
93% of target compounds met criteria.
The following compounds did not meet % deviation criteria: n-Butylbenzene 27%H (20%), n-Propylbenzene 22%H (20%), p-Isopropyltoluene 23%H (20%), sec-Butylbenzene 23%H (20%), tert-Butylbenzene 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2,2-Tetrachloroethane 0.294 (0.3), 1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.082 (0.1), Acetone 0.035 (0.1), Bromoform 0.073 (0.1), Methyl ethyl ketone 0.061 (0.1), Tetrahydrofuran (THF) 0.037 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

CHEM17 10/12/22-1 Michael Hahn, Chemist 10/12/22

CM45648 (2X), CM45649 (20X), CM45650 (20X, 500X), CM45652 (5X), CM45654 (5X), CM45655 (40X, 500X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

VOA Narration

Continuing Calibration Verification (CHEM17/1012_01-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2,3-Trichlorobenzene 22%H (20%), 1,2,4-Trichlorobenzene 23%H (20%), Hexachlorobutadiene 25%H (20%), n-Butylbenzene 24%H (20%), Naphthalene 24%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.036 (0.05), 2-Hexanone 0.067 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.034 (0.1), Bromoform 0.074 (0.1), Methyl ethyl ketone 0.068 (0.1), Tetrahydrofuran (THF) 0.036 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

QC (Batch Specific):

Batch 646250 (CM44238) CHEM17 10/9/2022-1

CM45643(1X), CM45644(100X), CM45645(100X), CM45648(20X), CM45649(100X), CM45650(100X), CM45651(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646742 (CM46914) CHEM17 10/12/2022-1

CM45648(2X), CM45649(20X), CM45650(20X, 500X), CM45652(5X), CM45654(5X), CM45655(40X, 500X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(131%), Naphthalene(134%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(133%), Naphthalene(134%), n-Butylbenzene(132%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 646504 (CM45646) CHEM17 10/11/2022-1

CM45644(20X), CM45645(20X), CM45646(100X, 500X), CM45647(40X, 500X), CM45648(50X), CM45652(1X), CM45653(1X), CM45654(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: n-Butylbenzene(132%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Hexachlorobutadiene(134%), n-Butylbenzene(135%), sec-Butylbenzene(131%)
All MSD recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(133%), Hexachlorobutadiene(134%), Naphthalene(132%), n-Butylbenzene(137%), p-Isopropyltoluene(131%), sec-Butylbenzene(133%)
All MS/MSD RPDs were less than 20% with the following exceptions: Bromomethane(30.3%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM45643

VOA Narration

The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 1.3 °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification
Sampler's Signature [signature] Date: 9/29/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
45643	22A-TB02-092822-1	GW	9/28/22	0905	2							X									
45644	22A-AE102RR5-092822-1	GW	9/28/22	1320	3							X									
45645	22A-AE102RR5-092822-2	GW	9/28/22	1325	3	~~2~~						X									
45646	22A-AE103R4-092822-1	GW	9/28/22	1405	9	3						X	X								MS/MSD
45647	22A-AE103R7-092822-1	GW	9/28/22	1430	3							X									
45648	22A-AE104R1-092822-1	GW	9/28/22	1505	3	1						X	X								
45649	22A-AE104R3-092822-1	GW	9/28/22	1510	3	1						X	X								
45650	22A-AE104R5-092822-1	GW	9/28/22	1515	3	2		4				X	X				X	X	X	X	
45651	22A-AE105D-092922-1	GW	9/29/22	1130	3	2		4				X	X				X	X	X	X	
45652	22A-AE106M-092922-1	GW	9/29/22	1050	3	1		4				X				X	X	X	X	X	
45653	22A-AE-TRC301R4-092922-1	GW	9/29/22	1200	3	1		4				X				X	X	X	X	X	
45654	22A-AE106M-092922-2	GW	9/29/22	1055	3	1		4				X				X	X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9.29.22	1430
ST	[signature]	9/29	1816

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

State where samples were collected: MA

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 1.3 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5236
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/29/22

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
451055	22A-AE102RR6-092822-1	GW	9/28/22	1330	3	2		4				X	X				X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9.29.22	1430
ST		9/29	1816

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [X] MCP (CAM Rpt)
- [X] GW-1
- [X] GW-2
- [X] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

State where samples were collected: MA

Data Format
- [x] PDF
- [x] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

Rebecca Merz

From: Murphy, Tessa <Tessa.Murphy@aecom.com>
Sent: Friday, September 30, 2022 11:38 AM
To: Rebecca Merz
Cc: Herberich, Lori; Olson, Scott (Chelmsford); Potter, Dylan (Chelmsford)
Subject: RE: Phoenix Labs - GCM45643, LOCKHEED-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

That is correct. Thanks!

Tessa Murphy
Pronouns: *she, her, hers*
Entry Level Environmental Scientist
M +1-978-382-5209
tessa.murphy@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, United States
T +1-978-905-2100
aecom.com

From: Rebecca Merz <Rebeccam@phoenixlabs.com>
Sent: Friday, September 30, 2022 11:13
To: Murphy, Tessa <Tessa.Murphy@aecom.com>
Cc: Herberich, Lori <Lori.Herberich@aecom.com>; Olson, Scott (Chelmsford) <scott.olson@aecom.com>; Potter, Dylan (Chelmsford) <Dylan.Potter2@aecom.com>
Subject: RE: Phoenix Labs - GCM45643, LOCKHEED-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

Hi Tessa,

We've updated the ID for CM45654. We have corrected the 1,4-Dioxane login and currently the following are being analyzed:

22A-AE103R4-092822-1 (CM45646)
22A-AE104R1-092822-1 (CM45648)
22A-AE104R3-092822-1 (CM45649+)
22A-AE104R5-092822-1 (CM45650)
22A-AE105D-092922-1 (CM45651)
22A-AE102RR6-092822-1 (CM45655)

Please correct me if I have this wrong **J**

Thank you,

Rebecca Merz

New England Sales Manager
Phoenix Environmental Laboratories, Inc.
860-212-9457 (mobile)

rebeccam@phoenixlabs.com
https://www.phoenixlabs.com/

Please note I will be on PTO 10/7 through 10/11

From: Murphy, Tessa <Tessa.Murphy@aecom.com>
Sent: Friday, September 30, 2022 10:48 AM
To: Rebecca Merz <Rebeccam@phoenixlabs.com>
Cc: Herberich, Lori <Lori.Herberich@aecom.com>; Olson, Scott (Chelmsford) <scott.olson@aecom.com>; Potter, Dylan (Chelmsford) <Dylan.Potter2@aecom.com>
Subject: RE: Phoenix Labs - GCM45643, LOCKHEED-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

Hi Rebecca,

Please see the attached PDF for corrections.

- Sample ID CM45654 should have the client ID corrected to say 22A-AE106M-092922-2.
- To clarify your message below, was the 1,4-Dioxane fix for these samples? They should not be analyzed for 1,4-Dioxane per the COC.
  22A-AE106M-092922-1
  22A-TRC301R4-092922-1
  22A-AE106M-092922-2 (corrected ID)

Thanks!

Tessa Murphy
Pronouns: *she, her, hers*
Entry Level Environmental Scientist
M +1-978-382-5209
tessa.murphy@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, United States
T +1-978-905-2100
aecom.com

From: Rebecca Merz <Rebeccam@phoenixlabs.com>
Sent: Friday, September 30, 2022 09:58
To: Murphy, Tessa <Tessa.Murphy@aecom.com>
Subject: FW: Phoenix Labs - GCM45643, LOCKHEED-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

We have fixed the 1,4-Dioxane. We had missed one sample and had it logged in on a few that it should have been. All set **J**

Rebecca Merz

New England Sales Manager
Phoenix Environmental Laboratories, Inc.
860-212-9457 (mobile)
rebeccam@phoenixlabs.com
https://www.phoenixlabs.com/

Please note I will be on PTO 10/7 through 10/11

From: Sample Receiving - Phoenix Labs <samplereceiving@phoenixlabs.com>
Sent: Thursday, September 29, 2022 10:08 PM
To: Rebecca Merz <Rebeccam@phoenixlabs.com>
Subject: Phoenix Labs - GCM45643, LOCKHEED-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

This is an automated sample acknowledgement.

If you were issued a Phoenix Price Quote # for this SDG and it was not listed on the chain, please email client services with the quote number so we can ensure proper invoicing. If no quote was issued, no further action is required.

Purchase Order#: 148194

Samples Will Be Disposed After: 75 Days

GCM45643 Criteria:
GROUND WATER(13): MA CAM, MA GW1 (GW-1), MA GW2 (GW-2), MA GW3 (GW-3)

Please email client services only if you require criteria different than what is listed.

Delivery group GCM45643 (LOCKHEED-WILMINGTON MA 60688023.02.2) has been logged in for the following samples:

Phoenix Id	Client Id
CM45643	22A-TB02-092822-1
CM45644	22A-AE102RR5-092822-1
CM45645	22A-AE102RR5-092822-2
CM45646	22A-AE103R4-092822-1
CM45647	22A-AE103R7-092822-1
CM45648	22A-AE104R1-092822-1
CM45649	22A-AE104R3-092822-1
CM45650	22A-AE104R5-092822-1
CM45651	22A-AE105D-092922-1
CM45652	22A-AE106M-092922-1
CM45653	22A-TRC301R4-092922-1
CM45654	22A-AE106M-092922-1
CM45655	22A-AE102RR6-092822-1

The samples in this delivery group were received at 1.3°C. (Note acceptance criteria for relevant matrices is above freezing up to 6°C)

If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.

Thank you for your business,

Phoenix Environmental Laboratories, Inc.

587 East Middle Turnpike
P.O. Box 370
Manchester, CT 06374
Tel. (860) 645-1102
Fax. (860) 645-0823
www.phoenixlabs.com

Please do not reply to this email.
cc'd:rebeccam@phoenixlabs.com;Lori.Herberich@aecom.com;Scott.Olson@aecom.com;dylan.potter@aecom.com;tessa.murphy@aecom.com

PHOENIX
Environmental Laboratories, Inc.

Thursday, October 13, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60688023.02.2**
SDG ID: **GCM46662**
Sample ID#s: CM46662 - CM46672

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 13, 2022

SDG I.D.: GCM46662

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 13, 2022

SDG I.D.: GCM46662

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-AE106R3-092922-1	CM46662	GROUND WATER
22A-AE106R5-092922-1	CM46663	GROUND WATER
22A-MW4A-093022-1	CM46664	GROUND WATER
22A-MW4A-093022-2	CM46665	GROUND WATER
22A-PS3-093022-1	CM46666	GROUND WATER
22A-PS5D-093022-1	CM46667	GROUND WATER
22A-AE03-093022-1	CM46668	GROUND WATER
22A-AE04-093022-1	CM46669	GROUND WATER
22A-TRC103-093022-1	CM46670	GROUND WATER
22A-TRC102-093022-1	CM46671	GROUND WATER
22A-TB01-092922-1	CM46672	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46662

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Iron (Dissolved)	0.113	0.011	mg/L	1	10/05/22	TH	SW6010D	
Manganese (Dissolved)	0.195	0.001	mg/L	1	10/05/22	TH	SW6010D	
Iron	0.120	0.010	mg/L	1	10/07/22	TH	SW6010D	B*
Manganese	0.209	0.001	mg/L	1	10/07/22	TH	SW6010D	
Chloride	146	25.0	mg/L	5	10/07/22	BS/EG	E300.0	
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/01/22 02:02	CL/GD	E300.0	
Nitrate as Nitrogen	0.21	0.05	mg/L	1	09/30/22 23:40	CL/GD	E300.0	
Sulfate	15.0	5.0	mg/L	1	09/30/22	CL/GD	E300.0	
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11	
Total Organic Carbon	1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14	
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A	
Total Metals Digestion	Completed				09/30/22	AG		
Volatiles								
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C	
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1-Dichloroethane	1.6	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C	
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C	

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46662

Client ID: 22A-AE106R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	3.8	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	14	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	1.0	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/11/22	MH	70 - 130 %

Oxygenates& Dioxane

1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

B* = Present in blank, a bias is possible.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	13:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46663

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106R5-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethane	1.6	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46663

Client ID: 22A-AE106R5-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	19	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	30	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	79		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	10:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46664

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-MW4A-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.007	0.004	mg/L	1	10/05/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46664

Client ID: 22A-MW4A-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	9.2	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.0	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	1.1	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	1.2	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46664
Client ID: 22A-MW4A-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	103		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	102		%	1	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.31	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	84		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	10:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46665

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-MW4A-093022-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.010	0.004	mg/L	1	10/05/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46665

Client ID: 22A-MW4A-093022-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	8.9	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.9	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	1.1	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	1.1	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %

Ver 1

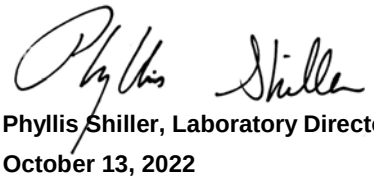
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46665
Client ID: 22A-MW4A-093022-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	103		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	102		%	1	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.26	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	83		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46666

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PS3-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46666

Client ID: 22A-PS3-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

Ver 1

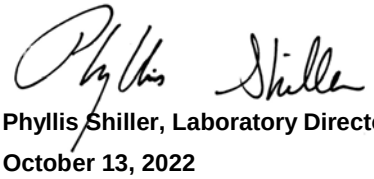
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46666
Client ID: 22A-PS3-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	11:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46667

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PS5D-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46667
Client ID: 22A-PS5D-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.0	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	2.8	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

Ver 1

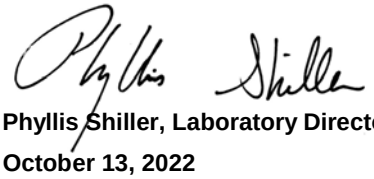
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46667
Client ID: 22A-PS5D-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	10:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46668

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE03-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.035	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.032	0.004	mg/L	1	10/05/22	TH	SW6010D
Client MS/MSD	Completed				10/06/22		
EPH Extraction	Completed				10/05/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				09/30/22	X/K	SW3520C
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	3.0	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/03/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Naphthalene	3.5	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pyrene	ND	0.07	ug/L	1	10/03/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	10/03/22	WB	40 - 140 %
% Nitrobenzene-d5	86		%	1	10/03/22	WB	40 - 140 %
% Terphenyl-d14	56		%	1	10/03/22	WB	40 - 140 %

MA EPH Aliphatic/Aromatic Ranges

C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	59		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	86		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	90		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	86		%	1	10/07/22	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	650	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	450	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	200	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	5.8	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	2.1	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	113		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	109		%	1	10/05/22	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

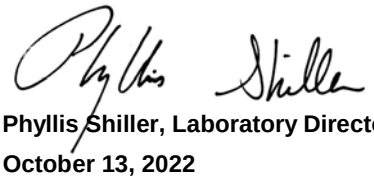
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	9:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46669

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE04-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				09/30/22	X/K	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/03/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/03/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/03/22	WB	40 - 140 %
% Nitrobenzene-d5	81		%	1	10/03/22	WB	40 - 140 %
% Terphenyl-d14	58		%	1	10/03/22	WB	40 - 140 %

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46669
Client ID: 22A-AE04-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	65		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	80		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	81		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	71		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	112		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	109		%	1	10/05/22	V	70 - 130 %

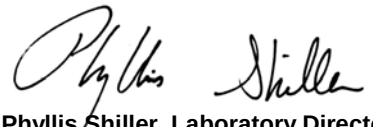
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	11:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46670

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC103-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				09/30/22	X/K	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/04/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/04/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/04/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/04/22	WB	40 - 140 %
% Nitrobenzene-d5	68		%	1	10/04/22	WB	40 - 140 %
% Terphenyl-d14	45		%	1	10/04/22	WB	40 - 140 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46670
Client ID: 22A-TRC103-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	69		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	83		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	87		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	82		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	118		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	110		%	1	10/05/22	V	70 - 130 %

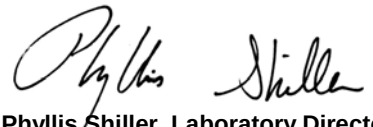
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	13:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46671

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC102-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.052	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	0.047	0.004	mg/L	1	10/05/22	TH	SW6010D
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/04/22	X/K	SW3520C
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46671

Client ID: 22A-TRC102-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	4.7	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/05/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/05/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/05/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	10/05/22	WB	40 - 140 %
% Nitrobenzene-d5	80		%	1	10/05/22	WB	40 - 140 %
% Terphenyl-d14	68		%	1	10/05/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	67		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	83		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	85		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	82		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46671
Client ID: 22A-TRC102-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	117		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	113		%	1	10/05/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	9:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46672

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TB01-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46672

Client ID: 22A-TB01-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	117		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	94		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46672

Client ID: 22A-TB01-092922-1

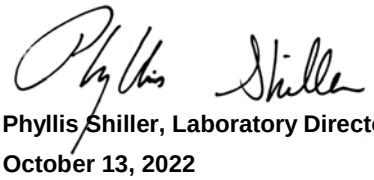
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 13, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 13, 2022

QA/QC Data

SDG I.D.: GCM46662

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645251 (mg/L), QC Sample No: CM45650 (CM46671)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	0.007	NC	98.4	102	3.6	97.2			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 644778 (mg/L), QC Sample No: CM46668 (CM46662, CM46664, CM46665, CM46668)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.035	0.039	10.8	103	99.8	3.2	111	108	2.7	80 - 120	20
Iron	0.015	0.010	8.23	8.75	6.10	108	105	2.8	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	1.29	1.36	5.30	109	105	3.7	119	115	3.4	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645089 (mg/L), QC Sample No: CM46668 (CM46662, CM46664, CM46665, CM46668, CM46671)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.032	0.030	6.50	89.0	84.8	4.8	91.7	91.4	0.3	80 - 120	20
Iron	BRL	0.011	7.60	7.42	2.40	94.1	86.9	8.0	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	1.20	1.18	1.70	91.7	86.2	6.2	95.8	93.6	2.3	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 13, 2022

QA/QC Data

SDG I.D.: GCM46662

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645186 (mg/L), QC Sample No: CM45601 (CM46662)													
Total Organic Carbon	BRL	1.0	4.4	4.3	NC	107			98.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 645407 (mg/L), QC Sample No: CM49151 (CM46662)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	92.3			102			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 645633 (mg/L), QC Sample No: CM46519 (CM46662)													
Chloride	BRL	5.0	49.3	48.1	2.50	97.3			102			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	97.2			102			90 - 110	20
Sulfate	BRL	5.0	17.1	16.4	NC	99.1			100			90 - 110	20
QA/QC Batch 645838 (mg/L), QC Sample No: CM50665 (CM46662)													
Chloride	BRL	5.0	41.2	41.7	1.20	95.0			102			90 - 110	20
Sulfate	BRL	5.0	10.2	10.1	NC	94.4			103			90 - 110	20
QA/QC Batch 645633 (mg/L), QC Sample No: CM46519 (CM46662)													
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	94.8			101			90 - 110	20
QA/QC Batch 645838 (mg/L), QC Sample No: CM50665 (CM46662)													
Nitrate as Nitrogen	BRL	0.05	3.37	3.36	0.30	98.3			108			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 13, 2022

QA/QC Data

SDG I.D.: GCM46662

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 645140 (ug/l), QC Sample No: CM45650 (CM46663, CM46664, CM46665)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	89	85	4.6	NC			70 - 130	20	
% 1,4-dioxane-d8	84	%	93	89	4.4	87			70 - 130	20	
QA/QC Batch 645375 (ug/L), QC Sample No: CM46668 (CM46668)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	55	54	1.8	54	56	3.6	40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	71	69	2.9	73	73	0.0	40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	60	59	1.7	61	58	5.0	40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
C9 - Nonane	ND	10	27	30	10.5	37	42	12.7	40 - 140	25	l,m
C-10 Decane	ND	10	41	42	2.4	43	47	8.9	40 - 140	25	
C12 - Dodecane	ND	10	55	53	3.7	49	52	5.9	40 - 140	25	
C14 - Tetradecane	ND	10	62	59	5.0	56	58	3.5	40 - 140	25	
C16 - Hexadecane	ND	10	69	65	6.0	64	65	1.6	40 - 140	25	
C18 - Octadecane	ND	10	76	72	5.4	74	72	2.7	40 - 140	25	
C19 - Nonadecane	ND	10	73	70	4.2	71	69	2.9	40 - 140	25	
C20 - Eicosane	ND	10	74	71	4.1	72	70	2.8	40 - 140	25	
C22 - Docosane	ND	10	73	70	4.2	72	70	2.8	40 - 140	25	
C24 - Tetracosane	ND	10	75	72	4.1	73	71	2.8	40 - 140	25	
C26 - Hexacosane	ND	10	77	74	4.0	75	73	2.7	40 - 140	25	
C28 - Octacosane	ND	10	75	73	2.7	75	73	2.7	40 - 140	25	
C30 - Tricotane	ND	10	73	70	4.2	72	72	0.0	40 - 140	25	
C36 - Hexatriacontane	ND	10	52	49	5.9	76	84	10.0	40 - 140	25	
% 1-chlorooctadecane (aliphatic)	70	%	86	79	8.5	75	69	8.3	40 - 140	25	
% o-terphenyl (aromatic)	86	%	88	82	7.1	86	82	4.8	40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	97	%	97	89	8.6	103	91	12.4	40 - 140	25	
% 2-Bromonaphthalene (Fractionati	91	%	102	95	7.1	105	96	9.0	40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 645596 (ug/L), QC Sample No: CM49088 (CM46669, CM46670, CM46671)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	74	65	12.9				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	96	86	11.0				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	78	68	13.7				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
C9 - Nonane	ND	10	43	39	9.8				40 - 140	25	l
C-10 Decane	ND	10	57	50	13.1				40 - 140	25	
C12 - Dodecane	ND	10	72	62	14.9				40 - 140	25	
C14 - Tetradecane	ND	10	83	71	15.6				40 - 140	25	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
C16 - Hexadecane	ND	10	89	79	11.9				40 - 140	25	
C18 - Octadecane	ND	10	98	89	9.6				40 - 140	25	
C19 - Nonadecane	ND	10	94	85	10.1				40 - 140	25	
C20 - Eicosane	ND	10	94	85	10.1				40 - 140	25	
C22 - Docosane	ND	10	96	87	9.8				40 - 140	25	
C24 - Tetracosane	ND	10	97	89	8.6				40 - 140	25	
C26 - Hexacosane	ND	10	96	88	8.7				40 - 140	25	
C28 - Octacosane	ND	10	96	87	9.8				40 - 140	25	
C30 - Tricotane	ND	10	93	86	7.8				40 - 140	25	
C36 - Hexatriacontane	ND	10	100	84	17.4				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	77	%	77	71	8.1				40 - 140	25	
% o-terphenyl (aromatic)	77	%	76	69	9.7				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	74	%	77	77	0.0				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	78	%	77	75	2.6				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 644757 (ug/L), QC Sample No: CM46668 (CM46668, CM46669, CM46670)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	66	62	6.3	51	46	10.3	40 - 140	20	
Acenaphthene	ND	0.50	70	67	4.4	65	61	6.3	40 - 140	20	
Acenaphthylene	ND	0.10	62	62	0.0	58	55	5.3	40 - 140	20	
Anthracene	ND	0.10	75	72	4.1	68	65	4.5	40 - 140	20	
Benz(a)anthracene	ND	0.02	81	75	7.7	62	64	3.2	40 - 140	20	
Benzo(a)pyrene	ND	0.02	75	66	12.8	54	57	5.4	40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	76	66	14.1	52	55	5.6	40 - 140	20	
Benzo(ghi)perylene	ND	0.02	85	66	25.2	58	60	3.4	40 - 140	20	r
Benzo(k)fluoranthene	ND	0.02	74	62	17.6	50	53	5.8	40 - 140	20	
Chrysene	ND	0.02	77	69	11.0	58	59	1.7	40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	94	71	27.9	64	68	6.1	40 - 140	20	r
Fluoranthene	ND	0.50	79	75	5.2	68	66	3.0	40 - 140	20	
Fluorene	ND	0.10	74	72	2.7	69	64	7.5	40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	103	80	25.1	70	73	4.2	40 - 140	20	r
Naphthalene	ND	0.50	68	62	9.2	50	45	10.5	40 - 140	20	
Phenanthrene	ND	0.06	77	73	5.3	71	66	7.3	40 - 140	20	
Pyrene	ND	0.07	81	76	6.4	68	67	1.5	40 - 140	20	
% 2-Fluorobiphenyl	64	%	64	64	0.0	60	54	10.5	40 - 140	20	
% Nitrobenzene-d5	80	%	74	77	4.0	84	77	8.7	40 - 140	20	
% Terphenyl-d14	82	%	77	70	9.5	57	58	1.7	40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 645258 (ug/L), QC Sample No: CM46671 (CM46671)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	111	91	19.8				40 - 140	20	
Acenaphthene	ND	0.50	64	76	17.1				40 - 140	20	
Acenaphthylene	ND	0.10	66	66	0.0				40 - 140	20	
Anthracene	ND	0.10	57	75	27.3				40 - 140	20	r
Benz(a)anthracene	ND	0.02	88	88	0.0				40 - 140	20	
Benzo(a)pyrene	ND	0.02	75	75	0.0				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	89	89	0.0				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(ghi)perylene	ND	0.02	87	87	0.0				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	85	85	0.0				40 - 140	20	
Chrysene	ND	0.02	82	82	0.0				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	88	88	0.0				40 - 140	20	
Fluoranthene	ND	0.50	55	74	29.5				40 - 140	20	r
Fluorene	ND	0.10	74	80	7.8				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	90	90	0.0				40 - 140	20	
Naphthalene	ND	0.50	117	94	21.8				40 - 140	20	r
Phenanthrene	ND	0.06	81	87	7.1				40 - 140	20	
Pyrene	ND	0.07	88	88	0.0				40 - 140	20	
% 2-Fluorobiphenyl	77	%	67	69	2.9				40 - 140	20	
% Nitrobenzene-d5	84	%	81	83	2.4				40 - 140	20	
% Terphenyl-d14	74	%	52	70	29.5				40 - 140	20	r

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 646395 (ug/L), QC Sample No: CM46672 (CM46672)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	111	97	13.5				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	114	92	21.4				70 - 130	20	r
1,1,2,2-Tetrachloroethane	ND	0.50	102	97	5.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	94	98	4.2				70 - 130	20	
1,1-Dichloroethane	ND	1.0	108	91	17.1				70 - 130	20	
1,1-Dichloroethene	ND	1.0	103	80	25.1				70 - 130	20	r
1,1-Dichloropropene	ND	1.0	129	115	11.5				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	115	99	15.0				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	106	101	4.8				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	113	96	16.3				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	117	97	18.7				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	108	107	0.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	109	102	6.6				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	105	89	16.5				70 - 130	20	
1,2-Dichloroethane	ND	1.0	99	102	3.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	103	93	10.2				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	118	95	21.6				70 - 130	20	r
1,3-Dichlorobenzene	ND	1.0	110	91	18.9				70 - 130	20	
1,3-Dichloropropane	ND	1.0	111	101	9.4				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	110	93	16.7				70 - 130	20	
1,4-dioxane	ND	100	105	104	1.0				40 - 160	20	
2,2-Dichloropropane	ND	1.0	122	95	24.9				70 - 130	20	r
2-Chlorotoluene	ND	1.0	111	92	18.7				70 - 130	20	
2-Hexanone	ND	5.0	106	104	1.9				40 - 160	20	
4-Chlorotoluene	ND	1.0	114	95	18.2				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	92	103	11.3				40 - 160	20	
Acetone	ND	5.0	86	82	4.8				40 - 160	20	
Benzene	ND	0.70	120	113	6.0				70 - 130	20	
Bromobenzene	ND	1.0	107	93	14.0				70 - 130	20	
Bromochloromethane	ND	1.0	115	106	8.1				70 - 130	20	
Bromodichloromethane	ND	0.50	104	96	8.0				70 - 130	20	
Bromoform	ND	1.0	114	105	8.2				70 - 130	20	
Bromomethane	ND	1.0	98	80	20.2				40 - 160	20	
Carbon Disulfide	ND	1.0	108	82	27.4				70 - 130	20	r

QA/QC Data

SDG I.D.: GCM46662

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon tetrachloride	ND	1.0	118	94	22.6				70 - 130	20	r
Chlorobenzene	ND	1.0	107	91	16.2				70 - 130	20	
Chloroethane	ND	1.0	141	106	28.3				70 - 130	20	l,r
Chloroform	ND	1.0	115	99	15.0				70 - 130	20	
Chloromethane	ND	1.0	99	81	20.0				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	122	105	15.0				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	99	101	2.0				70 - 130	20	
Dibromochloromethane	ND	0.50	112	104	7.4				70 - 130	20	
Dibromomethane	ND	1.0	105	99	5.9				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	94	71	27.9				40 - 160	20	r
Di-isopropyl ether	ND	1.0	110	97	12.6				70 - 130	20	
Ethyl ether	ND	1.0	96	85	12.2				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	117	105	10.8				70 - 130	20	
Ethylbenzene	ND	1.0	113	92	20.5				70 - 130	20	
Hexachlorobutadiene	ND	0.40	111	89	22.0				70 - 130	20	r
Isopropylbenzene	ND	1.0	119	96	21.4				70 - 130	20	r
m&p-Xylene	ND	1.0	116	95	19.9				70 - 130	20	
Methyl ethyl ketone	ND	5.0	121	118	2.5				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	96	7.0				70 - 130	20	
Methylene chloride	ND	1.0	96	85	12.2				70 - 130	20	
Naphthalene	ND	1.0	123	111	10.3				70 - 130	20	
n-Butylbenzene	ND	1.0	121	97	22.0				70 - 130	20	r
n-Propylbenzene	ND	1.0	116	95	19.9				70 - 130	20	
o-Xylene	ND	1.0	117	96	19.7				70 - 130	20	
p-Isopropyltoluene	ND	1.0	124	99	22.4				70 - 130	20	r
sec-Butylbenzene	ND	1.0	121	98	21.0				70 - 130	20	r
Styrene	ND	1.0	120	101	17.2				70 - 130	20	
tert-amyl methyl ether	ND	1.0	109	113	3.6				70 - 130	20	
tert-Butylbenzene	ND	1.0	119	96	21.4				70 - 130	20	r
Tetrachloroethene	ND	1.0	96	88	8.7				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	129	124	4.0				70 - 130	20	
Toluene	ND	1.0	96	90	6.5				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	99	81	20.0				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	101	105	3.9				70 - 130	20	
Trichloroethene	ND	1.0	99	81	20.0				70 - 130	20	
Trichlorofluoromethane	ND	1.0	110	85	25.6				70 - 130	20	r
Trichlorotrifluoroethane	ND	1.0	99	78	23.7				70 - 130	20	r
Vinyl chloride	ND	1.0	102	80	24.2				70 - 130	20	r
% 1,2-dichlorobenzene-d4	102	%	99	98	1.0				70 - 130	20	
% Bromofluorobenzene	94	%	102	101	1.0				70 - 130	20	
% Dibromofluoromethane	102	%	100	102	2.0				70 - 130	20	
% Toluene-d8	97	%	88	100	12.8				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646501 (ug/L), QC Sample No: CM58488 (CM46662, CM46663, CM46664, CM46665, CM46666, CM46667, CM46671)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	109	10.6				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	92	100	8.3				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	103	118	13.6				70 - 130	20	

QA/QC Data

SDG I.D.: GCM46662

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1,2-Trichloroethane	ND	1.0	90	104	14.4				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	111	8.5				70 - 130	20
1,1-Dichloroethene	ND	1.0	98	102	4.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	91	102	11.4				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	99	117	16.7				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	113	126	10.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	106	121	13.2				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	110	117	6.2				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	102	115	12.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	98	109	10.6				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	106	116	9.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	107	10.8				70 - 130	20
1,2-Dichloropropane	ND	1.0	94	105	11.1				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	117	6.2				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	108	117	8.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	99	111	11.4				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	106	114	7.3				70 - 130	20
1,4-dioxane	ND	100	102	109	6.6				40 - 160	20
2,2-Dichloropropane	ND	1.0	93	100	7.3				70 - 130	20
2-Chlorotoluene	ND	1.0	109	115	5.4				70 - 130	20
2-Hexanone	ND	5.0	94	111	16.6				40 - 160	20
4-Chlorotoluene	ND	1.0	110	119	7.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	90	107	17.3				40 - 160	20
Acetone	ND	5.0	103	118	13.6				40 - 160	20
Benzene	ND	0.70	92	102	10.3				70 - 130	20
Bromobenzene	ND	1.0	108	117	8.0				70 - 130	20
Bromochloromethane	ND	1.0	91	104	13.3				70 - 130	20
Bromodichloromethane	ND	0.50	92	105	13.2				70 - 130	20
Bromoform	ND	1.0	91	105	14.3				70 - 130	20
Bromomethane	ND	1.0	105	115	9.1				40 - 160	20
Carbon Disulfide	ND	1.0	94	99	5.2				70 - 130	20
Carbon tetrachloride	ND	1.0	86	97	12.0				70 - 130	20
Chlorobenzene	ND	1.0	100	108	7.7				70 - 130	20
Chloroethane	ND	1.0	103	112	8.4				70 - 130	20
Chloroform	ND	1.0	95	104	9.0				70 - 130	20
Chloromethane	ND	1.0	93	101	8.2				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	96	108	11.8				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	90	101	11.5				70 - 130	20
Dibromochloromethane	ND	0.50	95	110	14.6				70 - 130	20
Dibromomethane	ND	1.0	91	105	14.3				70 - 130	20
Dichlorodifluoromethane	ND	1.0	78	86	9.8				40 - 160	20
Di-isopropyl ether	ND	1.0	103	114	10.1				70 - 130	20
Ethyl ether	ND	1.0	95	104	9.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	95	107	11.9				70 - 130	20
Ethylbenzene	ND	1.0	102	109	6.6				70 - 130	20
Hexachlorobutadiene	ND	0.40	108	117	8.0				70 - 130	20
Isopropylbenzene	ND	1.0	108	114	5.4				70 - 130	20
m&p-Xylene	ND	1.0	101	109	7.6				70 - 130	20
Methyl ethyl ketone	ND	5.0	91	101	10.4				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	93	105	12.1				70 - 130	20
Methylene chloride	ND	1.0	93	101	8.2				70 - 130	20
Naphthalene	ND	1.0	102	119	15.4				70 - 130	20
n-Butylbenzene	ND	1.0	116	124	6.7				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
n-Propylbenzene	ND	1.0	110	117	6.2				70 - 130	20
o-Xylene	ND	1.0	100	108	7.7				70 - 130	20
p-Isopropyltoluene	ND	1.0	111	118	6.1				70 - 130	20
sec-Butylbenzene	ND	1.0	111	116	4.4				70 - 130	20
Styrene	ND	1.0	103	113	9.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	85	98	14.2				70 - 130	20
tert-Butylbenzene	ND	1.0	108	115	6.3				70 - 130	20
Tetrachloroethene	ND	1.0	88	97	9.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	87	104	17.8				70 - 130	20
Toluene	ND	1.0	93	102	9.2				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	98	106	7.8				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	92	104	12.2				70 - 130	20
Trichloroethene	ND	1.0	89	99	10.6				70 - 130	20
Trichlorofluoromethane	ND	1.0	99	105	5.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	85	93	9.0				70 - 130	20
Vinyl chloride	ND	1.0	100	108	7.7				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	102	3.0				70 - 130	20
% Bromofluorobenzene	91	%	95	97	2.1				70 - 130	20
% Dibromofluoromethane	99	%	99	101	2.0				70 - 130	20
% Toluene-d8	101	%	101	103	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 645647 (ug/L), QC Sample No: CM46668 (CM46668, CM46669, CM46670, CM46671)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	100	99	1.0	108	112	3.6	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	98	98	0.0	85	96	12.2	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	100	99	1.0	108	112	3.6	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	98	98	0.0	85	96	12.2	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	104	105	1.0	96	102	6.1	70 - 130	25
Benzene	ND	1.0	100	101	1.0	102	107	4.8	70 - 130	25
Ethyl Benzene	ND	1.0	99	100	1.0	103	107	3.8	70 - 130	25
MTBE	ND	1.0	108	107	0.9	107	113	5.5	70 - 130	25
Naphthalene	ND	5.0	108	109	0.9	105	110	4.7	70 - 130	25
Toluene	ND	1.0	100	101	1.0	103	110	6.6	70 - 130	25
m,p-Xylenes	ND	2.0	101	102	1.0	101	105	3.9	70 - 130	25
o-Xylene	ND	1.0	98	99	1.0	93	98	5.2	70 - 130	25
% 2,5-Dibromotoluene (PID)	106	%	101	101	0.0	101	103	2.0	70 - 130	25
% 2,5-Dibromotoluene (FID)	113	%	104	103	1.0	103	105	1.9	70 - 130	25

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCM46662

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 13, 2022

Thursday, October 13, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46662 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46662	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46662	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	14	1.0	5	5	ug/L
CM46662	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46662	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46662	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	1.0	5	5	ug/L
CM46662	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46662	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	14	1.0	5	5	ug/L
CM46662	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	14	1.0	5	5	ug/L
CM46662	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46662	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	14	1.0	5	5	ug/L
CM46662	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46662	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46662	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46663	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46663	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46663	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	30	1.0	5	5	ug/L
CM46663	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46663	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	1.0	5	5	ug/L
CM46663	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46663	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	30	1.0	5	5	ug/L
CM46663	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	30	1.0	5	5	ug/L
CM46663	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46663	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	30	1.0	5	5	ug/L
CM46663	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46664	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46664	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46664	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46664	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46664	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46664	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.31	0.20	0.3	0.3	ug/l
CM46664	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.31	0.20	0.3	0.3	ug/l
CM46664	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.31	0.20	0.3	0.3	ug/l
CM46664	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46665	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46665	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46665	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46665	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46665	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46665	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L

Thursday, October 13, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46662 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46666	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46666	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46666	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46666	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46666	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46666	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46666	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46666	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46667	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46667	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46667	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46667	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.8	1.0	2	2	ug/L
CM46667	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46667	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.8	1.0	2	2	ug/L
CM46667	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	2.8	1.0	2	2	ug/L
CM46667	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	2.8	1.0	2	2	ug/L
CM46667	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46667	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	2.8	1.0	2	2	ug/L
CM46667	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46667	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46667	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46668	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.035	0.004	0.01	0.01	mg/L
CM46668	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.035	0.004	0.01	0.01	mg/L
CM46668	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.035	0.004	0.01	0.01	mg/L
CM46668	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.032	0.004	0.01	0.01	mg/L
CM46668	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.032	0.004	0.01	0.01	mg/L
CM46668	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.032	0.004	0.01	0.01	mg/L
CM46671	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46671	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46671	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46671	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46671	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46671	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46671	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46671	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46671	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.052	0.004	0.01	0.01	mg/L
CM46671	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.052	0.004	0.01	0.01	mg/L
CM46671	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.052	0.004	0.01	0.01	mg/L
CM46671	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.047	0.004	0.01	0.01	mg/L
CM46671	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.047	0.004	0.01	0.01	mg/L

Thursday, October 13, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46662 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46671	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.047	0.004	0.01	0.01	mg/L
CM46672	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46672	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46672	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46672	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46672	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46672	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM46672	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM46672	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM46662, CM46663, CM46664, CM46665, CM46666, CM46667, CM46668, CM46669, CM46670, CM46671, CM46672

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

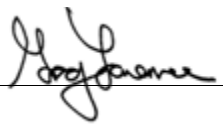
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, ICP, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, October 13, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/05/22-1 Adam Werner, Chemist 10/05/22

CM46663 (1X), CM46664 (1X), CM46665 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1005_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 645140 (CM45650)

CM46663, CM46664, CM46665

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 645375 (Samples: CM46668): -----

Several QC recoveries are below the lower range. A low bias is possible. (C9 - Nonane)

QC Batch 645596 (Samples: CM46669, CM46670, CM46671): -----

The LCSD recovery is below the lower range. All of the other QC is acceptable, therefore no significant bias is suspected. (C9 - Nonane)

Instrument:

AU-FID3 10/07/22-1 Adam Werner, Chemist 10/07/22

CM46668 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR0906BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 10/06/22-1 Adam Werner, Chemist 10/06/22

CM46668 (1X), CM46669 (1X), CM46670 (1X), CM46671 (1X)

The initial calibration (AL0805BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 645596 (CM49088)

CM46669, CM46670, CM46671

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(39%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QC (Site Specific):

Batch 645375 (CM46668)

CM46668

All LCS recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(27%)
All LCSD recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(30%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
All MS recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(37%)
All MSD recoveries were within 40 - 140 with the following exceptions: None.
All MS/MSD RPDs were less than 25% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

EPH Narration

obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/05/22-1 Greg Danielewski, Chemist 10/05/22

CM46662

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645186 (CM45601)

CM46662

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 645407 (CM49151)

CM46662

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/30/22-2 Catherine Lundigan, Greg Danielewski, Chemist 09/30/22

CM46662

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 10/06/22-1 Brian Sheriden, Eric Geyer, Chemist 10/06/22

CM46662

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

IC

Batch 645633 (CM46519)

CM46662

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 645838 (CM50665)

CM46662

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? No.

QC Batch 644778 (Samples: CM46662, CM46664, CM46665, CM46668): -----

Analyte was found in blank. A high bias is suspected. (Aqueous- Iron(CM46662))

Instrument:

ARCOS 10/05/22 09:03 Tina Hall, Chemist 10/05/22

CM46662, CM46664, CM46665, CM46668, CM46671

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS 10/07/22 08:21 Tina Hall, Chemist 10/07/22

CM46662, CM46664, CM46665, CM46668

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS-2 10/08/22 08:30 Tina Hall, Chemist 10/08/22

CM46671

The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 645251 (CM45650)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

October 13, 2022

SDG I.D.: GCM46662

ICP Metals Narration

CM46671

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

QC (Site Specific):

Batch 644778 (CM46668)

CM46662, CM46664, CM46665, CM46668

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645089 (CM46668)

CM46662, CM46664, CM46665, CM46668, CM46671

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 644757 (Samples: CM46668, CM46669, CM46670): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no significant variability is suspected. (Benzo(ghi)perylene, Dibenz(a,h)anthracene, Indeno(1,2,3-cd)pyrene)

QC Batch 645258 (Samples: CM46671): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes and a surrogate. These analytes were not reported in the sample(s) so no significant variability is suspected. (Anthracene, Fluoranthene, Naphthalene, % Terphenyl-d14)

Instrument:

CHEM27 10/04/22-1 Wes Bryon, Chemist 10/04/22

CM46670 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0808):

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

SVOASIM Narration

100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/1004_04-27_BNSIM18_0808) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM27 10/05/22-1 Wes Bryon, Chemist 10/05/22

CM46671 (1X, 1000X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0808):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/1005_03-27_BNSIM18_0808) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM33 10/03/22-1 Wes Bryon, Chemist 10/03/22

CM46668 (1X, 1000X), CM46669 (1X)

Initial Calibration Evaluation (CHEM33/33_PAHSIM_0919):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM33/1003_03-33_PAHSIM_0919) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 645258 (CM46671)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

SVOASIM Narration

CM46671

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: % Terphenyl-d14(29.5%), Anthracene(27.3%), Fluoranthene(29.5%), Naphthalene(21.8%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QC (Site Specific):

Batch 644757 (CM46668)

CM46668, CM46669, CM46670

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: Benzo(ghi)perylene(25.2%), Dibenz(a,h)anthracene(27.9%), Indeno(1,2,3-cd)pyrene(25.1%)
All MS recoveries were within 40 - 140 with the following exceptions: None.
All MSD recoveries were within 40 - 140 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646395 (Samples: CM46672): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (Chloroethane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,3,5-Trimethylbenzene, 2,2-Dichloropropane, Carbon Disulfide, Carbon tetrachloride, Chloroethane, Dichlorodifluoromethane, Hexachlorobutadiene, Isopropylbenzene, n-Butylbenzene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Trichlorofluoromethane, Trichlorotrifluoroethane, Vinyl chloride)

Instrument:

CHEM02 10/11/22-2 Michael Hahn, Chemist 10/11/22

CM46662 (1X), CM46663 (1X), CM46664 (1X), CM46665 (1X), CM46666 (1X), CM46667 (1X), CM46671 (1X)

Chem02 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM02/VT-P100922):
98% of target compounds met criteria.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

VOA Narration

The following compounds had %RSDs >20%: Bromomethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.046 (0.05), 2-Hexanone 0.094 (0.1), Acetone 0.048 (0.1), Methyl ethyl ketone 0.089 (0.1)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.046 (0.05), Acetone 0.048 (0.05)

Continuing Calibration Verification (CHEM02/1011_30-VT-P100922) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 29%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.062 (0.1), Methyl ethyl ketone 0.093 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/09/22-1 Michael Hahn, Chemist 10/09/22

CM46672 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100822):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromoform 23% (20%), Chloroethane 35% (20%), Naphthalene 24% (20%), Trichloroethene 26% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.077 (0.1), Methyl ethyl ketone 0.091 (0.1), Tetrachloroethene 0.178 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1009_04-VOA23_100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
86% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,1-Dichloropropene 34%H (20%), 2,2-Dichloropropane 21%H (20%), Benzene 27%H (20%), Chloroethane 25%H (20%), n-Butylbenzene 21%H (20%), Naphthalene 21%H (20%), p-Isopropyltoluene 21%H (20%), Tetrahydrofuran (THF) 30%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.183 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 646395 (CM46672) CHEM23 10/9/2022-1

CM46672(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(141%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 1,1,1-Trichloroethane(21.4%), 1,1-Dichloroethene(25.1%), 1,3,5-Trimethylbenzene(21.6%), 2,2-Dichloropropane(24.9%), Carbon Disulfide(27.4%), Carbon tetrachloride(22.6%), Chloroethane(28.3%), Dichlorodifluoromethane(27.9%), Hexachlorobutadiene(22.0%), Isopropylbenzene(21.4%), n-Butylbenzene(22.0%), p-Isopropyltoluene(22.4%), sec-Butylbenzene(21.0%), tert-Butylbenzene(21.4%), Trichlorofluoromethane(25.6%), Trichlorotrifluoroethane(23.7%), Vinyl chloride(24.2%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 13, 2022

SDG I.D.: GCM46662

VOA Narration

The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646501 (CM58488) CHEM02 10/11/2022-2

CM46662(1X), CM46663(1X), CM46664(1X), CM46665(1X), CM46666(1X), CM46667(1X), CM46671(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 10/05/22-1 James Karabetsos, Chemist 10/05/22

CM46668 (1X), CM46669 (1X), CM46670 (1X), CM46671 (1X)

Initial Calibration Evaluation (PIDFID/VPH_100322_T):
The following compounds exceeded %RSD criteria: None.

QC (Site Specific):

Batch 645647 (CM46668)

CM46668(1X), CM46669(1X), CM46670(1X), CM46671(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 25% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ✓ No ☐
Coolant: IPK ☐ ICE ✓ No ☐
Temp 0.1 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 9/30/22

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & ~~UNP~~ (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
46662	22A-AE106R3-092922-1	GW	9/29/22	1300	3	1		4				X					X	X	X	X	
46663	22A-AE106RS-092922-1	GW	9/29/22	1310	3	1						X	X								
46664	22A-MW4A-093022-1	GW	9/30/22	1030	3	1		2				X	X			X					
46665	22A-MW4A-093022-2	GW	9/30/22	1035	3	1		2				X	X			X					
46666	22A-PS3-093022-1	GW	9/30/22	1130	3							X									
46667	22A-PS5D-093022-1	GW	9/30/22	1150	3							X									
46668	22A-AE03-093022-1	GW	9/30/22	1040	6	6		6						X	X	X					MS/MSD
46669	22A-AE04-093022-1	GW	9/30/22	0950	2	2								X	X						
46670	22A-TRC03-093022-1	GW	9/30/22	1115	2	2								X	X						
46671	22A-TRC102-093022-1	GW	9/30/22	1315	5	2		2				X		X	X	X					
46672	22A-TB01-092922-1	GW	9/29/22	0900	2							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-30-22	1405
[signature]	[signature]	9/30/22	16:31

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Friday, October 28, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60688023.02.2**
SDG ID: **GCM46673**
Sample ID#s: CM46673 - CM46684

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

October 28, 2022

SDG I.D.: GCM46673

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver.2:
This report has been revised to include all VOC batches in the QA/QC section.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 28, 2022

SDG I.D.: GCM46673

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-AE105S-092922-1	CM46673	GROUND WATER
22A-AE105R2-092922-1	CM46674	GROUND WATER
22A-AE105R3-092922-1	CM46675	GROUND WATER
22A-AE105R4-092922-1	CM46676	GROUND WATER
22A-AE105R5-092922-1	CM46677	GROUND WATER
22A-TRC301R1-092922-1	CM46678	GROUND WATER
22A-TRC301R2-092922-1	CM46679	GROUND WATER
22A-TRC301R3-092922-1	CM46680	GROUND WATER
22A-PS1M-092922-1	CM46681	GROUND WATER
22A-PS1D-092922-1	CM46682	GROUND WATER
22A-PS8D-092922-1	CM46683	GROUND WATER
22A-AE106R1-092922-1	CM46684	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	15:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46673

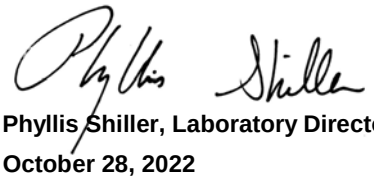
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE105S-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.018	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	0.014	0.004	mg/L	1	10/05/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	14:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46674

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE105R2-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.186	0.011	mg/L	1	10/05/22	TH	SW6010D
Manganese (Dissolved)	0.081	0.001	mg/L	1	10/05/22	TH	SW6010D
Iron	0.216	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	0.087	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	79.2	5.0	mg/L	1	09/30/22	CL/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	09/30/22 23:50	CL/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/30/22 23:50	CL/GD	E300.0
Sulfate	17.3	5.0	mg/L	1	09/30/22	CL/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	3.6	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	2.2	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46674

Client ID: 22A-AE105R2-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	27	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.9	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	27	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46674
Client ID: 22A-AE105R2-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	120	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	103		%	20	10/10/22	MH	70 - 130 %
% Toluene-d8 (20x)	80		%	20	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	4.2	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	88		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Ver 2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	14:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46675

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE105R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	5.3	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	3.5	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

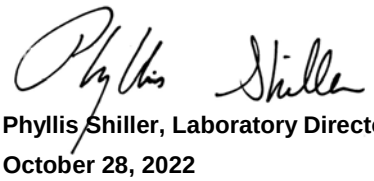
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	43	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	3.3	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	52	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	150	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	1.3	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	90		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	106		%	20	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	14:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46676

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE105R4-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	4.6	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	3.3	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46676

Client ID: 22A-AE105R4-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	40	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.5	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	46	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	150	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	101		%	20	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	4.1	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	14:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46677

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE105R5-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	3.8	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	2.9	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46677

Client ID: 22A-AE105R5-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	43	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.7	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	31	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	120	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	101		%	20	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	17:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46678

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC301R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	1.9	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46678
Client ID: 22A-TRC301R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	18	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.2	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	12	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	52	10	ug/L	10	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	2.0	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	106		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	102		%	10	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	94		%	10	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	104		%	10	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	102		%	10	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	16:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46679

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC301R2-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	3.4	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	1.7	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46679

Client ID: 22A-TRC301R2-092922-1

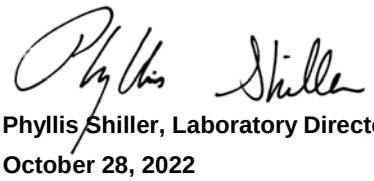
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	18	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	5.8	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	28	10	ug/L	10	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	87	10	ug/L	10	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	1.5	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	103		%	10	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	103		%	10	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	85		%	10	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	15:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46680

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC301R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	3.4	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	1.7	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46680
Client ID: 22A-TRC301R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	19	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	6.1	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	29	10	ug/L	10	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	84	10	ug/L	10	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	1.7	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	90		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	103		%	10	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	94		%	10	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	103		%	10	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	81		%	10	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	1.0	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	16:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46681

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PS1M-092922-1

Parameter	Result		RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles								
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND		0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND		0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND		0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND		0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND		5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND		1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND		5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	33	S	25	ug/L	1	10/09/22	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46681

Client ID: 22A-PS1M-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	2.2	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	59	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.7	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	4.0	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	110	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	4.8	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	115		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	92		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	15:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46682

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PS1D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46682
Client ID: 22A-PS1D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	8.4	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	3.0	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	4.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	16	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	1.1	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	89		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

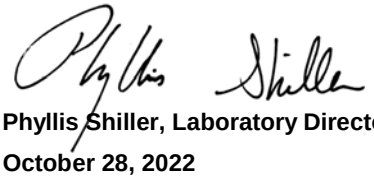
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46682
Client ID: 22A-PS1D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	16:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46683

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PS8D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/05/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46683

Client ID: 22A-PS8D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	10/09/22	MH	70 - 130 %

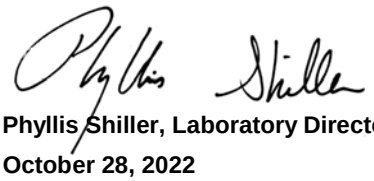
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46683
Client ID: 22A-PS8D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	101		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	102		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	13:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46684

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1-Dichloroethane	1.3	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/10/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/10/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/10/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/10/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46684
Client ID: 22A-AE106R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/10/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
cis-1,2-Dichloroethene	15	1.0	ug/L	1	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/10/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/10/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Tetrachloroethene	2.1	1.0	ug/L	1	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/10/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/10/22	MH	SW8260C
Trichloroethene	5.9	1.0	ug/L	1	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/10/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/10/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/10/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/10/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)

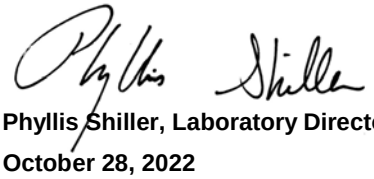
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46684
Client ID: 22A-AE106R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 28, 2022

QA/QC Data

SDG I.D.: GCM46673

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 644779 (mg/L), QC Sample No: CM46506 (CM46673, CM46674, CM46683)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	101	102	1.0	103			80 - 120	20
Iron	BRL	0.010	0.339	0.345	1.80	100	100	0.0	106			80 - 120	20
Manganese	BRL	0.001	0.025	0.025	0	99.1	99.3	0.2	101			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645089 (mg/L), QC Sample No: CM46668 (CM46673, CM46674, CM46683)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	0.032	0.030	6.50	89.0	84.8	4.8	91.7	91.4	0.3	80 - 120	20
Iron	BRL	0.011	7.60	7.42	2.40	94.1	86.9	8.0	NC	NC	NC	80 - 120	20
Manganese	BRL	0.001	1.20	1.18	1.70	91.7	86.2	6.2	95.8	93.6	2.3	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 28, 2022

QA/QC Data

SDG I.D.: GCM46673

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645186 (mg/L), QC Sample No: CM45601 (CM46674)													
Total Organic Carbon	BRL	1.0	4.4	4.3	NC	107			98.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 645407 (mg/L), QC Sample No: CM49151 (CM46674)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	92.3			102			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 645633 (mg/L), QC Sample No: CM46519 (CM46674)													
Chloride	BRL	5.0	49.3	48.1	2.50	97.3			102			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	97.2			102			90 - 110	20
Sulfate	BRL	5.0	17.1	16.4	NC	99.1			100			90 - 110	20
QA/QC Batch 645633 (mg/L), QC Sample No: CM46519 (CM46674)													
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	94.8			101			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 28, 2022

QA/QC Data

SDG I.D.: GCM46673

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 645140 (ug/l), QC Sample No: CM45650 (CM46674, CM46676)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	89	85	4.6	NC			70 - 130	20	
% 1,4-dioxane-d8	84	%	93	89	4.4	87			70 - 130	20	
QA/QC Batch 646395 (ug/L), QC Sample No: CM46672 (CM46674 (20X) , CM46675 (20X) , CM46676 (20X) , CM46677 (20X) , CM46678 (10X) , CM46679 (10X) , CM46680 (10X) , CM46681, CM46683, CM46684)											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	111	97	13.5				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	114	92	21.4				70 - 130	20	r
1,1,2,2-Tetrachloroethane	ND	0.50	102	97	5.0				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	94	98	4.2				70 - 130	20	
1,1-Dichloroethane	ND	1.0	108	91	17.1				70 - 130	20	
1,1-Dichloroethene	ND	1.0	103	80	25.1				70 - 130	20	r
1,1-Dichloropropene	ND	1.0	129	115	11.5				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	115	99	15.0				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	106	101	4.8				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	113	96	16.3				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	117	97	18.7				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	108	107	0.9				70 - 130	20	
1,2-Dibromoethane	ND	1.0	109	102	6.6				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	105	89	16.5				70 - 130	20	
1,2-Dichloroethane	ND	1.0	99	102	3.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	103	93	10.2				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	118	95	21.6				70 - 130	20	r
1,3-Dichlorobenzene	ND	1.0	110	91	18.9				70 - 130	20	
1,3-Dichloropropane	ND	1.0	111	101	9.4				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	110	93	16.7				70 - 130	20	
1,4-dioxane	ND	100	105	104	1.0				40 - 160	20	
2,2-Dichloropropane	ND	1.0	122	95	24.9				70 - 130	20	r
2-Chlorotoluene	ND	1.0	111	92	18.7				70 - 130	20	
2-Hexanone	ND	5.0	106	104	1.9				40 - 160	20	
4-Chlorotoluene	ND	1.0	114	95	18.2				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	92	103	11.3				40 - 160	20	
Acetone	ND	5.0	86	82	4.8				40 - 160	20	
Benzene	ND	0.70	120	113	6.0				70 - 130	20	
Bromobenzene	ND	1.0	107	93	14.0				70 - 130	20	
Bromochloromethane	ND	1.0	115	106	8.1				70 - 130	20	
Bromodichloromethane	ND	0.50	104	96	8.0				70 - 130	20	
Bromoform	ND	1.0	114	105	8.2				70 - 130	20	
Bromomethane	ND	1.0	98	80	20.2				40 - 160	20	
Carbon Disulfide	ND	1.0	108	82	27.4				70 - 130	20	r
Carbon tetrachloride	ND	1.0	118	94	22.6				70 - 130	20	r
Chlorobenzene	ND	1.0	107	91	16.2				70 - 130	20	

QA/QC Data

SDG I.D.: GCM46673

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Chloroethane	ND	1.0	141	106	28.3				70 - 130	20	l,r
Chloroform	ND	1.0	115	99	15.0				70 - 130	20	
Chloromethane	ND	1.0	99	81	20.0				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	122	105	15.0				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	99	101	2.0				70 - 130	20	
Dibromochloromethane	ND	0.50	112	104	7.4				70 - 130	20	
Dibromomethane	ND	1.0	105	99	5.9				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	94	71	27.9				40 - 160	20	r
Di-isopropyl ether	ND	1.0	110	97	12.6				70 - 130	20	
Ethyl ether	ND	1.0	96	85	12.2				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	117	105	10.8				70 - 130	20	
Ethylbenzene	ND	1.0	113	92	20.5				70 - 130	20	
Hexachlorobutadiene	ND	0.40	111	89	22.0				70 - 130	20	r
Isopropylbenzene	ND	1.0	119	96	21.4				70 - 130	20	r
m&p-Xylene	ND	1.0	116	95	19.9				70 - 130	20	
Methyl ethyl ketone	ND	5.0	121	118	2.5				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	96	7.0				70 - 130	20	
Methylene chloride	ND	1.0	96	85	12.2				70 - 130	20	
Naphthalene	ND	1.0	123	111	10.3				70 - 130	20	
n-Butylbenzene	ND	1.0	121	97	22.0				70 - 130	20	r
n-Propylbenzene	ND	1.0	116	95	19.9				70 - 130	20	
o-Xylene	ND	1.0	117	96	19.7				70 - 130	20	
p-Isopropyltoluene	ND	1.0	124	99	22.4				70 - 130	20	r
sec-Butylbenzene	ND	1.0	121	98	21.0				70 - 130	20	r
Styrene	ND	1.0	120	101	17.2				70 - 130	20	
tert-amyl methyl ether	ND	1.0	109	113	3.6				70 - 130	20	
tert-Butylbenzene	ND	1.0	119	96	21.4				70 - 130	20	r
Tetrachloroethene	ND	1.0	96	88	8.7				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	129	124	4.0				70 - 130	20	
Toluene	ND	1.0	96	90	6.5				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	99	81	20.0				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	101	105	3.9				70 - 130	20	
Trichloroethene	ND	1.0	99	81	20.0				70 - 130	20	
Trichlorofluoromethane	ND	1.0	110	85	25.6				70 - 130	20	r
Trichlorotrifluoroethane	ND	1.0	99	78	23.7				70 - 130	20	r
Vinyl chloride	ND	1.0	102	80	24.2				70 - 130	20	r
% 1,2-dichlorobenzene-d4	102	%	99	98	1.0				70 - 130	20	
% Bromofluorobenzene	94	%	102	101	1.0				70 - 130	20	
% Dibromofluoromethane	102	%	100	102	2.0				70 - 130	20	
% Toluene-d8	97	%	88	100	12.8				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646712 (ug/L), QC Sample No: CM49151 (CM46682)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	103	0.0	107	117	8.9	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	106	105	0.9	121	123	1.6	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	109	106	2.8	106	105	0.9	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	106	107	0.9	105	109	3.7	70 - 130	20	
1,1-Dichloroethane	ND	1.0	111	107	3.7	120	125	4.1	70 - 130	20	

QA/QC Data

SDG I.D.: GCM46673

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1-Dichloroethene	ND	1.0	105	102	2.9	116	118	1.7	70 - 130	20	
1,1-Dichloropropene	ND	1.0	107	112	4.6	120	123	2.5	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	116	110	5.3	108	110	1.8	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	108	106	1.9	107	108	0.9	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	111	108	2.7	111	115	3.5	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	109	107	1.9	114	121	6.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	94	93	1.1	80	80	0.0	70 - 130	20	
1,2-Dibromoethane	ND	1.0	109	108	0.9	103	113	9.3	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	107	1.9	111	118	6.1	70 - 130	20	
1,2-Dichloroethane	ND	1.0	118	119	0.8	113	126	10.9	70 - 130	20	
1,2-Dichloropropane	ND	1.0	108	110	1.8	115	120	4.3	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	109	107	1.9	116	120	3.4	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	109	105	3.7	113	121	6.8	70 - 130	20	
1,3-Dichloropropane	ND	1.0	112	109	2.7	111	119	7.0	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	109	107	1.9	114	120	5.1	70 - 130	20	
1,4-dioxane	ND	100	101	98	3.0	105	103	1.9	40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	99	8.7	115	117	1.7	70 - 130	20	
2-Chlorotoluene	ND	1.0	112	109	2.7	116	123	5.9	70 - 130	20	
2-Hexanone	ND	5.0	104	103	1.0	86	93	7.8	40 - 160	20	
4-Chlorotoluene	ND	1.0	113	111	1.8	117	124	5.8	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	106	106	0.0	95	99	4.1	40 - 160	20	
Acetone	ND	5.0	110	101	8.5	117	110	6.2	40 - 160	20	
Benzene	ND	0.70	104	108	3.8	114	121	6.0	70 - 130	20	
Bromobenzene	ND	1.0	111	109	1.8	114	120	5.1	70 - 130	20	
Bromochloromethane	ND	1.0	105	100	4.9	111	112	0.9	70 - 130	20	
Bromodichloromethane	ND	0.50	99	99	0.0	102	108	5.7	70 - 130	20	
Bromoform	ND	1.0	95	88	7.7	83	89	7.0	70 - 130	20	
Bromomethane	ND	1.0	106	95	10.9	93	116	22.0	40 - 160	20	r
Carbon Disulfide	ND	1.0	91	89	2.2	94	99	5.2	70 - 130	20	
Carbon tetrachloride	ND	1.0	105	101	3.9	111	117	5.3	70 - 130	20	
Chlorobenzene	ND	1.0	106	105	0.9	111	120	7.8	70 - 130	20	
Chloroethane	ND	1.0	107	105	1.9	119	123	3.3	70 - 130	20	
Chloroform	ND	1.0	110	104	5.6	117	121	3.4	70 - 130	20	
Chloromethane	ND	1.0	106	103	2.9	114	117	2.6	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	108	98	9.7	116	120	3.4	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	98	99	1.0	96	104	8.0	70 - 130	20	
Dibromochloromethane	ND	0.50	99	96	3.1	93	104	11.2	70 - 130	20	
Dibromomethane	ND	1.0	107	109	1.9	105	114	8.2	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	88	88	0.0	95	94	1.1	40 - 160	20	
Di-isopropyl ether	ND	1.0	116	110	5.3	121	127	4.8	70 - 130	20	
Ethyl ether	ND	1.0	109	100	8.6	108	108	0.0	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	108	104	3.8	107	107	0.0	70 - 130	20	
Ethylbenzene	ND	1.0	110	110	0.0	115	124	7.5	70 - 130	20	
Hexachlorobutadiene	ND	0.40	108	107	0.9	117	121	3.4	70 - 130	20	
Isopropylbenzene	ND	1.0	110	108	1.8	117	121	3.4	70 - 130	20	
m&p-Xylene	ND	1.0	107	107	0.0	113	121	6.8	70 - 130	20	
Methyl ethyl ketone	ND	5.0	116	115	0.9	113	110	2.7	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	109	102	6.6	104	106	1.9	70 - 130	20	
Methylene chloride	ND	1.0	93	90	3.3	99	103	4.0	70 - 130	20	
Naphthalene	ND	1.0	111	108	2.7	98	103	5.0	70 - 130	20	
n-Butylbenzene	ND	1.0	116	113	2.6	122	128	4.8	70 - 130	20	
n-Propylbenzene	ND	1.0	111	110	0.9	117	122	4.2	70 - 130	20	
o-Xylene	ND	1.0	106	105	0.9	108	115	6.3	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
p-Isopropyltoluene	ND	1.0	111	109	1.8	119	124	4.1	70 - 130	20
sec-Butylbenzene	ND	1.0	113	113	0.0	121	126	4.0	70 - 130	20
Styrene	ND	1.0	109	108	0.9	110	120	8.7	70 - 130	20
tert-amyl methyl ether	ND	1.0	100	110	9.5	97	101	4.0	70 - 130	20
tert-Butylbenzene	ND	1.0	111	111	0.0	117	124	5.8	70 - 130	20
Tetrachloroethene	ND	1.0	108	112	3.6	118	122	3.3	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	108	108	0.0	104	101	2.9	70 - 130	20
Toluene	ND	1.0	105	109	3.7	115	118	2.6	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	109	106	2.8	120	120	0.0	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0	99	105	5.9	70 - 130	20
Trichloroethene	ND	1.0	107	109	1.9	117	120	2.5	70 - 130	20
Trichlorofluoromethane	ND	1.0	111	108	2.7	125	128	2.4	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	95	94	1.1	110	113	2.7	70 - 130	20
Vinyl chloride	ND	1.0	109	107	1.9	121	123	1.6	70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	102	102	0.0	102	101	1.0	70 - 130	20
% Bromofluorobenzene	97	%	101	99	2.0	97	101	4.0	70 - 130	20
% Dibromofluoromethane	98	%	97	97	0.0	99	102	3.0	70 - 130	20
% Toluene-d8	100	%	98	100	2.0	97	98	1.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646501 (ug/L), QC Sample No: CM58488 (CM46674, CM46675, CM46676, CM46677, CM46678, CM46679, CM46680)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	109	10.6				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	92	100	8.3				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	103	118	13.6				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	90	104	14.4				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	111	8.5				70 - 130	20
1,1-Dichloroethene	ND	1.0	98	102	4.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	91	102	11.4				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	99	117	16.7				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	113	126	10.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	106	121	13.2				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	110	117	6.2				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	102	115	12.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	98	109	10.6				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	106	116	9.0				70 - 130	20
1,2-Dichloroethane	ND	1.0	96	107	10.8				70 - 130	20
1,2-Dichloropropane	ND	1.0	94	105	11.1				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	117	6.2				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	108	117	8.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	99	111	11.4				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	106	114	7.3				70 - 130	20
1,4-dioxane	ND	100	102	109	6.6				40 - 160	20
2,2-Dichloropropane	ND	1.0	93	100	7.3				70 - 130	20
2-Chlorotoluene	ND	1.0	109	115	5.4				70 - 130	20
2-Hexanone	ND	5.0	94	111	16.6				40 - 160	20
4-Chlorotoluene	ND	1.0	110	119	7.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	90	107	17.3				40 - 160	20
Acetone	ND	5.0	103	118	13.6				40 - 160	20
Benzene	ND	0.70	92	102	10.3				70 - 130	20

QA/QC Data

SDG I.D.: GCM46673

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromobenzene	ND	1.0	108	117	8.0				70 - 130	20
Bromochloromethane	ND	1.0	91	104	13.3				70 - 130	20
Bromodichloromethane	ND	0.50	92	105	13.2				70 - 130	20
Bromoform	ND	1.0	91	105	14.3				70 - 130	20
Bromomethane	ND	1.0	105	115	9.1				40 - 160	20
Carbon Disulfide	ND	1.0	94	99	5.2				70 - 130	20
Carbon tetrachloride	ND	1.0	86	97	12.0				70 - 130	20
Chlorobenzene	ND	1.0	100	108	7.7				70 - 130	20
Chloroethane	ND	1.0	103	112	8.4				70 - 130	20
Chloroform	ND	1.0	95	104	9.0				70 - 130	20
Chloromethane	ND	1.0	93	101	8.2				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	96	108	11.8				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	90	101	11.5				70 - 130	20
Dibromochloromethane	ND	0.50	95	110	14.6				70 - 130	20
Dibromomethane	ND	1.0	91	105	14.3				70 - 130	20
Dichlorodifluoromethane	ND	1.0	78	86	9.8				40 - 160	20
Di-isopropyl ether	ND	1.0	103	114	10.1				70 - 130	20
Ethyl ether	ND	1.0	95	104	9.0				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	95	107	11.9				70 - 130	20
Ethylbenzene	ND	1.0	102	109	6.6				70 - 130	20
Hexachlorobutadiene	ND	0.40	108	117	8.0				70 - 130	20
Isopropylbenzene	ND	1.0	108	114	5.4				70 - 130	20
m&p-Xylene	ND	1.0	101	109	7.6				70 - 130	20
Methyl ethyl ketone	ND	5.0	91	101	10.4				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	93	105	12.1				70 - 130	20
Methylene chloride	ND	1.0	93	101	8.2				70 - 130	20
Naphthalene	ND	1.0	102	119	15.4				70 - 130	20
n-Butylbenzene	ND	1.0	116	124	6.7				70 - 130	20
n-Propylbenzene	ND	1.0	110	117	6.2				70 - 130	20
o-Xylene	ND	1.0	100	108	7.7				70 - 130	20
p-Isopropyltoluene	ND	1.0	111	118	6.1				70 - 130	20
sec-Butylbenzene	ND	1.0	111	116	4.4				70 - 130	20
Styrene	ND	1.0	103	113	9.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	85	98	14.2				70 - 130	20
tert-Butylbenzene	ND	1.0	108	115	6.3				70 - 130	20
Tetrachloroethene	ND	1.0	88	97	9.7				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	87	104	17.8				70 - 130	20
Toluene	ND	1.0	93	102	9.2				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	98	106	7.8				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	92	104	12.2				70 - 130	20
Trichlorofluoromethane	ND	1.0	99	105	5.9				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	85	93	9.0				70 - 130	20
Vinyl chloride	ND	1.0	100	108	7.7				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	102	3.0				70 - 130	20
% Bromofluorobenzene	91	%	95	97	2.1				70 - 130	20
% Dibromofluoromethane	99	%	99	101	2.0				70 - 130	20
% Toluene-d8	101	%	101	103	2.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCM46673

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 28, 2022

Friday, October 28, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46673 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46673	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.018	0.004	0.01	0.01	mg/L
CM46673	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.018	0.004	0.01	0.01	mg/L
CM46673	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.018	0.004	0.01	0.01	mg/L
CM46673	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.014	0.004	0.01	0.01	mg/L
CM46673	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.014	0.004	0.01	0.01	mg/L
CM46673	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.014	0.004	0.01	0.01	mg/L
CM46674	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	27	1.0	20	20	ug/L
CM46674	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46674	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	27	20	5	5	ug/L
CM46674	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46674	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46674	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	120	20	5	5	ug/L
CM46674	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	1.0	20	20	ug/L
CM46674	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46674	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	20	5	5	ug/L
CM46674	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	20	5	5	ug/L
CM46674	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	1.0	20	20	ug/L
CM46674	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	20	5	5	ug/L
CM46674	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	27	20	5	5	ug/L
CM46674	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	20	5	5	ug/L
CM46674	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46674	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	20	5	5	ug/L
CM46674	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	1.0	20	20	ug/L
CM46674	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4.2	0.20	0.3	0.3	ug/l
CM46674	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.2	0.20	0.3	0.3	ug/l
CM46674	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	4.2	0.20	0.3	0.3	ug/l
CM46674	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46675	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	150	20	5	5	ug/L
CM46675	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	52	20	5	5	ug/L
CM46675	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46675	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	43	20	20	20	ug/L
CM46675	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46675	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46675	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	20	5	5	ug/L
CM46675	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46675	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	43	20	20	20	ug/L
CM46675	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	52	20	5	5	ug/L
CM46675	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	52	20	50	50	ug/L
CM46675	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	20	5	5	ug/L
CM46675	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	43	20	20	20	ug/L

Friday, October 28, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46673 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46675	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	52	20	5	5	ug/L
CM46675	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	20	5	5	ug/L
CM46675	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46675	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	52	20	50	50	ug/L
CM46675	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	43	20	20	20	ug/L
CM46675	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	20	5	5	ug/L
CM46675	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46675	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46675	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46676	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	46	20	5	5	ug/L
CM46676	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	40	20	20	20	ug/L
CM46676	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46676	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46676	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46676	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	150	20	5	5	ug/L
CM46676	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	40	20	20	20	ug/L
CM46676	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46676	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	46	20	5	5	ug/L
CM46676	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	20	5	5	ug/L
CM46676	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	20	5	5	ug/L
CM46676	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	40	20	20	20	ug/L
CM46676	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	46	20	5	5	ug/L
CM46676	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46676	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	20	5	5	ug/L
CM46676	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	20	5	5	ug/L
CM46676	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	40	20	20	20	ug/L
CM46676	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4.1	0.20	0.3	0.3	ug/l
CM46676	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.1	0.20	0.3	0.3	ug/l
CM46676	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	4.1	0.20	0.3	0.3	ug/l
CM46676	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46677	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46677	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	31	20	5	5	ug/L
CM46677	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	120	20	5	5	ug/L
CM46677	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	43	20	20	20	ug/L
CM46677	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46677	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46677	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	20	5	5	ug/L
CM46677	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	43	20	20	20	ug/L
CM46677	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	31	20	5	5	ug/L
CM46677	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L

Friday, October 28, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46673 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46677	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	43	20	20	20	ug/L
CM46677	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	20	5	5	ug/L
CM46677	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	20	5	5	ug/L
CM46677	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	31	20	5	5	ug/L
CM46677	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46677	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	43	20	20	20	ug/L
CM46677	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	20	5	5	ug/L
CM46677	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46677	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46677	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46678	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46678	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46678	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46678	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	12	1.0	5	5	ug/L
CM46678	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	52	10	5	5	ug/L
CM46678	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46678	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	1.0	5	5	ug/L
CM46678	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	52	10	5	5	ug/L
CM46678	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	52	10	5	5	ug/L
CM46678	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	52	10	5	5	ug/L
CM46678	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	1.0	5	5	ug/L
CM46678	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46678	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	52	10	5	5	ug/L
CM46678	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46678	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46678	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46679	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	28	10	5	5	ug/L
CM46679	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46679	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46679	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46679	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	87	10	5	5	ug/L
CM46679	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	87	10	5	5	ug/L
CM46679	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46679	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	28	10	5	5	ug/L
CM46679	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	87	10	5	5	ug/L
CM46679	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46679	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	87	10	5	5	ug/L
CM46679	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	28	10	5	5	ug/L
CM46679	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	87	10	5	5	ug/L
CM46679	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L

Friday, October 28, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46673 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46679	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46679	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46680	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46680	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	84	10	5	5	ug/L
CM46680	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	29	10	5	5	ug/L
CM46680	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46680	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46680	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46680	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	29	10	5	5	ug/L
CM46680	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	84	10	5	5	ug/L
CM46680	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	84	10	5	5	ug/L
CM46680	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46680	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	29	10	5	5	ug/L
CM46680	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	84	10	5	5	ug/L
CM46680	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	84	10	5	5	ug/L
CM46680	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46680	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46680	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM46681	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46681	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46681	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46681	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	59	5.0	38	38	ug/L
CM46681	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46681	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46681	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM46681	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM46681	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM46682	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46682	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46682	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	16	1.0	5	5	ug/L
CM46682	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46682	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46682	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	1.0	5	5	ug/L
CM46682	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	1.0	5	5	ug/L
CM46682	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46682	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	16	1.0	5	5	ug/L
CM46682	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	16	1.0	5	5	ug/L
CM46682	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM46682	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM46682	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L

Friday, October 28, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM46673 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM46683	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46683	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46683	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46683	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46683	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46683	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM46683	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM46683	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM46684	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM46684	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	5.9	1.0	5	5	ug/L
CM46684	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM46684	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM46684	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM46684	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.9	1.0	5	5	ug/L
CM46684	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.9	1.0	5	5	ug/L
CM46684	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM46684	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	5.9	1.0	5	5	ug/L
CM46684	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	5.9	1.0	5	5	ug/L
CM46684	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM46684	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM46684	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM46673, CM46674, CM46675, CM46676, CM46677, CM46678, CM46679, CM46680, CM46681, CM46682, CM46683, CM46684

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

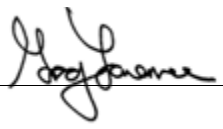
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, October 28, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 28, 2022

SDG I.D.: GCM46673

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/05/22-1 Adam Werner, Chemist 10/05/22

CM46674 (1X), CM46676 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1005_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 645140 (CM45650)

CM46674, CM46676

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 28, 2022

SDG I.D.: GCM46673

Wet Chemistry Analysis

BECKMAN DU720 10/05/22-1 Greg Danielewski, Chemist 10/05/22

CM46674

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645186 (CM45601)

CM46674

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 645407 (CM49151)

CM46674

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 09/30/22-2 Catherine Lundigan, Greg Danielewski, Chemist 09/30/22

CM46674

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645633 (CM46519)

CM46674

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

October 28, 2022

SDG I.D.: GCM46673

ICP Metals Narration

ARCOS 10/05/22 09:03 Tina Hall, Chemist 10/05/22

CM46673, CM46674, CM46683

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

ARCOS-2 10/08/22 08:30 Tina Hall, Chemist 10/08/22

CM46673, CM46674, CM46683

The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 644779 (CM46506)

CM46673, CM46674, CM46683

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645089 (CM46668)

CM46673, CM46674, CM46683

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646395 (Samples: CM46674, CM46675, CM46676, CM46677, CM46678, CM46679, CM46680, CM46681, CM46683, CM46684): -----

The LCS recovery is above the upper range for one analyte that was not reported in the sample(s). No significant bias is suspected. (Chloroethane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (1,1,1-Trichloroethane, 1,3,5-Trimethylbenzene, 2,2-Dichloropropane, Carbon Disulfide, Carbon tetrachloride, Chloroethane, Dichlorodifluoromethane, Hexachlorobutadiene, Isopropylbenzene, n-Butylbenzene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Trichlorofluoromethane, Trichlorotrifluoroethane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (1,1-Dichloroethene, Vinyl chloride)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 28, 2022

SDG I.D.: GCM46673

VOA Narration

Instrument:

CHEM02 10/11/22-2 Michael Hahn, Chemist 10/11/22

CM46674 (1X), CM46675 (1X), CM46676 (1X), CM46677 (1X), CM46678 (1X), CM46679 (1X), CM46680 (1X)

Chem02 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM02/VT-P100922):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.046 (0.05), 2-Hexanone 0.094 (0.1), Acetone 0.048 (0.1), Methyl ethyl ketone 0.089 (0.1)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.046 (0.05), Acetone 0.048 (0.05)

Continuing Calibration Verification (CHEM02/1011_30-VT-P100922) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 29%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.062 (0.1), Methyl ethyl ketone 0.093 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM15 10/12/22-1 Harry Mullin, Chemist 10/12/22

CM46682 (1X)

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1012_01-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/09/22-1 Michael Hahn, Chemist 10/09/22

CM46674 (20X), CM46675 (20X), CM46676 (20X), CM46677 (20X), CM46678 (10X), CM46679 (10X), CM46680 (10X), CM46681 (1X), CM46683 (1X), CM46684 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_100822):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromoform 23% (20%), Chloroethane 35% (20%), Naphthalene 24% (20%), Trichloroethene 26% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.077 (0.1), Methyl ethyl ketone 0.091 (0.1), Tetrachloroethene 0.178 (0.2)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 28, 2022

SDG I.D.: GCM46673

VOA Narration

The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1009_04-VOA23_100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
86% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,1-Dichloropropene 34%H (20%), 2,2-Dichloropropane 21%H (20%), Benzene 27%H (20%), Chloroethane 25%H (20%), n-Butylbenzene 21%H (20%), Naphthalene 21%H (20%), p-Isopropyltoluene 21%H (20%), Tetrahydrofuran (THF) 30%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.183 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 646395 (CM46672) CHEM23 10/9/2022-1

CM46674(20X), CM46675(20X), CM46676(20X), CM46677(20X), CM46678(10X), CM46679(10X), CM46680(10X), CM46681(1X), CM46683(1X), CM46684(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(141%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 1,1,1-Trichloroethane(21.4%), 1,1-Dichloroethene(25.1%), 1,3,5-Trimethylbenzene(21.6%), 2,2-Dichloropropane(24.9%), Carbon Disulfide(27.4%), Carbon tetrachloride(22.6%), Chloroethane(28.3%), Dichlorodifluoromethane(27.9%), Hexachlorobutadiene(22.0%), Isopropylbenzene(21.4%), n-Butylbenzene(22.0%), p-Isopropyltoluene(22.4%), sec-Butylbenzene(21.0%), tert-Butylbenzene(21.4%), Trichlorofluoromethane(25.6%), Trichlorotrifluoroethane(23.7%), Vinyl chloride(24.2%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646501 (CM58488) CHEM02 10/11/2022-2

CM46674(1X), CM46675(1X), CM46676(1X), CM46677(1X), CM46678(1X), CM46679(1X), CM46680(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646712 (CM49151) CHEM15 10/12/2022-1

CM46682(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 28, 2022

SDG I.D.: GCM46673

VOA Narration

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☐ ICE ☐ No ☐
Temp 0.1°C Pg of

PHOENIX Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5236
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 9/30/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic			VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
46673	22A-AE105S-092922-1	GW	9/29/2022	1515				2							X					
46674	22A-AE105R2-092922-1	GW	9/29/2022	1455	3	2		4			X	X				X	X	X	X	
46675	22A-AE105R3-092922-1	GW	9/29/2022	1430	3						X									
46676	22A-AE105R4-092922-1	GW	9/29/2022	1435	3						X	X								
46677	22A-AE105R5-092922-1	GW	9/29/2022	1440	3						X									
46678	22A-TRC301R1-092922-1	GW	9/29/2022	1710	3						X									
46679	22A-TRC301R2-092922-1	GW	9/29/2022	1615	3						X									
46680	22A-TRC301R3-092922-1	GW	9/29/2022	1520	3						X									
46681	22A-PS1M-092922-1	GW	9/29/2022	1625	3						X									
46682	22A-PS1D-092922-1	GW	9/29/2022	1505	3						X									
46683	22A-PS8D-092922-1	GW	9/29/2022	1630	3			2			X				X					
46684	22A-AE106R1-092922-1	GW	9/29/2022	1305	3						X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	9-30-22	1605
[signature]	[signature]	9/30/22	16:57

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Thursday, October 20, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60688023.02.2**
SDG ID: **GCM47533**
Sample ID#s: CM47533 - CM47544

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 20, 2022

SDG I.D.: GCM47533

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 20, 2022

SDG I.D.: GCM47533

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-TB01-100322-1	CM47533	GROUND WATER
22A-AE101R2-100322-1	CM47534	GROUND WATER
22A-AE101R4-100322-1	CM47535	GROUND WATER
22A-AE101R6-100322-1	CM47536	GROUND WATER
22A-AE102M-100322-1	CM47537	GROUND WATER
22A-AE103D-100322-1	CM47538	GROUND WATER
22A-AE103S-100322-1	CM47539	GROUND WATER
22A-GZA102S-100322-1	CM47540	GROUND WATER
22A-GZA102S-100322-2	CM47541	GROUND WATER
22A-PZ2S-100322-1	CM47542	GROUND WATER
22A-MW5-100322-1	CM47543	GROUND WATER
22A-MW7-100322-1	CM47544	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47533

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TB01-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47533
Client ID: 22A-TB01-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	94		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	98		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47533
Client ID: 22A-TB01-100322-1

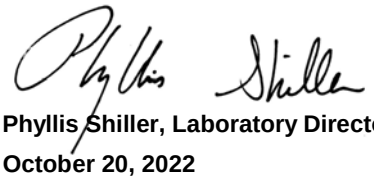
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	9:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47534

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE101R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	8.6	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47534

Client ID: 22A-AE101R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	68	10	ug/L	10	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	25	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	75	10	ug/L	10	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	18	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	100		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	101		%	10	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (10x)	95		%	10	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (10x)	99		%	10	10/12/22	HM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	101		%	10	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	4.7	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	80		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47535

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE101R4-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	1.09	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.965	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	1.15	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.941	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	41.7	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/03/22 20:01	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/03/22 20:01	BS/GD	E300.0
Sulfate	30.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	0.08	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	2.1	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	9.2	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47535

Client ID: 22A-AE101R4-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	240	20	ug/L	20	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	53	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47535
Client ID: 22A-AE101R4-100322-1

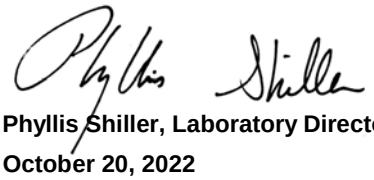
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	160	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	13	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	95		%	2	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (2x)	96		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	99		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	90		%	20	10/12/22	HM	70 - 130 %
% Toluene-d8 (20x)	99		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47536

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE101R6-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	2.73	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.574	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	3.02	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.577	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	78.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/03/22 20:11	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/03/22 20:11	BS/GD	E300.0
Sulfate	75.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	0.09	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	7.8	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	61	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	20	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47536

Client ID: 22A-AE101R6-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	970	500	ug/L	500	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	630	500	ug/L	500	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	52	20	ug/L	20	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	3200	500	ug/L	500	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	320	20	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	101		%	500	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	89		%	500	10/13/22	MH	70 - 130 %
% Toluene-d8 (500x)	96		%	500	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	12	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	9:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47537

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102M-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/06/22	TH	SW6010D
Arsenic (Dissolved)	0.009	0.004	mg/L	1	10/12/22	TH	SW6010D
Iron (Dissolved)	3.65	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	15.6	0.011	mg/L	10	10/14/22	TH	SW6010D
Iron	3.26	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	17.0	0.010	mg/L	10	10/14/22	TH	SW6010D
Chloride	828	125	mg/L	25	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/03/22 22:38	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/03/22 20:21	BS/GD	E300.0
Sulfate	7.9	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	2.4	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	3.0	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	1.3	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	53	10	ug/L	10	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	3.0	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	7.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	1.2	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	24	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	16	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	103		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	98		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (10x)	97		%	10	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (10x)	97		%	10	10/12/22	HM	70 - 130 %
% Toluene-d8 (10x)	100		%	10	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.49	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	83		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47538

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103D-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/06/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/12/22	TH	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	2.15	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	0.038	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	2.17	0.010	mg/L	10	10/14/22	TH	SW6010D
Chloride	909	125	mg/L	25	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/03/22 23:09	BS/GD	E300.0
Nitrate as Nitrogen	4.41	0.10	mg/L	2	10/03/22 22:59	BS/GD	E300.0
Sulfate	39.2	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.6	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	2.3	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	6.6	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	54	10	ug/L	10	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	93	10	ug/L	10	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	98		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	97		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	103		%	10	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (10x)	95		%	10	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (10x)	93		%	10	10/12/22	HM	70 - 130 %
% Toluene-d8 (10x)	100		%	10	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.49	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47539

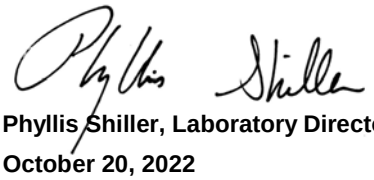
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.522	0.004	mg/L	1	10/06/22	TH	SW6010D
Arsenic (Dissolved)	0.172	0.004	mg/L	1	10/12/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47540

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA102S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.563	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.406	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	0.584	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.405	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	212	25.0	mg/L	5	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/04/22 00:21	BS/GD	E300.0
Nitrate as Nitrogen	0.27	0.05	mg/L	1	10/03/22 20:52	BS/GD	E300.0
Sulfate	11.8	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	6.8	1.0	mg/L	1	10/04/22	EG	SM5310B-14
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/06/22	X/MQ	SW3520C
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/03/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47540

Client ID: 22A-GZA102S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrachloroethene	2.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.4	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	100		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/07/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/07/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	63		%	1	10/07/22	WB	40 - 140 %
% Nitrobenzene-d5	68		%	1	10/07/22	WB	40 - 140 %
% Terphenyl-d14	58		%	1	10/07/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47540
Client ID: 22A-GZA102S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	83		%	1	10/08/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	88		%	1	10/08/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	92		%	1	10/08/22	AW	40 - 140 %
% o-terphenyl (aromatic)	91		%	1	10/08/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	116		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	109		%	1	10/06/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47541

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA102S-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.570	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.410	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	0.567	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.399	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	218	25.0	mg/L	5	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/04/22 00:41	BS/GD	E300.0
Nitrate as Nitrogen	0.28	0.05	mg/L	1	10/03/22 21:02	BS/GD	E300.0
Sulfate	11.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	6.8	1.0	mg/L	1	10/04/22	EG	SM5310B-14
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/06/22	X/MQ	SW3520C
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/03/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47541

Client ID: 22A-GZA102S-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrachloroethene	2.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.3	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	95		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/07/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/07/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/07/22	WB	40 - 140 %
% Nitrobenzene-d5	63		%	1	10/07/22	WB	40 - 140 %
% Terphenyl-d14	52		%	1	10/07/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47541
Client ID: 22A-GZA102S-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	54		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	80		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	85		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	81		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	101		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	94		%	1	10/06/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	11:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47542

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PZ2S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/06/22	X/MQ	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				10/03/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/07/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/07/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/07/22	WB	40 - 140 %
% Nitrobenzene-d5	78		%	1	10/07/22	WB	40 - 140 %
% Terphenyl-d14	53		%	1	10/07/22	WB	40 - 140 %

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47542
Client ID: 22A-PZ2S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	63		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	104		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	83		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	510	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	390	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	120	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	2.9	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	103		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	1	10/06/22	V	70 - 130 %

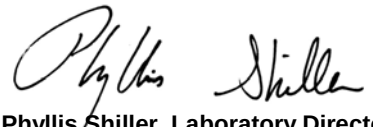
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Ver 1

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	11:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47543

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-MW5-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47543
Client ID: 22A-MW5-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	13	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	1.3	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	103		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47543

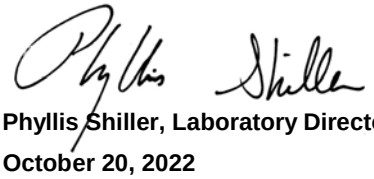
Client ID: 22A-MW5-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 20, 2022

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	12:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47544

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-MW7-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47544

Client ID: 22A-MW7-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	26	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	9.3	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	1.9	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	98		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	98		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

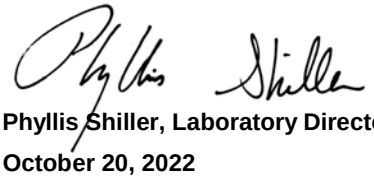
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47544
Client ID: 22A-MW7-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 20, 2022

QA/QC Data

SDG I.D.: GCM47533

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645253 (mg/L), QC Sample No: CM47433 (CM47535, CM47536, CM47537, CM47538, CM47539, CM47540, CM47541)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	95.3	97.6	2.4	99.3			80 - 120	20
Iron	BRL	0.010	0.686	0.681	0.70	89.7	90.9	1.3	99.4			80 - 120	20
Manganese	BRL	0.001	0.252	0.254	0.80	93.7	94.7	1.1	95.6			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645301 (mg/L), QC Sample No: CM47535 (CM47535, CM47536, CM47537, CM47538, CM47539, CM47540, CM47541)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	92.5	90.9	1.7	88.4			80 - 120	20
Iron	BRL	0.011	1.09	1.10	0.90	94.4	92.7	1.8	92.7			80 - 120	20
Manganese	BRL	0.001	0.965	0.976	1.10	95.6	94.4	1.3	89.1			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 20, 2022

QA/QC Data

SDG I.D.: GCM47533

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645395 (mg/L), QC Sample No: CM47523 (CM47535, CM47536, CM47537, CM47538, CM47540, CM47541)													
Total Organic Carbon	BRL	1.0	4.5	5.1	NC	110			114			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 645407 (mg/L), QC Sample No: CM49151 (CM47535, CM47536, CM47537, CM47538, CM47540, CM47541)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	92.3			102			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 645228 (mg/L), QC Sample No: CM47435 (CM47535, CM47536, CM47537, CM47538, CM47540, CM47541)													
Chloride	BRL	5.0	5.3	5.1	NC	96.4			94.2			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	1.71	1.67	2.40	98.9			98.5			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	99.3			98.2			90 - 110	20
Sulfate	BRL	5.0	7.8	7.2	NC	99.6			97.3			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 20, 2022

QA/QC Data

SDG I.D.: GCM47533

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645601 (ug/l), QC Sample No: CM49151 (CM47534, CM47536, CM47537, CM47538)										
1,4dioxane - Ground Water										
1,4-dioxane	ND	0.20	86	87	1.2	79	75	5.2	70 - 130	20
% 1,4-dioxane-d8	84	%	84	101	18.4	86	82	4.8	70 - 130	20
QA/QC Batch 645596 (ug/L), QC Sample No: CM49088 (CM47540, CM47541, CM47542)										
MAEPH - Ground Water										
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	74	65	12.9				40 - 140	25
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	96	86	11.0				40 - 140	25
C11-C22 Aromatic Hydrocarbons 1	ND	100	78	68	13.7				40 - 140	25
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25
C9 - Nonane	ND	10	43	39	9.8				40 - 140	25
C-10 Decane	ND	10	57	50	13.1				40 - 140	25
C12 - Dodecane	ND	10	72	62	14.9				40 - 140	25
C14 - Tetradecane	ND	10	83	71	15.6				40 - 140	25
C16 - Hexadecane	ND	10	89	79	11.9				40 - 140	25
C18 - Octadecane	ND	10	98	89	9.6				40 - 140	25
C19 - Nonadecane	ND	10	94	85	10.1				40 - 140	25
C20 - Eicosane	ND	10	94	85	10.1				40 - 140	25
C22 - Docosane	ND	10	96	87	9.8				40 - 140	25
C24 - Tetracosane	ND	10	97	89	8.6				40 - 140	25
C26 - Hexacosane	ND	10	96	88	8.7				40 - 140	25
C28 - Octacosane	ND	10	96	87	9.8				40 - 140	25
C30 - Tricotane	ND	10	93	86	7.8				40 - 140	25
C36 - Hexatriacontane	ND	10	100	84	17.4				40 - 140	25
% 1-chlorooctadecane (aliphatic)	77	%	77	71	8.1				40 - 140	25
% o-terphenyl (aromatic)	77	%	76	69	9.7				40 - 140	25
% 2-Fluorobiphenyl (Fractionation)	74	%	77	77	0.0				40 - 140	25
% 2-Bromonaphthalene (Fractionati	78	%	77	75	2.6				40 - 140	25
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5	
% Naphthalene BT		%	0	0	NC				0 - 5	
Comment:										
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%										
QA/QC Batch 645694 (ug/L), QC Sample No: CM47333 (CM47540, CM47541, CM47542)										
Semivolatiles by SIM, PAH - Ground Water										
2-Methylnaphthalene	ND	0.50	86	74	15.0				40 - 140	20
Acenaphthene	ND	0.50	68	70	2.9				40 - 140	20
Acenaphthylene	ND	0.10	57	60	5.1				40 - 140	20
Anthracene	ND	0.10	71	74	4.1				40 - 140	20
Benz(a)anthracene	ND	0.05	82	90	9.3				40 - 140	20
Benzo(a)pyrene	ND	0.20	73	81	10.4				40 - 140	20
Benzo(b)fluoranthene	ND	0.07	97	107	9.8				40 - 140	20
Benzo(ghi)perylene	ND	0.02	78	85	8.6				40 - 140	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzo(k)fluoranthene	ND	0.10	80	85	6.1				40 - 140	20
Chrysene	ND	0.05	75	81	7.7				40 - 140	20
Dibenz(a,h)anthracene	ND	0.02	78	84	7.4				40 - 140	20
Fluoranthene	ND	0.50	67	72	7.2				40 - 140	20
Fluorene	ND	0.10	71	72	1.4				40 - 140	20
Indeno(1,2,3-cd)pyrene	ND	0.10	82	89	8.2				40 - 140	20
Naphthalene	ND	0.50	84	71	16.8				40 - 140	20
Phenanthrene	ND	0.06	81	85	4.8				40 - 140	20
Pyrene	ND	0.07	80	87	8.4				40 - 140	20
% 2-Fluorobiphenyl	64	%	65	65	0.0				40 - 140	20
% Nitrobenzene-d5	71	%	74	72	2.7				40 - 140	20
% Terphenyl-d14	63	%	68	73	7.1				40 - 140	20

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 646485 (ug/L), QC Sample No: CM47543 (CM47533, CM47534 (10X) , CM47535 (20X) , CM47537 (10X) , CM47538 (10X) , CM47543, CM47544)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	110	2.8				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	106	112	5.5				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	105	112	6.5				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	107	110	2.8				70 - 130	20
1,1-Dichloroethane	ND	1.0	109	116	6.2				70 - 130	20
1,1-Dichloroethene	ND	1.0	101	108	6.7				70 - 130	20
1,1-Dichloropropene	ND	1.0	106	107	0.9				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	110	116	5.3				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	105	108	2.8				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	111	114	2.7				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	110	112	1.8				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	103	7.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	109	110	0.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	108	111	2.7				70 - 130	20
1,2-Dichloroethane	ND	1.0	116	109	6.2				70 - 130	20
1,2-Dichloropropane	ND	1.0	112	116	3.5				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	111	1.8				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	109	111	1.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	112	112	0.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	109	113	3.6				70 - 130	20
1,4-dioxane	ND	100	98	94	4.2				40 - 160	20
2,2-Dichloropropane	ND	1.0	101	100	1.0				70 - 130	20
2-Chlorotoluene	ND	1.0	112	114	1.8				70 - 130	20
2-Hexanone	ND	5.0	98	103	5.0				40 - 160	20
4-Chlorotoluene	ND	1.0	111	114	2.7				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	104	106	1.9				40 - 160	20
Acetone	ND	5.0	109	107	1.9				40 - 160	20
Benzene	ND	0.70	110	109	0.9				70 - 130	20
Bromobenzene	ND	1.0	110	117	6.2				70 - 130	20
Bromochloromethane	ND	1.0	111	112	0.9				70 - 130	20
Bromodichloromethane	ND	0.50	102	103	1.0				70 - 130	20
Bromoform	ND	1.0	96	97	1.0				70 - 130	20
Bromomethane	ND	1.0	91	106	15.2				40 - 160	20
Carbon Disulfide	ND	1.0	96	101	5.1				70 - 130	20

QA/QC Data

SDG I.D.: GCM47533

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Carbon tetrachloride	ND	1.0	120	124	3.3				70 - 130	20
Chlorobenzene	ND	1.0	108	111	2.7				70 - 130	20
Chloroethane	ND	1.0	109	114	4.5				70 - 130	20
Chloroform	ND	1.0	111	115	3.5				70 - 130	20
Chloromethane	ND	1.0	108	112	3.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	108	118	8.8				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	104	106	1.9				70 - 130	20
Dibromochloromethane	ND	0.50	102	102	0.0				70 - 130	20
Dibromomethane	ND	1.0	108	111	2.7				70 - 130	20
Dichlorodifluoromethane	ND	1.0	90	95	5.4				40 - 160	20
Di-isopropyl ether	ND	1.0	114	117	2.6				70 - 130	20
Ethyl ether	ND	1.0	102	106	3.8				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	108	118	8.8				70 - 130	20
Ethylbenzene	ND	1.0	112	113	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	101	105	3.9				70 - 130	20
Isopropylbenzene	ND	1.0	108	114	5.4				70 - 130	20
m&p-Xylene	ND	1.0	109	112	2.7				70 - 130	20
Methyl ethyl ketone	ND	5.0	111	114	2.7				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	107	115	7.2				70 - 130	20
Methylene chloride	ND	1.0	94	98	4.2				70 - 130	20
Naphthalene	ND	1.0	113	117	3.5				70 - 130	20
n-Butylbenzene	ND	1.0	110	112	1.8				70 - 130	20
n-Propylbenzene	ND	1.0	108	114	5.4				70 - 130	20
o-Xylene	ND	1.0	109	111	1.8				70 - 130	20
p-Isopropyltoluene	ND	1.0	109	112	2.7				70 - 130	20
sec-Butylbenzene	ND	1.0	109	112	2.7				70 - 130	20
Styrene	ND	1.0	111	115	3.5				70 - 130	20
tert-amyl methyl ether	ND	1.0	106	109	2.8				70 - 130	20
tert-Butylbenzene	ND	1.0	111	113	1.8				70 - 130	20
Tetrachloroethene	ND	1.0	106	108	1.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	107	111	3.7				70 - 130	20
Toluene	ND	1.0	112	113	0.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	114	115	0.9				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	106	107	0.9				70 - 130	20
Trichloroethene	ND	1.0	108	110	1.8				70 - 130	20
Trichlorofluoromethane	ND	1.0	104	108	3.8				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	90	97	7.5				70 - 130	20
Vinyl chloride	ND	1.0	105	110	4.7				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	97	101	4.0				70 - 130	20
% Bromofluorobenzene	98	%	100	103	3.0				70 - 130	20
% Dibromofluoromethane	98	%	101	101	0.0				70 - 130	20
% Toluene-d8	102	%	99	99	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646712 (ug/L), QC Sample No: CM49151 (CM47534, CM47535 (2X) , CM47536 (20X) , CM47537, CM47538, CM47540, CM47541)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	103	0.0	107	117	8.9	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	106	105	0.9	121	123	1.6	70 - 130	20

QA/QC Data

SDG I.D.: GCM47533

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1,2,2-Tetrachloroethane	ND	0.50	109	106	2.8	106	105	0.9	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	106	107	0.9	105	109	3.7	70 - 130	20	
1,1-Dichloroethane	ND	1.0	111	107	3.7	120	125	4.1	70 - 130	20	
1,1-Dichloroethene	ND	1.0	105	102	2.9	116	118	1.7	70 - 130	20	
1,1-Dichloropropene	ND	1.0	107	112	4.6	120	123	2.5	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	116	110	5.3	108	110	1.8	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	108	106	1.9	107	108	0.9	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	111	108	2.7	111	115	3.5	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	109	107	1.9	114	121	6.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	94	93	1.1	80	80	0.0	70 - 130	20	
1,2-Dibromoethane	ND	1.0	109	108	0.9	103	113	9.3	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	107	1.9	111	118	6.1	70 - 130	20	
1,2-Dichloroethane	ND	1.0	118	119	0.8	113	126	10.9	70 - 130	20	
1,2-Dichloropropane	ND	1.0	108	110	1.8	115	120	4.3	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	109	107	1.9	116	120	3.4	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	109	105	3.7	113	121	6.8	70 - 130	20	
1,3-Dichloropropane	ND	1.0	112	109	2.7	111	119	7.0	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	109	107	1.9	114	120	5.1	70 - 130	20	
1,4-dioxane	ND	100	101	98	3.0	105	103	1.9	40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	99	8.7	115	117	1.7	70 - 130	20	
2-Chlorotoluene	ND	1.0	112	109	2.7	116	123	5.9	70 - 130	20	
2-Hexanone	ND	5.0	104	103	1.0	86	93	7.8	40 - 160	20	
4-Chlorotoluene	ND	1.0	113	111	1.8	117	124	5.8	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	106	106	0.0	95	99	4.1	40 - 160	20	
Acetone	ND	5.0	110	101	8.5	117	110	6.2	40 - 160	20	
Benzene	ND	0.70	104	108	3.8	114	121	6.0	70 - 130	20	
Bromobenzene	ND	1.0	111	109	1.8	114	120	5.1	70 - 130	20	
Bromochloromethane	ND	1.0	105	100	4.9	111	112	0.9	70 - 130	20	
Bromodichloromethane	ND	0.50	99	99	0.0	102	108	5.7	70 - 130	20	
Bromoform	ND	1.0	95	88	7.7	83	89	7.0	70 - 130	20	
Bromomethane	ND	1.0	106	95	10.9	93	116	22.0	40 - 160	20	r
Carbon Disulfide	ND	1.0	91	89	2.2	94	99	5.2	70 - 130	20	
Carbon tetrachloride	ND	1.0	105	101	3.9	111	117	5.3	70 - 130	20	
Chlorobenzene	ND	1.0	106	105	0.9	111	120	7.8	70 - 130	20	
Chloroethane	ND	1.0	107	105	1.9	119	123	3.3	70 - 130	20	
Chloroform	ND	1.0	110	104	5.6	117	121	3.4	70 - 130	20	
Chloromethane	ND	1.0	106	103	2.9	114	117	2.6	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	108	98	9.7	116	120	3.4	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	98	99	1.0	96	104	8.0	70 - 130	20	
Dibromochloromethane	ND	0.50	99	96	3.1	93	104	11.2	70 - 130	20	
Dibromomethane	ND	1.0	107	109	1.9	105	114	8.2	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	88	88	0.0	95	94	1.1	40 - 160	20	
Di-isopropyl ether	ND	1.0	116	110	5.3	121	127	4.8	70 - 130	20	
Ethyl ether	ND	1.0	109	100	8.6	108	108	0.0	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	108	104	3.8	107	107	0.0	70 - 130	20	
Ethylbenzene	ND	1.0	110	110	0.0	115	124	7.5	70 - 130	20	
Hexachlorobutadiene	ND	0.40	108	107	0.9	117	121	3.4	70 - 130	20	
Isopropylbenzene	ND	1.0	110	108	1.8	117	121	3.4	70 - 130	20	
m&p-Xylene	ND	1.0	107	107	0.0	113	121	6.8	70 - 130	20	
Methyl ethyl ketone	ND	5.0	116	115	0.9	113	110	2.7	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	109	102	6.6	104	106	1.9	70 - 130	20	
Methylene chloride	ND	1.0	93	90	3.3	99	103	4.0	70 - 130	20	
Naphthalene	ND	1.0	111	108	2.7	98	103	5.0	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
n-Butylbenzene	ND	1.0	116	113	2.6	122	128	4.8	70 - 130	20
n-Propylbenzene	ND	1.0	111	110	0.9	117	122	4.2	70 - 130	20
o-Xylene	ND	1.0	106	105	0.9	108	115	6.3	70 - 130	20
p-Isopropyltoluene	ND	1.0	111	109	1.8	119	124	4.1	70 - 130	20
sec-Butylbenzene	ND	1.0	113	113	0.0	121	126	4.0	70 - 130	20
Styrene	ND	1.0	109	108	0.9	110	120	8.7	70 - 130	20
tert-amyl methyl ether	ND	1.0	100	110	9.5	97	101	4.0	70 - 130	20
tert-Butylbenzene	ND	1.0	111	111	0.0	117	124	5.8	70 - 130	20
Tetrachloroethene	ND	1.0	108	112	3.6	118	122	3.3	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	108	108	0.0	104	101	2.9	70 - 130	20
Toluene	ND	1.0	105	109	3.7	115	118	2.6	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	109	106	2.8	120	120	0.0	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0	99	105	5.9	70 - 130	20
Trichloroethene	ND	1.0	107	109	1.9	117	120	2.5	70 - 130	20
Trichlorofluoromethane	ND	1.0	111	108	2.7	125	128	2.4	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	95	94	1.1	110	113	2.7	70 - 130	20
Vinyl chloride	ND	1.0	109	107	1.9	121	123	1.6	70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	102	102	0.0	102	101	1.0	70 - 130	20
% Bromofluorobenzene	97	%	101	99	2.0	97	101	4.0	70 - 130	20
% Dibromofluoromethane	98	%	97	97	0.0	99	102	3.0	70 - 130	20
% Toluene-d8	100	%	98	100	2.0	97	98	1.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646962 (ug/L), QC Sample No: CM60510 (CM47536 (500X))

Volatiles - Ground Water

cis-1,2-Dichloroethene	ND	1.0	103	114	10.1				70 - 130	20
Tetrachloroethene	ND	1.0	104	109	4.7				70 - 130	20
Trichloroethene	ND	1.0	104	110	5.6				70 - 130	20
% 1,2-dichlorobenzene-d4	103	%	102	102	0.0				70 - 130	20
% Bromofluorobenzene	96	%	98	98	0.0				70 - 130	20
% Dibromofluoromethane	93	%	92	92	0.0				70 - 130	20
% Toluene-d8	96	%	98	98	0.0				70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 645647 (ug/L), QC Sample No: CM46668 (CM47540)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	100	99	1.0	108	112	3.6	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	98	98	0.0	85	96	12.2	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	100	99	1.0	108	112	3.6	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	98	98	0.0	85	96	12.2	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	104	105	1.0	96	102	6.1	70 - 130	25
Benzene	ND	1.0	100	101	1.0	102	107	4.8	70 - 130	25
Ethyl Benzene	ND	1.0	99	100	1.0	103	107	3.8	70 - 130	25
MTBE	ND	1.0	108	107	0.9	107	113	5.5	70 - 130	25
Naphthalene	ND	5.0	108	109	0.9	105	110	4.7	70 - 130	25
Toluene	ND	1.0	100	101	1.0	103	110	6.6	70 - 130	25
m,p-Xylenes	ND	2.0	101	102	1.0	101	105	3.9	70 - 130	25
o-Xylene	ND	1.0	98	99	1.0	93	98	5.2	70 - 130	25

QA/QC Data

SDG I.D.: GCM47533

Parameter	Blank	Blk RL		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 2,5-Dibromotoluene (PID)	106	%		101	101	0.0	101	103	2.0	70 - 130	25
% 2,5-Dibromotoluene (FID)	113	%		104	103	1.0	103	105	1.9	70 - 130	25
QA/QC Batch 645881 (ug/L), QC Sample No: CM49088 (CM47541, CM47542)											
Volatile Petroleum Hydrocarbons - Ground Water											
Unadjusted C5-C8 Aliphatics (*1)	ND	100		97	93	4.2	108	113	4.5	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100		92	90	2.2	104	109	4.7	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100		97	93	4.2	108	113	4.5	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100		92	90	2.2	104	109	4.7	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100		94	92	2.2	97	105	7.9	70 - 130	25
Benzene	ND	1.0		93	92	1.1	100	107	6.8	70 - 130	25
Ethyl Benzene	ND	1.0		92	91	1.1	99	107	7.8	70 - 130	25
MTBE	ND	1.0		91	90	1.1	91	100	9.4	70 - 130	25
Naphthalene	ND	5.0		86	85	1.2	87	96	9.8	70 - 130	25
Toluene	ND	1.0		94	92	2.2	101	108	6.7	70 - 130	25
m,p-Xylenes	ND	2.0		95	93	2.1	101	109	7.6	70 - 130	25
o-Xylene	ND	1.0		91	89	2.2	95	102	7.1	70 - 130	25
% 2,5-Dibromotoluene (PID)	92	%		80	81	1.2	81	87	7.1	70 - 130	25
% 2,5-Dibromotoluene (FID)	99	%		85	89	4.6	90	99	9.5	70 - 130	25

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 20, 2022

Thursday, October 20, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM47533 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM47533	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM47533	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47533	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47533	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47533	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47533	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM47533	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM47533	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM47534	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47534	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	75	10	5	5	ug/L
CM47534	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	68	10	20	20	ug/L
CM47534	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	25	1.0	5	5	ug/L
CM47534	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM47534	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	18	1.0	2	2	ug/L
CM47534	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47534	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	18	1.0	2	2	ug/L
CM47534	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	75	10	5	5	ug/L
CM47534	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	1.0	5	5	ug/L
CM47534	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	68	10	20	20	ug/L
CM47534	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47534	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	68	10	20	20	ug/L
CM47534	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	75	10	5	5	ug/L
CM47534	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	18	1.0	2	2	ug/L
CM47534	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	18	1.0	2	2	ug/L
CM47534	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	25	1.0	5	5	ug/L
CM47534	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	75	10	5	5	ug/L
CM47534	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47534	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	68	10	20	20	ug/L
CM47534	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	18	1.0	2	2	ug/L
CM47534	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	75	10	5	5	ug/L
CM47534	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4.7	0.20	0.3	0.3	ug/l
CM47534	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.7	0.20	0.3	0.3	ug/l
CM47534	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	4.7	0.20	0.3	0.3	ug/l
CM47535	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM47535	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	13	2.0	2	2	ug/L
CM47535	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM47535	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	53	2.0	5	5	ug/L
CM47535	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	160	20	5	5	ug/L
CM47535	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM47535	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	240	20	20	20	ug/L

Thursday, October 20, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM47533 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM47535	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM47535	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM47535	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	240	20	20	20	ug/L
CM47535	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	2.0	2	2	ug/L
CM47535	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	53	2.0	5	5	ug/L
CM47535	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	20	5	5	ug/L
CM47535	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM47535	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	240	20	20	20	ug/L
CM47535	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	53	2.0	50	50	ug/L
CM47535	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	160	20	5	5	ug/L
CM47535	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	2.0	2	2	ug/L
CM47535	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	2.0	2	2	ug/L
CM47535	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	160	20	5	5	ug/L
CM47535	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	53	2.0	5	5	ug/L
CM47535	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	240	20	70	70	ug/L
CM47535	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM47535	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	160	20	5	5	ug/L
CM47535	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	240	20	20	20	ug/L
CM47535	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	53	2.0	50	50	ug/L
CM47535	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	2.0	2	2	ug/L
CM47535	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	0.3	0.3	ug/L
CM47535	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	80	0.3	0.3	ug/L
CM47535	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	80	0.3	0.3	ug/L
CM47535	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.965	0.001	0.43	0.43	mg/L
CM47535	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.941	0.001	0.43	0.43	mg/L
CM47536	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM47536	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM47536	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM47536	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	970	500	20	20	ug/L
CM47536	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM47536	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM47536	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	320	20	2	2	ug/L
CM47536	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM47536	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM47536	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM47536	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM47536	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM47536	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM47536	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L

Thursday, October 20, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM47533 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM47536	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	630	500	5	5	ug/L
CM47536	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	3200	500	5	5	ug/L
CM47536	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM47536	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	630	500	5	5	ug/L
CM47536	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM47536	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM47536	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	320	20	2	2	ug/L
CM47536	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3200	500	5	5	ug/L
CM47536	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM47536	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM47536	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	970	500	20	20	ug/L
CM47536	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	20	7	7	ug/L
CM47536	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM47536	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM47536	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM47536	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	630	500	50	50	ug/L
CM47536	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3200	500	5	5	ug/L
CM47536	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM47536	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	320	20	2	2	ug/L
CM47536	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	970	500	20	20	ug/L
CM47536	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	970	500	70	70	ug/L
CM47536	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM47536	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM47536	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM47536	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	20	20	7	7	ug/L
CM47536	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM47536	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM47536	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3200	500	5	5	ug/L
CM47536	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	320	20	2	2	ug/L
CM47536	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	630	500	5	5	ug/L
CM47536	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	630	500	50	50	ug/L
CM47536	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3200	500	5	5	ug/L
CM47536	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	320	20	2	2	ug/L
CM47536	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	970	500	20	20	ug/L

Thursday, October 20, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM47533 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM47536	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM47536	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM47536	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	12	0.20	0.3	0.3	ug/l
CM47536	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	0.20	0.3	0.3	ug/l
CM47536	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	12	0.20	0.3	0.3	ug/l
CM47536	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.574	0.001	0.43	0.43	mg/L
CM47536	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.577	0.001	0.43	0.43	mg/L
CM47537	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	16	1.0	2	2	ug/L
CM47537	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	7.1	1.0	5	5	ug/L
CM47537	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	53	10	20	20	ug/L
CM47537	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47537	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47537	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	24	1.0	5	5	ug/L
CM47537	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM47537	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	1.0	2	2	ug/L
CM47537	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	24	1.0	5	5	ug/L
CM47537	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.1	1.0	5	5	ug/L
CM47537	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47537	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	53	10	20	20	ug/L
CM47537	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	24	1.0	5	5	ug/L
CM47537	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	53	10	20	20	ug/L
CM47537	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	1.0	2	2	ug/L
CM47537	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	24	1.0	5	5	ug/L
CM47537	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47537	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	16	1.0	2	2	ug/L
CM47537	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.1	1.0	5	5	ug/L
CM47537	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	16	1.0	2	2	ug/L
CM47537	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	53	10	20	20	ug/L
CM47537	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	24	1.0	5	5	ug/L
CM47537	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.49	0.20	0.3	0.3	ug/l
CM47537	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.49	0.20	0.3	0.3	ug/l
CM47537	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.49	0.20	0.3	0.3	ug/l
CM47537	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	15.6	0.011	0.43	0.43	mg/L
CM47537	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	17.0	0.010	0.43	0.43	mg/L
CM47538	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47538	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM47538	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47538	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	54	10	5	5	ug/L
CM47538	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	93	10	5	5	ug/L

Thursday, October 20, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM47533 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM47538	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	93	10	5	5	ug/L
CM47538	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47538	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	54	10	5	5	ug/L
CM47538	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	93	10	5	5	ug/L
CM47538	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	54	10	50	50	ug/L
CM47538	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	54	10	5	5	ug/L
CM47538	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47538	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	93	10	5	5	ug/L
CM47538	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	93	10	5	5	ug/L
CM47538	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	54	10	50	50	ug/L
CM47538	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.49	0.20	0.3	0.3	ug/l
CM47538	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.49	0.20	0.3	0.3	ug/l
CM47538	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.49	0.20	0.3	0.3	ug/l
CM47538	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.15	0.001	0.43	0.43	mg/L
CM47538	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.17	0.010	0.43	0.43	mg/L
CM47539	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.522	0.004	0.01	0.01	mg/L
CM47539	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.522	0.004	0.01	0.01	mg/L
CM47539	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.522	0.004	0.01	0.01	mg/L
CM47539	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.172	0.004	0.01	0.01	mg/L
CM47539	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.172	0.004	0.01	0.01	mg/L
CM47539	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.172	0.004	0.01	0.01	mg/L
CM47540	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47540	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM47540	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47540	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47540	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47540	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM47540	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM47540	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM47541	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47541	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM47541	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47541	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47541	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47541	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM47541	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM47541	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM47543	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47543	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L

Thursday, October 20, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM47533 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM47543	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47543	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47543	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47543	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM47543	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM47543	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM47544	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM47544	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	9.3	1.0	5	5	ug/L
CM47544	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	26	1.0	20	20	ug/L
CM47544	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM47544	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM47544	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	1.0	20	20	ug/L
CM47544	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.3	1.0	5	5	ug/L
CM47544	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM47544	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	1.0	20	20	ug/L
CM47544	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	9.3	1.0	5	5	ug/L
CM47544	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM47544	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9.3	1.0	5	5	ug/L
CM47544	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	26	1.0	20	20	ug/L
CM47544	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	9.3	1.0	5	5	ug/L
CM47544	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM47544	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM47544	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM47533, CM47534, CM47535, CM47536, CM47537, CM47538, CM47539, CM47540, CM47541, CM47542, CM47543, CM47544

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

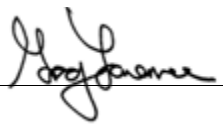
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: EPH Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Thursday, October 20, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 20, 2022

SDG I.D.: GCM47533

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/06/22-1 Adam Werner, Chemist 10/06/22

CM47534 (1X), CM47536 (1X), CM47537 (1X), CM47538 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1006_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 645601 (CM49151)

CM47534, CM47536, CM47537, CM47538

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 20, 2022

SDG I.D.: GCM47533

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 645596 (Samples: CM47540, CM47541, CM47542): -----

The LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C9 - Nonane)

Instrument:

AU-FID4 10/06/22-1 Adam Werner, Chemist 10/06/22

CM47540 (1X), CM47541 (1X), CM47542 (1X)

The initial calibration (AL0805BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 645596 (CM49088)

CM47540, CM47541, CM47542

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(39%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/05/22-1 Greg Danielewski, Chemist 10/05/22

CM47535 , CM47536 , CM47537 , CM47538 , CM47540 , CM47541

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645395 (CM47523)

CM47535, CM47536, CM47537, CM47538, CM47540, CM47541

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 645407 (CM49151)

CM47535, CM47536, CM47537, CM47538, CM47540, CM47541

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 20, 2022

SDG I.D.: GCM47533

Wet Chemistry Analysis

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 10/03/22-2 Brian Sheriden, Greg Danielewski, Chemist 10/03/22

CM47535 , CM47536 , CM47537 , CM47538 , CM47540 , CM47541

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645228 (CM47435)

CM47535, CM47536, CM47537, CM47538, CM47540, CM47541

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 10/06/22 08:36 Tina Hall, Chemist 10/06/22

CM47535, CM47536, CM47537, CM47538, CM47539, CM47540, CM47541

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/12/22 09:40 Tina Hall, Chemist 10/12/22

CM47535, CM47536, CM47537, CM47538, CM47539, CM47540, CM47541

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Certification Report

October 20, 2022

SDG I.D.: GCM47533

ICP Metals Narration

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/13/22 08:05 Tina Hall, Chemist 10/13/22

CM47537

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/14/22 08:37 Tina Hall, Chemist 10/14/22

CM47537, CM47538

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 645253 (CM47433)

CM47535, CM47536, CM47537, CM47538, CM47539, CM47540, CM47541

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645301 (CM47535)

CM47535, CM47536, CM47537, CM47538, CM47539, CM47540, CM47541

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM27 10/07/22-1 Wes Bryon, Chemist 10/07/22

CM47540 (1X), CM47541 (1X), CM47542 (1X)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 20, 2022

SDG I.D.: GCM47533

SVOASIM Narration

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0808):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/1007_03-27_BNSIM18_0808) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 645694 (CM47333)

CM47540, CM47541, CM47542

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM15 10/11/22-4 Harry Mullin, Chemist 10/11/22

CM47533 (1X), CM47534 (10X), CM47535 (20X), CM47537 (10X), CM47538 (10X), CM47543 (1X), CM47544 (1X)

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1010_32-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 20, 2022

SDG I.D.: GCM47533

VOA Narration

The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM15 10/12/22-1 Harry Mullin, Chemist 10/12/22

CM47534 (1X), CM47535 (2X), CM47536 (20X), CM47537 (1X), CM47538 (1X), CM47540 (1X), CM47541 (1X)

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1012_01-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM17 10/13/22-1 Michael Hahn, Chemist 10/13/22

CM47536 (500X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM17/1013_02-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
88% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 646485 (CM47543) CHEM15 10/11/2022-4

CM47533(1X), CM47534(10X), CM47535(20X), CM47537(10X), CM47538(10X), CM47543(1X), CM47544(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 20, 2022

SDG I.D.: GCM47533

VOA Narration

Batch 646712 (CM49151) CHEM15 10/12/2022-1

CM47534(1X), CM47535(2X), CM47536(20X), CM47537(1X), CM47538(1X), CM47540(1X), CM47541(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646962 (CM60510) CHEM17 10/13/2022-1

CM47536(500X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 10/05/22-1 James Karabetsos, Chemist 10/05/22

CM47540 (1X)

Initial Calibration Evaluation (PIDFID/VPH_100322_T):
The following compounds exceeded %RSD criteria: None.

PIDFID 10/06/22-1 James Karabetsos, Chemist 10/06/22

CM47541 (1X), CM47542 (1X)

Initial Calibration Evaluation (PIDFID/VPH_100322_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 645647 (CM46668)

CM47540(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.

Batch 645881 (CM49088)

CM47541(1X), CM47542(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 20, 2022

SDG I.D.: GCM47533

VPH Narration

All LCS/LCSD RPDs were less than 25% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]

CHAIN OF CUSTODY RECORD

Temp 1.8 °C Pg of

PHOENIX *Environmental Laboratories, Inc.*

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 10/3/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
47533	22A-TB01-100322-1	GW	10/3/22	0800	2							X									
47534	22A-AE101RZ-100322-1	GW	10/3/22	0910	3	1						X	X								
47535	22A-AE101R4-100322-1	GW	10/3/22	1000	3	1		4				X					X	X	X	X	
47536	22A-AE101R6-100322-1	GW	10/3/22	1100	3	2		4				X	X				X	X	X	X	
47537	22A-AE102M-100322-1	GW	10/3/22	0915	3	2		4				X	X			X	X	X	X	X	
47538	22A-AE103D-100322-1	GW	10/3/22	1050	3	2		4				X	X			X	X	X	X	X	
47539	22A-AE103S-100322-1	GW	10/3/22	1005				2								X					
~~—~~	~~22A-AE104D-100322-1~~	~~GW~~	~~10/3/22~~																		10/3/22
~~—~~	~~22A-AE104D-100322-2~~	~~GW~~	~~10/3/22~~																		10/3/22
(1) 47540	22A-GZA102S-100322-1	GW	10/3/22	1015	5			4				X		X	X		X	X	X	X	
(1) 47541	22A-GZA102S-100322-2	GW	10/3/22	1015	5			4				X		X	X		X	X	X	X	
47542	22A-P22S-100322-1	GW	10/3/22	1145	2	2								X	X						

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10-3-22	1300
[signature]	[signature]	10-3-22	1450

Comments, Special Requirements or Regulations:
(1) Also received 8oz Amber (TOC) + 1000mL Amber for (EPH/PAH)

Turnaround:
10 - 15 days

RI
- [ ] Direct Exposure (Residential)
- [ ] GW
- [ ] Other

CT
- [ ] RCP Cert
- [ ] GW Protection
- [ ] SW Protection
- [ ] GA Mobility
- [ ] GB Mobility
- [ ] Residential DEC
- [ ] I/C DEC
- [ ] Other

MA
- [X] MCP (CAM Rpt)
- [X] GW-1
- [X] GW-2
- [X] GW-3
- [ ] S-1
- [ ] S-2
- [ ] S-3
- [ ] MWRA eSMART
- [ ] Other

State where samples were collected: MA

Data Format
- [X] PDF
- [X] AECOM EQuIS 4-File EDD format

Data Package
- [ ] Tier II Checklist
- [ ] Full Data Package*
- [ ] Phoenix Std Report
- [ ] Other

* SURCHARGE APPLIES

Cooler: Yes ☒ No ☐
Coolant: IPK ☐ ICE ☒ No ☐
Temp 1.8 C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 10/3/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
47543	22A-MW5-100322-1	GW	10/3/22	1115	3							X									
47544	22A-MW7-100322-1	GW	10/3/22	1210	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature] 10-3-22		1300
[signature]	[signature] 10-3-22		14:50

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

PHOENIX
Environmental Laboratories, Inc.

Tuesday, January 10, 2023

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
SDG ID: GCM49146
Sample ID#s: CM49146 - CM49163

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

January 10, 2023

SDG I.D.: GCM49146

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Ver.2:
This report has been revised to correct Question A on the MCP certification form.

Ver 3:
This report has been revised per client reqeust. 1,4-Dioxane results for sample 22A-AE100R5-100422-1 were changed to sample 22A-AE100R3-100422-1.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

January 10, 2023

SDG I.D.: GCM49146

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-IP1R2-100322-1	CM49146	GROUND WATER
22A-TRC101-100322-1	CM49147	GROUND WATER
22A-AE2R-100322-1	CM49148	GROUND WATER
22A-AE104D-100322-1	CM49149	GROUND WATER
22A-AE104D-100322-2	CM49150	GROUND WATER
22A-GZA12-100422-1	CM49151	GROUND WATER
22A-GZA101R-100422-1	CM49152	GROUND WATER
22A-AE29R1-100422-1	CM49153	GROUND WATER
22AAE29R3-100422-1	CM49154	GROUND WATER
22A-AE29R5-100422-1	CM49155	GROUND WATER
22A-AE29R6-100422-1	CM49156	GROUND WATER
22A-AE100R1-100422-1	CM49157	GROUND WATER
22A-AE100R2-100422-1	CM49158	GROUND WATER
22A-AE100R3-100422-1	CM49159	GROUND WATER
22A-AE100R4-100422-1	CM49160	GROUND WATER
22A-AE100R5-100422-1	CM49161	GROUND WATER
22A-TB02-100322-1	CM49162	GROUND WATER
22A-EMW10D-100422-1	CM49163	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:10
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49146

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-IP1R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	75	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	19	7.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49146

Client ID: 22A-IP1R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	84	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	2800	400	ug/L	400	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	6000	400	ug/L	400	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	91		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	102		%	400	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (400x)	95		%	400	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (400x)	91		%	400	10/13/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49146
Client ID: 22A-IP1R2-100322-1

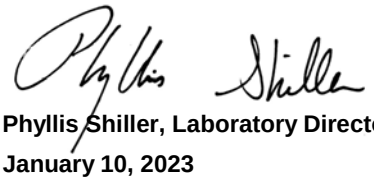
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (400x)	95		%	400	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49147

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC101-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C	
Semi-Volatile Extraction	Completed				10/07/22	X/MQ	SW3520C	
MA Petroleum Hydrocarbon (EPH)	Completed				10/04/22		MADEP EPH-19	
	Completed				10/06/22	V	MA VPH 2/20182.1, 201	
Semivolatiles by SIM, PAH								
2-Methylnaphthalene	0.51	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Acenaphthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Acenaphthylene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Benz(a)anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Benzo(a)pyrene	ND	0.19	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Chrysene	ND	0.05	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Fluoranthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Fluorene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Naphthalene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Phenanthrene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
Pyrene	ND	0.07	ug/L	1	10/10/22	KCA	SW8270D (SIM)	
QA/QC Surrogates								
% 2-Fluorobiphenyl	52		%	1	10/10/22	KCA	40 - 140 %	
% Nitrobenzene-d5	66		%	1	10/10/22	KCA	40 - 140 %	
% Terphenyl-d14	34		%	1	10/10/22	KCA	40 - 140 %	3

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49147
Client ID: 22A-TRC101-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	71		%	1	10/08/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	90		%	1	10/08/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	103		%	1	10/08/22	AW	40 - 140 %
% o-terphenyl (aromatic)	77		%	1	10/08/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	530	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	340	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	190	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	1.2	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	10/06/22	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Semi-Volatile Comment:
Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

January 10, 2023

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49148

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE2R-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	6.0	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	96		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

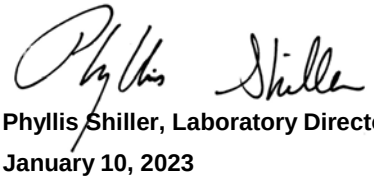
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49148
Client ID: 22A-AE2R-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49149

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104D-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	1.2	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.7	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	95		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49150

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104D-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	1.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.8	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	94		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	76		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	9:30
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49151

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA12-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.005	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/10/22	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.436	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.055	0.010	mg/L	1	10/07/22	TH	SW6010D
Manganese	0.473	0.001	mg/L	1	10/07/22	TH	SW6010D
Chloride	727	50.0	mg/L	10	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/04/22 23:14	BS/GD	E300.0
Nitrate as Nitrogen	8.42	0.50	mg/L	10	10/04/22 23:14	BS/GD	E300.0
Sulfate	32.2	5.0	mg/L	1	10/04/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	10/05/22	EG	SM5310B-14
Client MS/MSD	Completed				10/11/22		
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49151

Client ID: 22A-GZA12-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	97		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	86		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49152

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA101R-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.005	0.004	mg/L	1	10/10/22	CPP	SW6010D
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	7.9	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	220	20	ug/L	20	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	150	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	102		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	10/12/22	HM	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49152
Client ID: 22A-GZA101R-100422-1

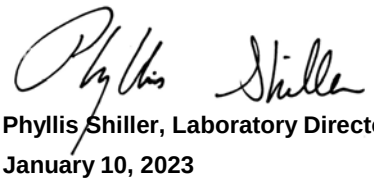
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (2x)	99		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	95		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	10/12/22	HM	70 - 130 %
% Toluene-d8 (20x)	101		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	8:42
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49153

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE29R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/04/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49153
Client ID: 22A-AE29R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.7	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	94		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	96		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)

Ver 3

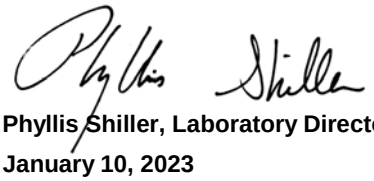
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49153
Client ID: 22A-AE29R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	9:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49154

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22AAE29R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	5.0	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49154
Client ID: 22AAE29R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	13	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	12	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	19	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 3

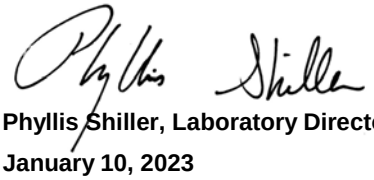
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49154
Client ID: 22AAE29R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	10:23
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49155

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE29R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	45	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethene	9.1	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49155

Client ID: 22A-AE29R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	160	20	ug/L	20	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	6.1	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	78	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	21	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	102		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	92		%	2	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (2x)	94		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	99		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	10/12/22	HM	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49155
Client ID: 22A-AE29R5-100422-1

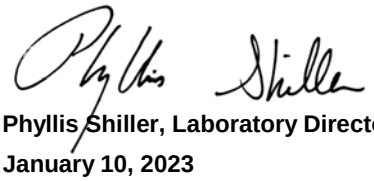
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:08
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49156

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE29R6-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	1.01	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.821	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	1.09	0.010	mg/L	1	10/07/22	TH	SW6010D
Manganese	0.879	0.001	mg/L	1	10/07/22	TH	SW6010D
Chloride	443	50.0	mg/L	10	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	10/04/22 23:25	BS/GD	E300.0
Nitrate as Nitrogen	< 0.25	0.25	mg/L	5	10/04/22 23:25	BS/GD	E300.0
Sulfate	35.2	25.0	mg/L	5	10/04/22	BS/GD	E300.0
Sulfide	0.09	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	10/05/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	59	20	ug/L	20	10/12/22	HM	SW8260C
1,1-Dichloroethene	15	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	370	20	ug/L	20	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	25	2.0	ug/L	2	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	70	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	14	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	92		%	2	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (2x)	98		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	98		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	98		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	95		%	20	10/12/22	HM	70 - 130 %
% Toluene-d8 (20x)	98		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	26	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	72		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	10:35
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49157

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.027	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.059	0.004	mg/L	1	10/10/22	CPP	SW6010D
EPH Extraction	Completed				10/10/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/07/22	X/MQ	SW3520C
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/04/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/10/22	KCA	SW8270D (SIM)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 2-Fluorobiphenyl	61		%	1	10/10/22	KCA	40 - 140 %
% Nitrobenzene-d5	71		%	1	10/10/22	KCA	40 - 140 %
% Terphenyl-d14	50		%	1	10/10/22	KCA	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	74		%	1	10/12/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	67		%	1	10/12/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	82		%	1	10/12/22	AW	40 - 140 %
% o-terphenyl (aromatic)	76		%	1	10/12/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	710	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	700	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	1.5	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	85		%	1	10/06/22	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

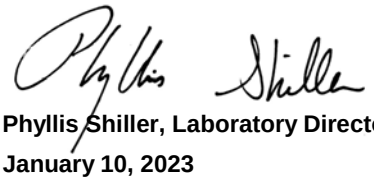
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:05
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49158

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1-Dichloroethane	6.5	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/12/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/12/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49158

Client ID: 22A-AE100R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/12/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/12/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/12/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/12/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	130	5.0	ug/L	5	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/12/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Tetrachloroethene	590	50	ug/L	50	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/12/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
Trichloroethene	550	50	ug/L	50	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Vinyl chloride	13	5.0	ug/L	5	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	91		%	5	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	99		%	5	10/12/22	MH	70 - 130 %
% Toluene-d8 (5x)	98		%	5	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	89		%	50	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	98		%	50	10/12/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49158
Client ID: 22A-AE100R2-100422-1

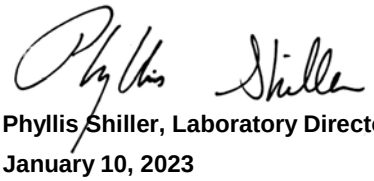
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (50x)	100		%	50	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:15
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49159

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethane	42	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethene	13	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Hexanone	ND	38	ug/L	10	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	10/15/22	MH	SW8260C
Acetone	ND	250	ug/L	10	10/15/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49159
Client ID: 22A-AE100R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromodichloromethane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	10	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroform	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	65	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	38	ug/L	10	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Naphthalene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
o-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Styrene	ND	10	ug/L	10	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Tetrachloroethene	3900	500	ug/L	500	10/18/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	10/15/22	MH	SW8260C
Toluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Trichloroethene	4400	500	ug/L	500	10/18/22	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Vinyl chloride	3.4	2.5	ug/L	10	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	97		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	99		%	10	10/15/22	MH	70 - 130 %
% Toluene-d8 (10x)	87		%	10	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	100		%	500	10/18/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	97		%	500	10/18/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	102		%	500	10/18/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49159
Client ID: 22A-AE100R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	99		%	500	10/18/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	400	ug/L	10	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.9	0.20	ug/l	1	10/06/22	PS	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	78		%	1	10/06/22	PS	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:25
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49160

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethane	41	20	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethene	13	7.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/15/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/15/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49160
Client ID: 22A-AE100R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	160	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/15/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Tetrachloroethene	2900	200	ug/L	200	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/15/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Trichloroethene	3700	200	ug/L	200	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Vinyl chloride	5.1	5.0	ug/L	20	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	10/15/22	MH	70 - 130 %
% Toluene-d8 (20x)	93		%	20	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	97		%	200	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (200x)	93		%	200	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (200x)	105		%	200	10/15/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49160
Client ID: 22A-AE100R4-100422-1

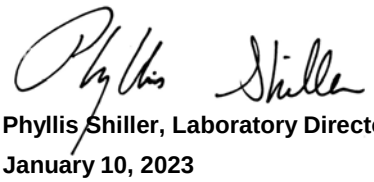
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	98		%	200	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.7	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	70		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:40
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49161

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.019	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.674	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.030	0.010	mg/L	1	10/07/22	TH	SW6010D
Manganese	0.762	0.001	mg/L	1	10/07/22	TH	SW6010D
Chloride	427	50.0	mg/L	10	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	10/05/22 00:31	BS/GD	E300.0
Nitrate as Nitrogen	0.72	0.05	mg/L	1	10/04/22 22:43	BS/GD	E300.0
Sulfate	29.6	5.0	mg/L	1	10/04/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.4	1.0	mg/L	1	10/05/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethane	30	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethene	10	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49161

Client ID: 22A-AE100R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Hexanone	ND	38	ug/L	10	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	10/15/22	MH	SW8260C
Acetone	ND	250	ug/L	10	10/15/22	MH	SW8260C
Benzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromodichloromethane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	10	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroform	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	950	100	ug/L	100	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	38	ug/L	10	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Naphthalene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
o-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Styrene	ND	10	ug/L	10	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Tetrachloroethene	980	100	ug/L	100	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	10/15/22	MH	SW8260C
Toluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	13	10	ug/L	10	10/15/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49161
Client ID: 22A-AE100R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Trichloroethene	1400	100	ug/L	100	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Vinyl chloride	43	10	ug/L	10	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	92		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	100		%	10	10/15/22	MH	70 - 130 %
% Toluene-d8 (10x)	94		%	10	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	90		%	100	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/12/22	MH	70 - 130 %
% Toluene-d8 (100x)	98		%	100	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	400	ug/L	10	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)

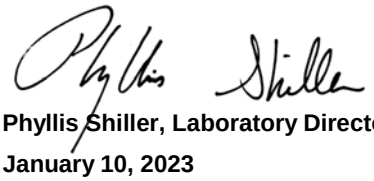
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 10, 2023

Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	12:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49162

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-TB02-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49162
Client ID: 22A-TB02-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	90		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

Ver 3

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49162
Client ID: 22A-TB02-100322-1

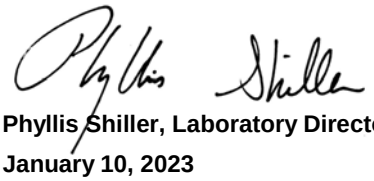
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 10, 2023

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49163

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-EMW10D-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	1.4	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49163

Client ID: 22A-EMW10D-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	22	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	99	10	ug/L	10	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	41	10	ug/L	10	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	3.2	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	98		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	104		%	10	10/15/22	MH	70 - 130 %

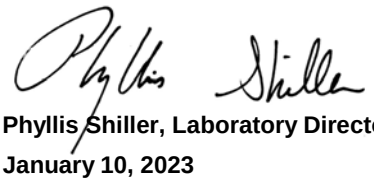
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49163
Client ID: 22A-EMW10D-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	99		%	10	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
January 10, 2023
Reviewed and Released by: Rebecca Merz, NE Sales Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

January 10, 2023

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645680 (mg/L), QC Sample No: CM49151 (CM49151, CM49152, CM49156, CM49157, CM49161)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	0.005	<0.004	NC	101	101	0.0	106	109	2.8	80 - 120	20
Iron	BRL	0.010	0.055	0.058	5.30	106	107	0.9	105	107	1.9	80 - 120	20
Manganese	BRL	0.001	0.473	0.480	1.50	106	107	0.9	105	108	2.8	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645565 (mg/L), QC Sample No: CM49151 (CM49151, CM49152, CM49156, CM49157, CM49161)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	88.6	90.1	1.7	89.0	90.6	1.8	80 - 120	20
Iron	BRL	0.011	<0.011	<0.011	NC	90.9	92.5	1.7	85.7	87.2	1.7	80 - 120	20
Manganese	BRL	0.001	0.436	0.436	0	91.4	92.9	1.6	88.0	89.2	1.4	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

January 10, 2023

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645407 (mg/L), QC Sample No: CM49151 (CM49151, CM49156, CM49161)													
Sulfide	BRL	0.05	<0.05	<0.05	NC	92.3			102			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 645605 (mg/L), QC Sample No: CM49151 (CM49151, CM49156, CM49161)													
Total Organic Carbon	BRL	1.0	1.1	1.1	NC	106			97.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 645484 (mg/L), QC Sample No: CM48781 (CM49151, CM49156, CM49161)													
Chloride	BRL	5.0	31.1	31.6	1.60	91.3			98.4			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	1.28	1.29	0.80	104			102			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	93.8			104			90 - 110	20
Sulfate	BRL	5.0	8.9	8.7	NC	94.7			96.0			90 - 110	20
QA/QC Batch 645485 (mg/L), QC Sample No: CM49151 (CM49151, CM49161)													
Chloride	BRL	5.0	727	739	1.60	95.1			94.3			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	8.42	8.89	5.40	95.9			96.2			90 - 110	20
Nitrite as Nitrogen	BRL	0.01	<0.10	<0.10	NC	103			106			90 - 110	20
Sulfate	BRL	5.0	32.2	32.4	0.60	97.7			97.5			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

January 10, 2023

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 645601 (ug/l), QC Sample No: CM49151 (CM49149, CM49150, CM49151, CM49156, CM49159, CM49160, CM49161)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	86	87	1.2	79	75	5.2	70 - 130	20	
% 1,4-dioxane-d8	84	%	84	101	18.4	86	82	4.8	70 - 130	20	
QA/QC Batch 645596 (ug/L), QC Sample No: CM49088 (CM49147)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	74	65	12.9				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	96	86	11.0				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	78	68	13.7				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
C9 - Nonane	ND	10	43	39	9.8				40 - 140	25	I
C-10 Decane	ND	10	57	50	13.1				40 - 140	25	
C12 - Dodecane	ND	10	72	62	14.9				40 - 140	25	
C14 - Tetradecane	ND	10	83	71	15.6				40 - 140	25	
C16 - Hexadecane	ND	10	89	79	11.9				40 - 140	25	
C18 - Octadecane	ND	10	98	89	9.6				40 - 140	25	
C19 - Nonadecane	ND	10	94	85	10.1				40 - 140	25	
C20 - Eicosane	ND	10	94	85	10.1				40 - 140	25	
C22 - Docosane	ND	10	96	87	9.8				40 - 140	25	
C24 - Tetracosane	ND	10	97	89	8.6				40 - 140	25	
C26 - Hexacosane	ND	10	96	88	8.7				40 - 140	25	
C28 - Octacosane	ND	10	96	87	9.8				40 - 140	25	
C30 - Tricotane	ND	10	93	86	7.8				40 - 140	25	
C36 - Hexatriacontane	ND	10	100	84	17.4				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	77	%	77	71	8.1				40 - 140	25	
% o-terphenyl (aromatic)	77	%	76	69	9.7				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	74	%	77	77	0.0				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	78	%	77	75	2.6				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 646087 (ug/L), QC Sample No: CM49157 (CM49157)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	84	78	7.4				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	92	106	14.1				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	76	71	6.8				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
C9 - Nonane	ND	10	58	43	29.7				40 - 140	25	r
C-10 Decane	ND	10	70	59	17.1				40 - 140	25	
C12 - Dodecane	ND	10	82	75	8.9				40 - 140	25	
C14 - Tetradecane	ND	10	91	88	3.4				40 - 140	25	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
C16 - Hexadecane	ND	10	97	96	1.0				40 - 140	25	
C18 - Octadecane	ND	10	108	109	0.9				40 - 140	25	
C19 - Nonadecane	ND	10	102	104	1.9				40 - 140	25	
C20 - Eicosane	ND	10	104	104	0.0				40 - 140	25	
C22 - Docosane	ND	10	106	107	0.9				40 - 140	25	
C24 - Tetracosane	ND	10	107	109	1.9				40 - 140	25	
C26 - Hexacosane	ND	10	104	108	3.8				40 - 140	25	
C28 - Octacosane	ND	10	99	106	6.8				40 - 140	25	
C30 - Tricotane	ND	10	89	104	15.5				40 - 140	25	
C36 - Hexatriacontane	ND	10	24	103	124.4				40 - 140	25	l,r
% 1-chlorooctadecane (aliphatic)	72	%	44	92	70.6				40 - 140	25	r
% o-terphenyl (aromatic)	77	%	42	74	55.2				40 - 140	25	r
% 2-Fluorobiphenyl (Fractionation)	78	%	80	72	10.5				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	77	%	69	63	9.1				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		

Comment:

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 645934 (ug/L), QC Sample No: CM49042 (CM49147, CM49157)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	75	71	5.5				40 - 140	20	
Acenaphthene	ND	0.50	69	67	2.9				40 - 140	20	
Acenaphthylene	ND	0.10	59	57	3.4				40 - 140	20	
Anthracene	ND	0.10	70	66	5.9				40 - 140	20	
Benz(a)anthracene	ND	0.02	83	80	3.7				40 - 140	20	
Benzo(a)pyrene	ND	0.02	77	72	6.7				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	82	78	5.0				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	80	78	2.5				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	56	54	3.6				40 - 140	20	
Chrysene	ND	0.02	76	73	4.0				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	80	77	3.8				40 - 140	20	
Fluoranthene	ND	0.50	65	64	1.6				40 - 140	20	
Fluorene	ND	0.10	71	70	1.4				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	84	80	4.9				40 - 140	20	
Naphthalene	ND	0.50	73	68	7.1				40 - 140	20	
Phenanthrene	ND	0.06	79	77	2.6				40 - 140	20	
Pyrene	ND	0.07	77	75	2.6				40 - 140	20	
% 2-Fluorobiphenyl	65	%	63	61	3.2				40 - 140	20	
% Nitrobenzene-d5	73	%	74	70	5.6				40 - 140	20	
% Terphenyl-d14	60	%	63	63	0.0				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 646770 (ug/L), QC Sample No: CM46620 (CM49158 (5X, 50X) , CM49161 (100X) , CM49162, CM49163)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	112	4.6				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	103	109	5.7				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	116	120	3.4				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	103	107	3.8				70 - 130	20	
1,1-Dichloroethane	ND	1.0	111	116	4.4				70 - 130	20	
1,1-Dichloroethene	ND	1.0	107	115	7.2				70 - 130	20	
1,1-Dichloropropene	ND	1.0	104	108	3.8				70 - 130	20	

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichlorobenzene	ND	1.0	120	129	7.2				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	122	128	4.8				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	120	127	5.7				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	114	119	4.3				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	111	114	2.7				70 - 130	20
1,2-Dibromoethane	ND	1.0	109	115	5.4				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	113	118	4.3				70 - 130	20
1,2-Dichloroethane	ND	1.0	107	109	1.9				70 - 130	20
1,2-Dichloropropane	ND	1.0	103	106	2.9				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	119	6.1				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	113	119	5.2				70 - 130	20
1,3-Dichloropropane	ND	1.0	112	117	4.4				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	110	115	4.4				70 - 130	20
1,4-dioxane	ND	100	110	107	2.8				40 - 160	20
2,2-Dichloropropane	ND	1.0	108	112	3.6				70 - 130	20
2-Chlorotoluene	ND	1.0	111	116	4.4				70 - 130	20
2-Hexanone	ND	5.0	115	117	1.7				40 - 160	20
4-Chlorotoluene	ND	1.0	115	121	5.1				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	108	109	0.9				40 - 160	20
Acetone	ND	5.0	129	132	2.3				40 - 160	20
Benzene	ND	0.70	99	105	5.9				70 - 130	20
Bromobenzene	ND	1.0	110	116	5.3				70 - 130	20
Bromochloromethane	ND	1.0	104	107	2.8				70 - 130	20
Bromodichloromethane	ND	0.50	102	108	5.7				70 - 130	20
Bromoform	ND	1.0	100	108	7.7				70 - 130	20
Bromomethane	ND	1.0	97	109	11.7				40 - 160	20
Carbon Disulfide	ND	1.0	99	106	6.8				70 - 130	20
Carbon tetrachloride	ND	1.0	99	106	6.8				70 - 130	20
Chlorobenzene	ND	1.0	107	111	3.7				70 - 130	20
Chloroethane	ND	1.0	112	118	5.2				70 - 130	20
Chloroform	ND	1.0	104	108	3.8				70 - 130	20
Chloromethane	ND	1.0	96	103	7.0				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	106	113	6.4				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	100	103	3.0				70 - 130	20
Dibromochloromethane	ND	0.50	107	112	4.6				70 - 130	20
Dibromomethane	ND	1.0	105	109	3.7				70 - 130	20
Dichlorodifluoromethane	ND	1.0	83	87	4.7				40 - 160	20
Di-isopropyl ether	ND	1.0	115	119	3.4				70 - 130	20
Ethyl ether	ND	1.0	106	111	4.6				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	110	114	3.6				70 - 130	20
Ethylbenzene	ND	1.0	110	115	4.4				70 - 130	20
Hexachlorobutadiene	ND	0.40	120	128	6.5				70 - 130	20
Isopropylbenzene	ND	1.0	110	118	7.0				70 - 130	20
m&p-Xylene	ND	1.0	109	113	3.6				70 - 130	20
Methyl ethyl ketone	ND	5.0	114	112	1.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	108	113	4.5				70 - 130	20
Methylene chloride	ND	1.0	101	107	5.8				70 - 130	20
Naphthalene	ND	1.0	123	130	5.5				70 - 130	20
n-Butylbenzene	ND	1.0	126	130	3.1				70 - 130	20
n-Propylbenzene	ND	1.0	115	120	4.3				70 - 130	20
o-Xylene	ND	1.0	107	112	4.6				70 - 130	20
p-Isopropyltoluene	ND	1.0	116	122	5.0				70 - 130	20
sec-Butylbenzene	ND	1.0	117	124	5.8				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Styrene	ND	1.0	111	117	5.3				70 - 130	20
tert-amyl methyl ether	ND	1.0	100	102	2.0				70 - 130	20
tert-Butylbenzene	ND	1.0	114	119	4.3				70 - 130	20
Tetrachloroethene	ND	1.0	99	104	4.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	108	114	5.4				70 - 130	20
Toluene	ND	1.0	100	105	4.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	104	112	7.4				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	103	108	4.7				70 - 130	20
Trichloroethene	ND	1.0	100	103	3.0				70 - 130	20
Trichlorofluoromethane	ND	1.0	117	123	5.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	102	109	6.6				70 - 130	20
Vinyl chloride	ND	1.0	108	113	4.5				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	101	101	0.0				70 - 130	20
% Bromofluorobenzene	91	%	98	97	1.0				70 - 130	20
% Dibromofluoromethane	105	%	102	101	1.0				70 - 130	20
% Toluene-d8	101	%	102	101	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646485 (ug/L), QC Sample No: CM47543 (CM49148, CM49149, CM49150, CM49152 (20X) , CM49155 (20X) , CM49156 (20X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	107	110	2.8				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	106	112	5.5				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	105	112	6.5				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	107	110	2.8				70 - 130	20
1,1-Dichloroethane	ND	1.0	109	116	6.2				70 - 130	20
1,1-Dichloroethene	ND	1.0	101	108	6.7				70 - 130	20
1,1-Dichloropropene	ND	1.0	106	107	0.9				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	110	116	5.3				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	105	108	2.8				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	111	114	2.7				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	110	112	1.8				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	96	103	7.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	109	110	0.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	108	111	2.7				70 - 130	20
1,2-Dichloroethane	ND	1.0	116	109	6.2				70 - 130	20
1,2-Dichloropropane	ND	1.0	112	116	3.5				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	111	1.8				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	109	111	1.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	112	112	0.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	109	113	3.6				70 - 130	20
1,4-dioxane	ND	100	98	94	4.2				40 - 160	20
2,2-Dichloropropane	ND	1.0	101	100	1.0				70 - 130	20
2-Chlorotoluene	ND	1.0	112	114	1.8				70 - 130	20
2-Hexanone	ND	5.0	98	103	5.0				40 - 160	20
4-Chlorotoluene	ND	1.0	111	114	2.7				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	104	106	1.9				40 - 160	20
Acetone	ND	5.0	109	107	1.9				40 - 160	20
Benzene	ND	0.70	110	109	0.9				70 - 130	20

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromobenzene	ND	1.0	110	117	6.2				70 - 130	20
Bromochloromethane	ND	1.0	111	112	0.9				70 - 130	20
Bromodichloromethane	ND	0.50	102	103	1.0				70 - 130	20
Bromoform	ND	1.0	96	97	1.0				70 - 130	20
Bromomethane	ND	1.0	91	106	15.2				40 - 160	20
Carbon Disulfide	ND	1.0	96	101	5.1				70 - 130	20
Carbon tetrachloride	ND	1.0	120	124	3.3				70 - 130	20
Chlorobenzene	ND	1.0	108	111	2.7				70 - 130	20
Chloroethane	ND	1.0	109	114	4.5				70 - 130	20
Chloroform	ND	1.0	111	115	3.5				70 - 130	20
Chloromethane	ND	1.0	108	112	3.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	108	118	8.8				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	104	106	1.9				70 - 130	20
Dibromochloromethane	ND	0.50	102	102	0.0				70 - 130	20
Dibromomethane	ND	1.0	108	111	2.7				70 - 130	20
Dichlorodifluoromethane	ND	1.0	90	95	5.4				40 - 160	20
Di-isopropyl ether	ND	1.0	114	117	2.6				70 - 130	20
Ethyl ether	ND	1.0	102	106	3.8				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	108	118	8.8				70 - 130	20
Ethylbenzene	ND	1.0	112	113	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	101	105	3.9				70 - 130	20
Isopropylbenzene	ND	1.0	108	114	5.4				70 - 130	20
m&p-Xylene	ND	1.0	109	112	2.7				70 - 130	20
Methyl ethyl ketone	ND	5.0	111	114	2.7				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	107	115	7.2				70 - 130	20
Methylene chloride	ND	1.0	94	98	4.2				70 - 130	20
Naphthalene	ND	1.0	113	117	3.5				70 - 130	20
n-Butylbenzene	ND	1.0	110	112	1.8				70 - 130	20
n-Propylbenzene	ND	1.0	108	114	5.4				70 - 130	20
o-Xylene	ND	1.0	109	111	1.8				70 - 130	20
p-Isopropyltoluene	ND	1.0	109	112	2.7				70 - 130	20
sec-Butylbenzene	ND	1.0	109	112	2.7				70 - 130	20
Styrene	ND	1.0	111	115	3.5				70 - 130	20
tert-amyl methyl ether	ND	1.0	106	109	2.8				70 - 130	20
tert-Butylbenzene	ND	1.0	111	113	1.8				70 - 130	20
Tetrachloroethene	ND	1.0	106	108	1.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	107	111	3.7				70 - 130	20
Toluene	ND	1.0	112	113	0.9				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	114	115	0.9				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	106	107	0.9				70 - 130	20
Trichloroethene	ND	1.0	108	110	1.8				70 - 130	20
Trichlorofluoromethane	ND	1.0	104	108	3.8				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	90	97	7.5				70 - 130	20
Vinyl chloride	ND	1.0	105	110	4.7				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	97	101	4.0				70 - 130	20
% Bromofluorobenzene	98	%	100	103	3.0				70 - 130	20
% Dibromofluoromethane	98	%	101	101	0.0				70 - 130	20
% Toluene-d8	102	%	99	99	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 646712 (ug/L), QC Sample No: CM49151 (CM49146 (20X) , CM49151, CM49152 (2X) , CM49155 (2X) , CM49156 (2X))											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	103	103	0.0	107	117	8.9	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	106	105	0.9	121	123	1.6	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	109	106	2.8	106	105	0.9	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	106	107	0.9	105	109	3.7	70 - 130	20	
1,1-Dichloroethane	ND	1.0	111	107	3.7	120	125	4.1	70 - 130	20	
1,1-Dichloroethene	ND	1.0	105	102	2.9	116	118	1.7	70 - 130	20	
1,1-Dichloropropene	ND	1.0	107	112	4.6	120	123	2.5	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	116	110	5.3	108	110	1.8	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	108	106	1.9	107	108	0.9	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	111	108	2.7	111	115	3.5	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	109	107	1.9	114	121	6.0	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	94	93	1.1	80	80	0.0	70 - 130	20	
1,2-Dibromoethane	ND	1.0	109	108	0.9	103	113	9.3	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	107	1.9	111	118	6.1	70 - 130	20	
1,2-Dichloroethane	ND	1.0	118	119	0.8	113	126	10.9	70 - 130	20	
1,2-Dichloropropane	ND	1.0	108	110	1.8	115	120	4.3	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	109	107	1.9	116	120	3.4	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	109	105	3.7	113	121	6.8	70 - 130	20	
1,3-Dichloropropane	ND	1.0	112	109	2.7	111	119	7.0	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	109	107	1.9	114	120	5.1	70 - 130	20	
1,4-dioxane	ND	100	101	98	3.0	105	103	1.9	40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	99	8.7	115	117	1.7	70 - 130	20	
2-Chlorotoluene	ND	1.0	112	109	2.7	116	123	5.9	70 - 130	20	
2-Hexanone	ND	5.0	104	103	1.0	86	93	7.8	40 - 160	20	
4-Chlorotoluene	ND	1.0	113	111	1.8	117	124	5.8	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	106	106	0.0	95	99	4.1	40 - 160	20	
Acetone	ND	5.0	110	101	8.5	117	110	6.2	40 - 160	20	
Benzene	ND	0.70	104	108	3.8	114	121	6.0	70 - 130	20	
Bromobenzene	ND	1.0	111	109	1.8	114	120	5.1	70 - 130	20	
Bromochloromethane	ND	1.0	105	100	4.9	111	112	0.9	70 - 130	20	
Bromodichloromethane	ND	0.50	99	99	0.0	102	108	5.7	70 - 130	20	
Bromoform	ND	1.0	95	88	7.7	83	89	7.0	70 - 130	20	
Bromomethane	ND	1.0	106	95	10.9	93	116	22.0	40 - 160	20	r
Carbon Disulfide	ND	1.0	91	89	2.2	94	99	5.2	70 - 130	20	
Carbon tetrachloride	ND	1.0	105	101	3.9	111	117	5.3	70 - 130	20	
Chlorobenzene	ND	1.0	106	105	0.9	111	120	7.8	70 - 130	20	
Chloroethane	ND	1.0	107	105	1.9	119	123	3.3	70 - 130	20	
Chloroform	ND	1.0	110	104	5.6	117	121	3.4	70 - 130	20	
Chloromethane	ND	1.0	106	103	2.9	114	117	2.6	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	108	98	9.7	116	120	3.4	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	98	99	1.0	96	104	8.0	70 - 130	20	
Dibromochloromethane	ND	0.50	99	96	3.1	93	104	11.2	70 - 130	20	
Dibromomethane	ND	1.0	107	109	1.9	105	114	8.2	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	88	88	0.0	95	94	1.1	40 - 160	20	
Di-isopropyl ether	ND	1.0	116	110	5.3	121	127	4.8	70 - 130	20	
Ethyl ether	ND	1.0	109	100	8.6	108	108	0.0	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	108	104	3.8	107	107	0.0	70 - 130	20	
Ethylbenzene	ND	1.0	110	110	0.0	115	124	7.5	70 - 130	20	
Hexachlorobutadiene	ND	0.40	108	107	0.9	117	121	3.4	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Isopropylbenzene	ND	1.0	110	108	1.8	117	121	3.4	70 - 130	20
m&p-Xylene	ND	1.0	107	107	0.0	113	121	6.8	70 - 130	20
Methyl ethyl ketone	ND	5.0	116	115	0.9	113	110	2.7	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	109	102	6.6	104	106	1.9	70 - 130	20
Methylene chloride	ND	1.0	93	90	3.3	99	103	4.0	70 - 130	20
Naphthalene	ND	1.0	111	108	2.7	98	103	5.0	70 - 130	20
n-Butylbenzene	ND	1.0	116	113	2.6	122	128	4.8	70 - 130	20
n-Propylbenzene	ND	1.0	111	110	0.9	117	122	4.2	70 - 130	20
o-Xylene	ND	1.0	106	105	0.9	108	115	6.3	70 - 130	20
p-Isopropyltoluene	ND	1.0	111	109	1.8	119	124	4.1	70 - 130	20
sec-Butylbenzene	ND	1.0	113	113	0.0	121	126	4.0	70 - 130	20
Styrene	ND	1.0	109	108	0.9	110	120	8.7	70 - 130	20
tert-amyl methyl ether	ND	1.0	100	110	9.5	97	101	4.0	70 - 130	20
tert-Butylbenzene	ND	1.0	111	111	0.0	117	124	5.8	70 - 130	20
Tetrachloroethene	ND	1.0	108	112	3.6	118	122	3.3	70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	108	108	0.0	104	101	2.9	70 - 130	20
Toluene	ND	1.0	105	109	3.7	115	118	2.6	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	109	106	2.8	120	120	0.0	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0	99	105	5.9	70 - 130	20
Trichloroethene	ND	1.0	107	109	1.9	117	120	2.5	70 - 130	20
Trichlorofluoromethane	ND	1.0	111	108	2.7	125	128	2.4	70 - 130	20
Trichlorotrifluoroethane	ND	1.0	95	94	1.1	110	113	2.7	70 - 130	20
Vinyl chloride	ND	1.0	109	107	1.9	121	123	1.6	70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	102	102	0.0	102	101	1.0	70 - 130	20
% Bromofluorobenzene	97	%	101	99	2.0	97	101	4.0	70 - 130	20
% Dibromofluoromethane	98	%	97	97	0.0	99	102	3.0	70 - 130	20
% Toluene-d8	100	%	98	100	2.0	97	98	1.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646716 (ug/L), QC Sample No: CM49153 (CM49153)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	103	0.0	113	106	6.4	70 - 130	20
1,1,1-Trichloroethane	ND	1.0	106	105	0.9	130	121	7.2	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	109	106	2.8	101	105	3.9	70 - 130	20
1,1,2-Trichloroethane	ND	1.0	106	107	0.9	108	107	0.9	70 - 130	20
1,1-Dichloroethane	ND	1.0	111	107	3.7	130	120	8.0	70 - 130	20
1,1-Dichloroethene	ND	1.0	105	102	2.9	126	119	5.7	70 - 130	20
1,1-Dichloropropene	ND	1.0	107	112	4.6	122	119	2.5	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	116	110	5.3	109	109	0.0	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	108	106	1.9	99	98	1.0	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	111	108	2.7	110	111	0.9	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	109	107	1.9	116	116	0.0	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	94	93	1.1	78	81	3.8	70 - 130	20
1,2-Dibromoethane	ND	1.0	109	108	0.9	110	109	0.9	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	109	107	1.9	113	111	1.8	70 - 130	20
1,2-Dichloroethane	ND	1.0	118	119	0.8	126	119	5.7	70 - 130	20
1,2-Dichloropropane	ND	1.0	108	110	1.8	119	112	6.1	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	107	1.9	115	116	0.9	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	109	105	3.7	114	114	0.0	70 - 130	20
1,3-Dichloropropane	ND	1.0	112	109	2.7	116	113	2.6	70 - 130	20

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,4-Dichlorobenzene	ND	1.0	109	107	1.9	115	114	0.9	70 - 130	20	
1,4-dioxane	ND	100	101	98	3.0	103	100	3.0	40 - 160	20	
2,2-Dichloropropane	ND	1.0	108	99	8.7	120	108	10.5	70 - 130	20	
2-Chlorotoluene	ND	1.0	112	109	2.7	118	117	0.9	70 - 130	20	
2-Hexanone	ND	5.0	104	103	1.0	88	91	3.4	40 - 160	20	
4-Chlorotoluene	ND	1.0	113	111	1.8	118	120	1.7	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	106	106	0.0	95	98	3.1	40 - 160	20	
Acetone	ND	5.0	110	101	8.5	116	112	3.5	40 - 160	20	
Benzene	ND	0.70	104	108	3.8	119	115	3.4	70 - 130	20	
Bromobenzene	ND	1.0	111	109	1.8	116	114	1.7	70 - 130	20	
Bromochloromethane	ND	1.0	105	100	4.9	118	107	9.8	70 - 130	20	
Bromodichloromethane	ND	0.50	99	99	0.0	106	102	3.8	70 - 130	20	
Bromoform	ND	1.0	95	88	7.7	89	88	1.1	70 - 130	20	
Bromomethane	ND	1.0	106	95	10.9	131	125	4.7	40 - 160	20	
Carbon Disulfide	ND	1.0	91	89	2.2	107	100	6.8	70 - 130	20	
Carbon tetrachloride	ND	1.0	105	101	3.9	122	115	5.9	70 - 130	20	
Chlorobenzene	ND	1.0	106	105	0.9	116	116	0.0	70 - 130	20	
Chloroethane	ND	1.0	107	105	1.9	128	120	6.5	70 - 130	20	
Chloroform	ND	1.0	110	104	5.6	127	117	8.2	70 - 130	20	
Chloromethane	ND	1.0	106	103	2.9	119	110	7.9	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	108	98	9.7	121	112	7.7	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	98	99	1.0	103	98	5.0	70 - 130	20	
Dibromochloromethane	ND	0.50	99	96	3.1	102	98	4.0	70 - 130	20	
Dibromomethane	ND	1.0	107	109	1.9	110	107	2.8	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	88	88	0.0	104	98	5.9	40 - 160	20	
Di-isopropyl ether	ND	1.0	116	110	5.3	128	121	5.6	70 - 130	20	
Ethyl ether	ND	1.0	109	100	8.6	114	108	5.4	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	108	104	3.8	112	106	5.5	70 - 130	20	
Ethylbenzene	ND	1.0	110	110	0.0	122	120	1.7	70 - 130	20	
Hexachlorobutadiene	ND	0.40	108	107	0.9	116	118	1.7	70 - 130	20	
Isopropylbenzene	ND	1.0	110	108	1.8	117	117	0.0	70 - 130	20	
m&p-Xylene	ND	1.0	107	107	0.0	120	117	2.5	70 - 130	20	
Methyl ethyl ketone	ND	5.0	116	115	0.9	113	107	5.5	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	109	102	6.6	109	103	5.7	70 - 130	20	
Methylene chloride	ND	1.0	93	90	3.3	105	98	6.9	70 - 130	20	
Naphthalene	ND	1.0	111	108	2.7	98	104	5.9	70 - 130	20	
n-Butylbenzene	ND	1.0	116	113	2.6	122	124	1.6	70 - 130	20	
n-Propylbenzene	ND	1.0	111	110	0.9	120	121	0.8	70 - 130	20	
o-Xylene	ND	1.0	106	105	0.9	113	111	1.8	70 - 130	20	
p-Isopropyltoluene	ND	1.0	111	109	1.8	119	120	0.8	70 - 130	20	
sec-Butylbenzene	ND	1.0	113	113	0.0	123	123	0.0	70 - 130	20	
Styrene	ND	1.0	109	108	0.9	118	113	4.3	70 - 130	20	
tert-amyl methyl ether	ND	1.0	100	110	9.5	97	96	1.0	70 - 130	20	
tert-Butylbenzene	ND	1.0	111	111	0.0	119	120	0.8	70 - 130	20	
Tetrachloroethene	ND	1.0	108	112	3.6	122	119	2.5	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	108	108	0.0	104	104	0.0	70 - 130	20	
Toluene	ND	1.0	105	109	3.7	118	115	2.6	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	109	106	2.8	130	119	8.8	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	102	103	1.0	103	100	3.0	70 - 130	20	
Trichloroethene	ND	1.0	107	109	1.9	121	119	1.7	70 - 130	20	
Trichlorofluoromethane	ND	1.0	111	108	2.7	134	128	4.6	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	95	94	1.1	116	111	4.4	70 - 130	20	
Vinyl chloride	ND	1.0	109	107	1.9	126	117	7.4	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 1,2-dichlorobenzene-d4	99	%	102	102	0.0	100	102	2.0	70 - 130	20
% Bromofluorobenzene	97	%	101	99	2.0	98	101	3.0	70 - 130	20
% Dibromofluoromethane	98	%	97	97	0.0	102	99	3.0	70 - 130	20
% Toluene-d8	100	%	98	100	2.0	98	98	0.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646962 (ug/L), QC Sample No: CM60510 (CM49146 (400X) , CM49154)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	119	124	4.1				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	101	105	3.9				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	120	125	4.1				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	111	119	7.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	107	4.8				70 - 130	20
1,1-Dichloroethene	ND	1.0	104	110	5.6				70 - 130	20
1,1-Dichloropropene	ND	1.0	112	118	5.2				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	132	136	3.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	118	130	9.7				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	128	133	3.8				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	115	122	5.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	129	131	1.5				70 - 130	20
1,2-Dibromoethane	ND	1.0	117	123	5.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	113	119	5.2				70 - 130	20
1,2-Dichloroethane	ND	1.0	111	116	4.4				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	112	4.6				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	115	122	5.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	111	118	6.1				70 - 130	20
1,3-Dichloropropane	ND	1.0	118	121	2.5				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	111	118	6.1				70 - 130	20
1,4-dioxane	ND	100	100	109	8.6				40 - 160	20
2,2-Dichloropropane	ND	1.0	102	107	4.8				70 - 130	20
2-Chlorotoluene	ND	1.0	114	121	6.0				70 - 130	20
2-Hexanone	ND	5.0	123	127	3.2				40 - 160	20
4-Chlorotoluene	ND	1.0	115	121	5.1				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	116	122	5.0				40 - 160	20
Acetone	ND	5.0	117	124	5.8				40 - 160	20
Benzene	ND	0.70	104	111	6.5				70 - 130	20
Bromobenzene	ND	1.0	114	120	5.1				70 - 130	20
Bromochloromethane	ND	1.0	106	111	4.6				70 - 130	20
Bromodichloromethane	ND	0.50	111	117	5.3				70 - 130	20
Bromoform	ND	1.0	117	121	3.4				70 - 130	20
Bromomethane	ND	1.0	84	92	9.1				40 - 160	20
Carbon Disulfide	ND	1.0	96	103	7.0				70 - 130	20
Carbon tetrachloride	ND	1.0	106	112	5.5				70 - 130	20
Chlorobenzene	ND	1.0	109	115	5.4				70 - 130	20
Chloroethane	ND	1.0	100	105	4.9				70 - 130	20
Chloroform	ND	1.0	100	107	6.8				70 - 130	20
Chloromethane	ND	1.0	92	97	5.3				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	103	114	10.1				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	112	117	4.4				70 - 130	20
Dibromochloromethane	ND	0.50	120	126	4.9				70 - 130	20

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Dibromomethane	ND	1.0	116	122	5.0				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	94	98	4.2				40 - 160	20	
Di-isopropyl ether	ND	1.0	109	114	4.5				70 - 130	20	
Ethyl ether	ND	1.0	107	111	3.7				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	112	117	4.4				70 - 130	20	
Ethylbenzene	ND	1.0	111	117	5.3				70 - 130	20	
Hexachlorobutadiene	ND	0.40	123	132	7.1				70 - 130	20	I
Isopropylbenzene	ND	1.0	114	120	5.1				70 - 130	20	
m&p-Xylene	ND	1.0	110	117	6.2				70 - 130	20	
Methyl ethyl ketone	ND	5.0	127	130	2.3				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	113	117	3.5				70 - 130	20	
Methylene chloride	ND	1.0	96	102	6.1				70 - 130	20	
Naphthalene	ND	1.0	137	139	1.4				70 - 130	20	I
n-Butylbenzene	ND	1.0	125	134	6.9				70 - 130	20	I
n-Propylbenzene	ND	1.0	114	122	6.8				70 - 130	20	
o-Xylene	ND	1.0	110	116	5.3				70 - 130	20	
p-Isopropyltoluene	ND	1.0	118	126	6.6				70 - 130	20	
sec-Butylbenzene	ND	1.0	118	127	7.3				70 - 130	20	
Styrene	ND	1.0	114	120	5.1				70 - 130	20	
tert-amyl methyl ether	ND	1.0	113	120	6.0				70 - 130	20	
tert-Butylbenzene	ND	1.0	116	123	5.9				70 - 130	20	
Tetrachloroethene	ND	1.0	104	109	4.7				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	100	101	1.0				70 - 130	20	
Toluene	ND	1.0	106	111	4.6				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	100	106	5.8				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	116	122	5.0				70 - 130	20	
Trichloroethene	ND	1.0	104	110	5.6				70 - 130	20	
Trichlorofluoromethane	ND	1.0	107	111	3.7				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	96	100	4.1				70 - 130	20	
Vinyl chloride	ND	1.0	104	111	6.5				70 - 130	20	
% 1,2-dichlorobenzene-d4	103	%	102	102	0.0				70 - 130	20	
% Bromofluorobenzene	96	%	98	98	0.0				70 - 130	20	
% Dibromofluoromethane	93	%	92	92	0.0				70 - 130	20	
% Toluene-d8	96	%	98	98	0.0				70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647791 (ug/L), QC Sample No: CM60991 (CM49159 (500X))

Volatiles - Ground Water

Tetrachloroethene	ND	1.0	101	93	8.2				70 - 130	20	
Trichloroethene	ND	1.0	99	94	5.2				70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	20	
% Bromofluorobenzene	97	%	103	99	4.0				70 - 130	20	
% Dibromofluoromethane	103	%	101	103	2.0				70 - 130	20	
% Toluene-d8	100	%	100	99	1.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 647251 (ug/L), QC Sample No: CM61864 (CM49159 (10X) , CM49160 (20X, 200X) , CM49161 (10X) , CM49163 (10X))										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	99	107	7.8				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	94	102	8.2				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	94	101	7.2				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	93	100	7.3				70 - 130	20
1,1-Dichloroethane	ND	1.0	97	106	8.9				70 - 130	20
1,1-Dichloroethene	ND	1.0	96	103	7.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	98	104	5.9				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	78	84	7.4				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	99	105	5.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	91	99	8.4				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	98	106	7.8				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	98	103	5.0				70 - 130	20
1,2-Dibromoethane	ND	1.0	101	109	7.6				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	94	102	8.2				70 - 130	20
1,2-Dichloroethane	ND	1.0	94	101	7.2				70 - 130	20
1,2-Dichloropropane	ND	1.0	97	104	7.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	98	105	6.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	98	106	7.8				70 - 130	20
1,3-Dichloropropane	ND	1.0	100	108	7.7				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	95	103	8.1				70 - 130	20
1,4-dioxane	ND	100	86	105	19.9				40 - 160	20
2,2-Dichloropropane	ND	1.0	99	106	6.8				70 - 130	20
2-Chlorotoluene	ND	1.0	100	106	5.8				70 - 130	20
2-Hexanone	ND	5.0	91	99	8.4				40 - 160	20
4-Chlorotoluene	ND	1.0	100	106	5.8				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	95	96	1.0				40 - 160	20
Acetone	ND	5.0	89	99	10.6				40 - 160	20
Benzene	ND	0.70	97	105	7.9				70 - 130	20
Bromobenzene	ND	1.0	96	104	8.0				70 - 130	20
Bromochloromethane	ND	1.0	96	104	8.0				70 - 130	20
Bromodichloromethane	ND	0.50	95	104	9.0				70 - 130	20
Bromoform	ND	1.0	95	104	9.0				70 - 130	20
Bromomethane	ND	1.0	105	119	12.5				40 - 160	20
Carbon Disulfide	ND	1.0	89	95	6.5				70 - 130	20
Carbon tetrachloride	ND	1.0	91	101	10.4				70 - 130	20
Chlorobenzene	ND	1.0	98	105	6.9				70 - 130	20
Chloroethane	ND	1.0	96	104	8.0				70 - 130	20
Chloroform	ND	1.0	96	104	8.0				70 - 130	20
Chloromethane	ND	1.0	88	94	6.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	99	106	6.8				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	96	104	8.0				70 - 130	20
Dibromochloromethane	ND	0.50	98	107	8.8				70 - 130	20
Dibromomethane	ND	1.0	95	104	9.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	70	75	6.9				40 - 160	20
Di-isopropyl ether	ND	1.0	94	103	9.1				70 - 130	20
Ethyl ether	ND	1.0	88	94	6.6				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	92	100	8.3				70 - 130	20
Ethylbenzene	ND	1.0	100	108	7.7				70 - 130	20
Hexachlorobutadiene	ND	0.40	97	104	7.0				70 - 130	20

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Isopropylbenzene	ND	1.0	98	106	7.8				70 - 130	20
m&p-Xylene	ND	1.0	100	107	6.8				70 - 130	20
Methyl ethyl ketone	ND	5.0	93	90	3.3				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	93	102	9.2				70 - 130	20
Methylene chloride	ND	1.0	89	97	8.6				70 - 130	20
Naphthalene	ND	1.0	85	97	13.2				70 - 130	20
n-Butylbenzene	ND	1.0	101	109	7.6				70 - 130	20
n-Propylbenzene	ND	1.0	100	108	7.7				70 - 130	20
o-Xylene	ND	1.0	100	108	7.7				70 - 130	20
p-Isopropyltoluene	ND	1.0	99	107	7.8				70 - 130	20
sec-Butylbenzene	ND	1.0	97	105	7.9				70 - 130	20
Styrene	ND	1.0	104	112	7.4				70 - 130	20
tert-amyl methyl ether	ND	1.0	91	97	6.4				70 - 130	20
tert-Butylbenzene	ND	1.0	98	106	7.8				70 - 130	20
Tetrachloroethene	ND	1.0	94	101	7.2				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	86	92	6.7				70 - 130	20
Toluene	ND	1.0	97	104	7.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	98	104	5.9				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	95	104	9.0				70 - 130	20
Trichloroethene	ND	1.0	95	103	8.1				70 - 130	20
Trichlorofluoromethane	ND	1.0	92	100	8.3				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	87	92	5.6				70 - 130	20
Vinyl chloride	ND	1.0	90	98	8.5				70 - 130	20
% 1,2-dichlorobenzene-d4	98	%	98	99	1.0				70 - 130	20
% Bromofluorobenzene	94	%	103	100	3.0				70 - 130	20
% Dibromofluoromethane	100	%	97	104	7.0				70 - 130	20
% Toluene-d8	97	%	100	100	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 645881 (ug/L), QC Sample No: CM49088 (CM49147, CM49157)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	97	93	4.2	108	113	4.5	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	92	90	2.2	104	109	4.7	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	97	93	4.2	108	113	4.5	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	92	90	2.2	104	109	4.7	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	94	92	2.2	97	105	7.9	70 - 130	25
Benzene	ND	1.0	93	92	1.1	100	107	6.8	70 - 130	25
Ethyl Benzene	ND	1.0	92	91	1.1	99	107	7.8	70 - 130	25
MTBE	ND	1.0	91	90	1.1	91	100	9.4	70 - 130	25
Naphthalene	ND	5.0	86	85	1.2	87	96	9.8	70 - 130	25
Toluene	ND	1.0	94	92	2.2	101	108	6.7	70 - 130	25
m,p-Xylenes	ND	2.0	95	93	2.1	101	109	7.6	70 - 130	25
o-Xylene	ND	1.0	91	89	2.2	95	102	7.1	70 - 130	25
% 2,5-Dibromotoluene (PID)	92	%	80	81	1.2	81	87	7.1	70 - 130	25
% 2,5-Dibromotoluene (FID)	99	%	85	89	4.6	90	99	9.5	70 - 130	25

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCM49146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
January 10, 2023

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49146	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM49146	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM49146	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	10	5	5	ug/L
CM49146	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM49146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	84	20	20	20	ug/L
CM49146	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	2800	400	5	5	ug/L
CM49146	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	4	4	ug/L
CM49146	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	3	3	ug/L
CM49146	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	38	38	ug/L
CM49146	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	38	38	ug/L
CM49146	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	6000	400	5	5	ug/L
CM49146	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	3	3	ug/L
CM49146	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM49146	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM49146	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM49146	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	75	20	70	70	ug/L
CM49146	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2800	400	5	5	ug/L
CM49146	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM49146	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	7.0	7	7	ug/L
CM49146	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM49146	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM49146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	84	20	20	20	ug/L
CM49146	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM49146	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM49146	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6000	400	5	5	ug/L
CM49146	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	75	20	70	70	ug/L
CM49146	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM49146	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM49146	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM49146	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6000	400	5	5	ug/L
CM49146	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	84	20	20	20	ug/L
CM49146	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2800	400	50	50	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49146	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM49146	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	75	20	70	70	ug/L
CM49146	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	6000	400	5	5	ug/L
CM49146	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2800	400	5	5	ug/L
CM49146	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM49146	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM49146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	84	20	70	70	ug/L
CM49146	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM49146	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	7.0	7	7	ug/L
CM49146	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM49146	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM49146	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2800	400	50	50	ug/L
CM49146	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	6000	400	5	5	ug/L
CM49146	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM49146	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM49146	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	84	20	20	20	ug/L
CM49146	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	6000	400	5000	5000	ug/L
CM49146	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	800	0.3	0.3	ug/L
CM49146	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	800	0.3	0.3	ug/L
CM49146	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	800	0.3	0.3	ug/L
CM49148	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM49148	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49148	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM49148	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	6.0	1.0	5	5	ug/L
CM49148	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.0	1.0	5	5	ug/L
CM49148	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49148	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6.0	1.0	5	5	ug/L
CM49148	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49148	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49148	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM49148	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM49149	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM49149	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49149	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49149	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49149	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49149	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49150	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM49150	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49150	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM49150	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49150	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49150	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49151	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49151	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM49151	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM49151	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49151	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49151	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49151	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.436	0.001	0.43	0.43	mg/L
CM49151	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.473	0.001	0.43	0.43	mg/L
CM49152	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM49152	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	220	20	5	5	ug/L
CM49152	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM49152	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM49152	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM49152	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM49152	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	150	20	5	5	ug/L
CM49152	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	220	20	5	5	ug/L
CM49152	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	150	20	5	5	ug/L
CM49152	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM49152	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	220	20	50	50	ug/L
CM49152	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	150	20	5	5	ug/L
CM49152	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	150	20	5	5	ug/L
CM49152	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	220	20	5	5	ug/L
CM49152	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM49152	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	150	20	5	5	ug/L
CM49152	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	220	20	50	50	ug/L
CM49152	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	80	0.3	0.3	ug/L
CM49152	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	80	0.3	0.3	ug/L
CM49152	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	80	0.3	0.3	ug/L
CM49153	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM49153	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49153	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49153	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49153	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49153	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49153	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM49153	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM49154	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	19	1.0	2	2	ug/L
CM49154	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM49154	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49154	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM49154	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	12	1.0	5	5	ug/L
CM49154	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	1.0	2	2	ug/L
CM49154	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49154	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	1.0	5	5	ug/L
CM49154	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	12	1.0	5	5	ug/L
CM49154	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	19	1.0	2	2	ug/L
CM49154	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	1.0	5	5	ug/L
CM49154	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49154	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	19	1.0	2	2	ug/L
CM49154	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	12	1.0	5	5	ug/L
CM49154	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	19	1.0	2	2	ug/L
CM49154	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49154	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM49154	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM49155	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	21	2.0	2	2	ug/L
CM49155	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM49155	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM49155	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM49155	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM49155	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	78	20	5	5	ug/L
CM49155	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	160	20	20	20	ug/L
CM49155	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM49155	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	2.0	2	2	ug/L
CM49155	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	78	20	5	5	ug/L
CM49155	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.1	2.0	7	7	ug/L
CM49155	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	20	20	20	ug/L
CM49155	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM49155	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	160	20	20	20	ug/L
CM49155	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	21	2.0	2	2	ug/L
CM49155	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	78	20	5	5	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49155	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	160	20	70	70	ug/L
CM49155	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	9.1	2.0	7	7	ug/L
CM49155	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	78	20	5	5	ug/L
CM49155	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM49155	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	21	2.0	2	2	ug/L
CM49155	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	78	20	5	5	ug/L
CM49155	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	21	2.0	2	2	ug/L
CM49155	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	160	20	20	20	ug/L
CM49155	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	80	0.3	0.3	ug/L
CM49155	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	80	0.3	0.3	ug/L
CM49155	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	80	0.3	0.3	ug/L
CM49156	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	14	2.0	2	2	ug/L
CM49156	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM49156	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	370	20	20	20	ug/L
CM49156	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	70	20	5	5	ug/L
CM49156	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM49156	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM49156	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM49156	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM49156	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	15	2.0	7	7	ug/L
CM49156	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	370	20	20	20	ug/L
CM49156	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	14	2.0	2	2	ug/L
CM49156	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	70	20	5	5	ug/L
CM49156	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM49156	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	14	2.0	2	2	ug/L
CM49156	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	70	20	5	5	ug/L
CM49156	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	370	20	20	20	ug/L
CM49156	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	70	20	5	5	ug/L
CM49156	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	370	20	70	70	ug/L
CM49156	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM49156	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	14	2.0	2	2	ug/L
CM49156	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	15	2.0	7	7	ug/L
CM49156	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	370	20	20	20	ug/L
CM49156	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	70	20	5	5	ug/L
CM49156	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	14	2.0	2	2	ug/L
CM49156	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	26	0.20	0.3	0.3	ug/l
CM49156	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	0.20	0.3	0.3	ug/l
CM49156	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	26	0.20	0.3	0.3	ug/l
CM49156	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	80	0.3	0.3	ug/L
CM49156	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.821	0.001	0.43	0.43	mg/L
CM49156	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.879	0.001	0.43	0.43	mg/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49157	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	700	100	300	300	ug/L
CM49157	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / CMR 310.40.1600 / GW-1 (mg/l)	700	100	300	300	ug/L
CM49157	$VPHRANGE-	C5-C8 Aliphatic Hydrocarbons *1,2	MA / GROUNDWATER STANDARDS / GW-1	700	100	300	300	ug/L
CM49157	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.027	0.004	0.01	0.01	mg/L
CM49157	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.027	0.004	0.01	0.01	mg/L
CM49157	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.027	0.004	0.01	0.01	mg/L
CM49157	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.059	0.004	0.01	0.01	mg/L
CM49157	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.059	0.004	0.01	0.01	mg/L
CM49157	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.059	0.004	0.01	0.01	mg/L
CM49158	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	590	50	5	5	ug/L
CM49158	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM49158	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM49158	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM49158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	130	5.0	20	20	ug/L
CM49158	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM49158	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM49158	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM49158	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	13	5.0	2	2	ug/L
CM49158	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	550	50	5	5	ug/L
CM49158	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	550	50	5	5	ug/L
CM49158	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM49158	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM49158	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	5.0	2	2	ug/L
CM49158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	5.0	20	20	ug/L
CM49158	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM49158	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	590	50	5	5	ug/L
CM49158	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM49158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	5.0	20	20	ug/L
CM49158	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	550	50	5	5	ug/L
CM49158	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	13	5.0	2	2	ug/L
CM49158	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	590	50	50	50	ug/L
CM49158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	5.0	70	70	ug/L
CM49158	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	13	5.0	2	2	ug/L
CM49158	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	590	50	5	5	ug/L
CM49158	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM49158	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	550	50	5	5	ug/L
CM49158	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM49158	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	13	5.0	2	2	ug/L
CM49158	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	5.0	20	20	ug/L
CM49158	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	590	50	50	50	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49158	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	550	50	5	5	ug/L
CM49158	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	200	0.3	0.3	ug/L
CM49158	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CM49158	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L
CM49159	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.00033	0.00033	ug/L
CM49159	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	65	10	20	20	ug/L
CM49159	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	3900	500	5	5	ug/L
CM49159	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.47	0.47	ug/L
CM49159	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CM49159	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CM49159	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	3.4	2.5	2	2	ug/L
CM49159	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.47	0.47	ug/L
CM49159	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.6	0.6	ug/L
CM49159	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	4400	500	5	5	ug/L
CM49159	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4400	500	5	5	ug/L
CM49159	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CM49159	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3900	500	5	5	ug/L
CM49159	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.4	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CM49159	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CM49159	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CM49159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	65	10	20	20	ug/L
CM49159	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	10	7	7	ug/L
CM49159	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.4	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4400	500	5	5	ug/L
CM49159	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3900	500	50	50	ug/L
CM49159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	65	10	20	20	ug/L
CM49159	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	3.4	2.5	2	2	ug/L
CM49159	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CM49159	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4400	500	5	5	ug/L
CM49159	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	13	10	7	7	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49159	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	3900	500	5	5	ug/L
CM49159	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CM49159	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	65	10	20	20	ug/L
CM49159	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	3900	500	50	50	ug/L
CM49159	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	3.4	2.5	2	2	ug/L
CM49159	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4400	500	5	5	ug/L
CM49159	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	6.9	0.20	0.3	0.3	ug/l
CM49159	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.9	0.20	0.3	0.3	ug/l
CM49159	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	6.9	0.20	0.3	0.3	ug/l
CM49159	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	400	0.3	0.3	ug/L
CM49160	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	3	3	ug/L
CM49160	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM49160	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	4	4	ug/L
CM49160	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	3	3	ug/L
CM49160	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	38	38	ug/L
CM49160	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM49160	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	10	5	5	ug/L
CM49160	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	3700	200	5	5	ug/L
CM49160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	160	20	20	20	ug/L
CM49160	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM49160	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM49160	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM49160	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM49160	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	2900	200	5	5	ug/L
CM49160	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	5.1	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	38	38	ug/L
CM49160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	20	20	20	ug/L
CM49160	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM49160	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3700	200	5	5	ug/L
CM49160	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM49160	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM49160	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2900	200	5	5	ug/L
CM49160	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM49160	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	5.1	5.0	2	2	ug/L
CM49160	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	13	7.0	7	7	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49160	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM49160	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM49160	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM49160	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM49160	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	3700	200	5	5	ug/L
CM49160	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2900	200	50	50	ug/L
CM49160	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM49160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	160	20	20	20	ug/L
CM49160	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	5.1	5.0	2	2	ug/L
CM49160	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	3700	200	5	5	ug/L
CM49160	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	5.1	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2900	200	5	5	ug/L
CM49160	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	13	7.0	7	7	ug/L
CM49160	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM49160	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM49160	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM49160	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM49160	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM49160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	160	20	70	70	ug/L
CM49160	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM49160	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	5.1	5.0	2	2	ug/L
CM49160	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM49160	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	160	20	20	20	ug/L
CM49160	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	3700	200	5	5	ug/L
CM49160	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2900	200	50	50	ug/L
CM49160	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM49160	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	6.7	0.20	0.3	0.3	ug/l
CM49160	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	6.7	0.20	0.3	0.3	ug/l
CM49160	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	6.7	0.20	0.3	0.3	ug/l
CM49160	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	800	0.3	0.3	ug/L
CM49161	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.00075	0.00075	ug/L
CM49161	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.0075	0.0075	ug/L
CM49161	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.6	0.6	ug/L
CM49161	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	980	100	5	5	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49161	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	950	100	20	20	ug/L
CM49161	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.47	0.47	ug/L
CM49161	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	5.0	0.00033	0.00033	ug/L
CM49161	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	1400	100	5	5	ug/L
CM49161	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	43	10	2	2	ug/L
CM49161	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	2.5	0.47	0.47	ug/L
CM49161	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	43	10	2	2	ug/L
CM49161	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	980	100	5	5	ug/L
CM49161	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CM49161	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1400	100	5	5	ug/L
CM49161	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CM49161	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CM49161	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	10	7	7	ug/L
CM49161	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	950	100	20	20	ug/L
CM49161	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CM49161	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	950	100	20	20	ug/L
CM49161	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	43	10	2	2	ug/L
CM49161	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	980	100	50	50	ug/L
CM49161	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1400	100	5	5	ug/L
CM49161	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	43	10	2	2	ug/L
CM49161	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1400	100	5	5	ug/L
CM49161	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	10	7	7	ug/L
CM49161	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	950	100	70	70	ug/L
CM49161	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	980	100	5	5	ug/L
CM49161	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CM49161	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CM49161	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CM49161	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1400	100	5	5	ug/L
CM49161	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	950	100	20	20	ug/L
CM49161	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	980	100	50	50	ug/L
CM49161	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	43	10	2	2	ug/L
CM49161	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	400	0.3	0.3	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM49161	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	400	0.3	0.3	ug/L
CM49161	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	400	0.3	0.3	ug/L
CM49161	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.674	0.001	0.43	0.43	mg/L
CM49161	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	0.762	0.001	0.43	0.43	mg/L
CM49162	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49162	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM49162	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM49162	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49162	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49162	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49162	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM49162	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM49163	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM49163	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	41	10	5	5	ug/L
CM49163	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	22	1.0	20	20	ug/L
CM49163	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM49163	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	99	10	5	5	ug/L
CM49163	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM49163	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	3.2	1.0	2	2	ug/L
CM49163	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	41	10	5	5	ug/L
CM49163	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.2	1.0	2	2	ug/L
CM49163	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	99	10	5	5	ug/L
CM49163	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM49163	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	22	1.0	20	20	ug/L
CM49163	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	22	1.0	20	20	ug/L
CM49163	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.2	1.0	2	2	ug/L
CM49163	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	99	10	50	50	ug/L
CM49163	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	41	10	5	5	ug/L
CM49163	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	3.2	1.0	2	2	ug/L
CM49163	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	41	10	5	5	ug/L
CM49163	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM49163	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	99	10	5	5	ug/L
CM49163	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	22	1.0	20	20	ug/L
CM49163	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	99	10	50	50	ug/L
CM49163	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	3.2	1.0	2	2	ug/L
CM49163	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	41	10	5	5	ug/L
CM49163	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEAD-WILMINGTO	ND	40	0.3	0.3	ug/L
CM49163	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM49163	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L

Tuesday, January 10, 2023

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM49146 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEAD-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM49146, CM49147, CM49148, CM49149, CM49150, CM49151, CM49152, CM49153, CM49154, CM49155, CM49156, CM49157, CM49158, CM49159, CM49160, CM49161, CM49162, CM49163

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

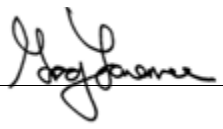
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Tuesday, January 10, 2023

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/06/22-1 Adam Werner, Chemist 10/06/22

CM49149 (1X), CM49150 (1X), CM49151 (1X), CM49156 (1X), CM49159 (1X), CM49160 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1006_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Site Specific):

Batch 645601 (CM49151)

CM49149, CM49150, CM49151, CM49156, CM49159, CM49160, CM49161

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 645596 (Samples: CM49147): -----

The LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C9 - Nonane)

QC Batch 646087 (Samples: CM49157): -----

The LCS recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C36 - Hexatriacontane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes and surrogates, no significant variability is suspected. (C36 - Hexatriacontane, C9 - Nonane, % 1-chlorooctadecane (aliphatic), % o-terphenyl (aromatic))

Instrument:

AU-FID3 10/11/22-1 Adam Werner, Chemist 10/11/22

CM49157 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR1010BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 10/06/22-1 Adam Werner, Chemist 10/06/22

CM49147 (1X)

The initial calibration (AL0805BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 10/11/22-1 Adam Werner, Chemist 10/11/22

CM49157 (1X)

The initial calibration (AL1010AI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 645596 (CM49088)

CM49147

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: C9 - Nonane(39%)
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

Batch 646087 (CM49157)

CM49157

All LCS recoveries were within 40 - 140 with the following exceptions: C36 - Hexatriacontane(24%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: % 1-chlorooctadecane (aliphatic)(70.6%), % o-terphenyl (aromatic)(55.2%), C36 - Hexatriacontane(124.4%), C9 - Nonane(29.7%)
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

EPH Narration

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/05/22-1 Greg Danielewski, Chemist 10/05/22

CM49151 , CM49156 , CM49161

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Site Specific):

Batch 645407 (CM49151)

CM49151, CM49156, CM49161

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 645605 (CM49151)

CM49151, CM49156, CM49161

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 10/04/22-2 Brian Sheriden, Greg Danielewski, Chemist 10/04/22

CM49151 , CM49156 , CM49161

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645484 (CM48781)

CM49151, CM49156, CM49161

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

IC

QC (Site Specific):

Batch 645485 (CM49151)

CM49151, CM49161

All LCS recoveries were within 90 - 110 with the following exceptions: None.
All MS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 10/07/22 08:21 Tina Hall, Chemist 10/07/22

CM49151, CM49152, CM49156, CM49157, CM49161

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/10/22 08:40 Cindy Pearce, Chemist 10/10/22

CM49151, CM49152, CM49156, CM49157, CM49161

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 645565 (CM49151)

CM49151, CM49152, CM49156, CM49157, CM49161

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Certification Report

January 10, 2023

SDG I.D.: GCM49146

ICP Metals Narration

Batch 645680 (CM49151)

CM49151, CM49152, CM49156, CM49157, CM49161

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM27 10/09/22-1 Matt Richard, Chemist 10/09/22

CM49147 (1X), CM49157 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0808):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/1009_03-27_BNSIM18_0808) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 645934 (CM49042)

CM49147, CM49157

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646712 (Samples: CM49146, CM49151, CM49152, CM49155, CM49156): -----

The MS/MSD RPD exceeds the method criteria for one analytes, all of the other QC is acceptable. No significant variability is suspected. (Bromomethane)

QC Batch 646716 (Samples: CM49153): -----

The MS recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (Trichlorofluoromethane)

QC Batch 646962 (Samples: CM49146, CM49154): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, Hexachlorobutadiene, Naphthalene, n-Butylbenzene)

Instrument:

CHEM02 10/12/22-1 Michael Hahn, Chemist 10/12/22

CM49158 (5X, 50X), CM49161 (100X), CM49162 (1X), CM49163 (1X)

Chem02 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM02/VT-P100922):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.046 (0.05), 2-Hexanone 0.094 (0.1), Acetone 0.048 (0.1), Methyl ethyl ketone 0.089 (0.1)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.046 (0.05), Acetone 0.048 (0.05)

Continuing Calibration Verification (CHEM02/1012_02-VT-P100922) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: n-Butylbenzene 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.046 (0.05), Acetone 0.057 (0.1), Bromoform 0.099 (0.1), Methyl ethyl ketone 0.096 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.046 (0.05)

CHEM02 10/15/22-1 Michael Hahn, Chemist 10/15/22

CM49159 (10X), CM49160 (20X, 200X), CM49161 (10X), CM49163 (10X)

Chem02 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM02/VT-P101422):

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

VOA Narration

93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 27% (20%), Bromomethane 35% (20%), Naphthalene 22% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.046 (0.05), 2-Hexanone 0.099 (0.1), Acetone 0.065 (0.1), Bromoform 0.094 (0.1), Methyl ethyl ketone 0.096 (0.1)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.046 (0.05)

Continuing Calibration Verification (CHEM02/1015_01-VT-P101422) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2,3-Trichlorobenzene 21%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.043 (0.05), 2-Hexanone 0.094 (0.1), Acetone 0.063 (0.1), Bromoform 0.087 (0.1), Methyl ethyl ketone 0.085 (0.1)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.046 (0.05)

CHEM15 10/11/22-4 Harry Mullin, Chemist 10/11/22

CM49148 (1X), CM49149 (1X), CM49150 (1X), CM49152 (20X), CM49155 (20X), CM49156 (20X)

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1010_32-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM15 10/12/22-1 Harry Mullin, Chemist 10/12/22

CM49146 (20X), CM49151 (1X), CM49152 (2X), CM49155 (2X), CM49156 (2X)

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1012_01-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM15 10/12/22-3 Harry Mullin, Chemist 10/12/22

CM49153 (1X)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

VOA Narration

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1012_01-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM17 10/13/22-1 Michael Hahn, Chemist 10/13/22

CM49146 (400X), CM49154 (1X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1013_02-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
88% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,1,2,2-Tetrachloroethane 21%H (20%), 1,2,3-Trichlorobenzene 29%H (20%), 1,2,4-Trichlorobenzene 25%H (20%), 2-Hexanone 25%H (20%), Bromomethane 30%L (20%), Dibromochloromethane 21%H (20%), Hexachlorobutadiene 27%H (20%), Methyl ethyl ketone 28%H (20%), n-Butylbenzene 24%H (20%), Naphthalene 31%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.037 (0.05), 2-Hexanone 0.079 (0.1), Acetone 0.040 (0.1), Bromoform 0.078 (0.1), Methyl ethyl ketone 0.077 (0.1), Tetrahydrofuran (THF) 0.042 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

CHEM23 10/18/22-1 Michael Hahn, Chemist 10/18/22

CM49159 (500X)

Initial Calibration Evaluation (CHEM23/VOA23_101722):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.181 (0.2)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

VOA Narration

The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1018_03-VOA23_101722) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Tetrachloroethene 0.181 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 646485 (CM47543) CHEM15 10/11/2022-4

CM49148(1X), CM49149(1X), CM49150(1X), CM49152(20X), CM49155(20X), CM49156(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646770 (CM46620) CHEM02 10/12/2022-1

CM49158(5X, 50X), CM49161(100X), CM49162(1X), CM49163(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646962 (CM60510) CHEM17 10/13/2022-1

CM49146(400X), CM49154(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(132%), Naphthalene(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(136%), 1,2,4-Trichlorobenzene(133%), 1,2-Dibromo-3-chloropropane(131%), Hexachlorobutadiene(132%), Naphthalene(139%), n-Butylbenzene(134%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647251 (CM61864) CHEM02 10/15/2022-1

CM49159(10X), CM49160(20X, 200X), CM49161(10X), CM49163(10X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

VOA Narration

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647791 (CM60991) CHEM23 10/18/2022-1

CM49159(500X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 646712 (CM49151) CHEM15 10/12/2022-1

CM49146(20X), CM49151(1X), CM49152(2X), CM49155(2X), CM49156(2X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: Bromomethane(22.0%)
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646716 (CM49153) CHEM15 10/12/2022-3

CM49153(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(134%)
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

January 10, 2023

SDG I.D.: GCM49146

VPH Narration

Instrument:

PIDFID 10/06/22-1 James Karabetsos, Chemist 10/06/22

CM49147 (1X), CM49157 (1X)

Initial Calibration Evaluation (PIDFID/VPH_100322_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 645881 (CM49088)

CM49147(1X), CM49157(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Temp 1.1 °C Pg of

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 995-2100
Contacts: Lori Herbierich (Chemist) 978-302-0089 Scott Olson (PM) 978-646-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification
Sampler's Signature [signature] Date: 10/4/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
49146	22A-IP1R2-100322-1	GW	10/3/22	1510	3							X									
49147	22A-TRC101-100322-1	GW	10/3/22	1400	2	2								X	X						
49148	22A-AE2R-100322-1	GW	10/3/22	1545	3							X									
49149	22A-AE104D-100322-1	GW	10/3/22	1500	3	1						X	X								
49150	22A-AE104D-100322-2	GW	10/3/22	1500	3	1						X	X								
49151	22A-GZA12-100422-1	GW	10/4/22	0930	9	6		12				X	X			X	X	X	X	X	MS/MSD
49152	22A-GZA101R-100422-1	GW	10/4/22	1145	3			2				X				X	X				
49153	22A-AE24R1-100422-1	GW	10/4/22	0842	~~3~~ 9							X									MS/MSD
49154	22A-AE24R3-100422-1	GW	10/4/22	0945	3							X									
49155	22A-AE24R5-100422-1	GW	10/4/22	1023	3							X									
49156	22A-AE29R6-100422-1	GW	10/4/22	1108	3	2		4				X	X				X	X	X	X	
49157	22A-AE100R1-100422-1	GW	10/4/22	1035	2	2								X	X	X					

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/5/22	2:08
[signature]	[signature]	10/4	1619

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

[illegible]
X MCP (GAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

[illegible]
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

[illegible] were collected: MA

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 1.1 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 10/4/22

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
49158	22A-AE100R2-100422-1	GW	10/4/22	1105	3							X									
49159	22A-AE100R3-100422-1	GW	10/4/22	1115	3	1						X									
49160	22A-AE100R4-100422-1	GW	10/4/22	1125	3	1						X	X								
49161	22A-AE100R5-100422-1	GW	10/4/22	1140	3	2		4				X	X				X	X	X	X	
49162	22A-TB02-100322-1	GW	10/3/22	1200	2							X									
49163	22A-EMW10D-100422-1	GW	10/4/22	1345	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/5/22	2:05
[signature]	[signature]	10/4	1619

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ RGSRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Rebecca Merz

From:	Murphy, Tessa <Tessa.Murphy@aecom.com>
Sent:	Wednesday, October 5, 2022 10:50 AM
To:	Rebecca Merz
Cc:	Olson, Scott (Chelmsford); Herberich, Lori; Potter, Dylan (Chelmsford)
Subject:	RE: Phoenix Labs - GCM49146, LOCKHEAD-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

One additional request – please cancel Dissolved and Total Fe & Mn for 22A-GZA101R-100422-1.

Thanks so much!
Tessa

Tessa Murphy
Pronouns: *she, her, hers*
Entry Level Environmental Scientist
M +1-978-382-5209
tessa.murphy@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, United States
T +1-978-905-2100
aecom.com

From: Rebecca Merz <Rebeccam@phoenixlabs.com>
Sent: Wednesday, October 5, 2022 10:44
To: Murphy, Tessa <Tessa.Murphy@aecom.com>
Cc: Olson, Scott (Chelmsford) <scott.olson@aecom.com>; Herberich, Lori <Lori.Herberich@aecom.com>; Potter, Dylan (Chelmsford) <Dylan.Potter2@aecom.com>
Subject: RE: Phoenix Labs - GCM49146, LOCKHEAD-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

All set **J**

Rebecca Merz

New England Sales Manager
Phoenix Environmental Laboratories, Inc.
860-212-9457 (mobile)
rebeccam@phoenixlabs.com
https://www.phoenixlabs.com/

Please note I will be on PTO 10/7 through 10/11

From: Murphy, Tessa <Tessa.Murphy@aecom.com>
Sent: Wednesday, October 5, 2022 9:43 AM
To: Rebecca Merz <Rebeccam@phoenixlabs.com>
Cc: Olson, Scott (Chelmsford) <scott.olson@aecom.com>; Herberich, Lori <Lori.Herberich@aecom.com>; Potter, Dylan (Chelmsford) <Dylan.Potter2@aecom.com>
Subject: RE: Phoenix Labs - GCM49146, LOCKHEAD-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

Rebecca Merz

From:	Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Sent:	Monday, January 9, 2023 1:16 PM
To:	Rebecca Merz; Herberich, Lori
Cc:	Potter, Dylan (Chelmsford)
Subject:	Revised Data Package - Lockheed Wilmington Site

Hi Rebecca,

Per our phone conversation last week, we would like to make the following update:

Package GCM49146
1,4-dioxane results for Sample 22A-AE100R5-100422-1 should be changed to sample 22A-AE100R3-100422-1.

Please provide updated PDF packages and updated EDD for our files. We will not load the new EDD, but would like it for our files to be complete.

Email with any questions.

Thank you.
Scott

PHOENIX
Environmental Laboratories, Inc.

Monday, November 07, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60688023.02.2**
SDG ID: **GCM50288**
Sample ID#s: CM50288 - CM50304

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

November 07, 2022

SDG I.D.: GCM50288

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Version 2 - Added comment for the cause of the interference of the 1,4-Dioxane surrogate. Phoenix Lab ID CM50302.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

November 07, 2022

SDG I.D.: GCM50288

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-TB01-100422-1	CM50288	GROUND WATER
22A-AE109R1-100422-1	CM50289	GROUND WATER
22A-AE109R2-100422-1	CM50290	GROUND WATER
22A-AE109R4-100422-1	CM50291	GROUND WATER
22A-AE109R6-100422-1	CM50292	GROUND WATER
22A-AE109R8-100422-1	CM50293	GROUND WATER
22A-GZA10-100422-1	CM50294	GROUND WATER
22A-AE26R1-100522-1	CM50295	GROUND WATER
22A-AE26R4-100522-1	CM50296	GROUND WATER
22A-AE26S-100522-1	CM50297	GROUND WATER
22A-AE27R-100522-1	CM50298	GROUND WATER
22A-AE24-100522-1	CM50299	GROUND WATER
22A-AE24-100522-2	CM50300	GROUND WATER
22A-AE23S-100522-1	CM50301	GROUND WATER
22A-AE23R-100522-1	CM50302	GROUND WATER
22A-AE28R1-100522-1	CM50303	GROUND WATER
22A-AE28R2-100522-1	CM50304	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50288

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TB01-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50288

Client ID: 22A-TB01-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	107		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	92		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	99		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50288
Client ID: 22A-TB01-100422-1

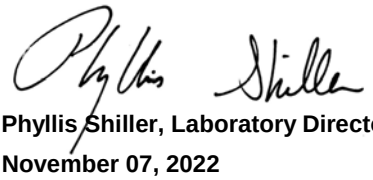
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50289

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50289

Client ID: 22A-AE109R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	3.1	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	1.0	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 2

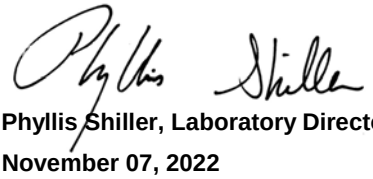
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50289
Client ID: 22A-AE109R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50290

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50290
Client ID: 22A-AE109R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	3.2	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	88		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50290
Client ID: 22A-AE109R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	4.6	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	78		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50291

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethane	3.1	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50291

Client ID: 22A-AE109R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	10/13/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	180	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/13/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Tetrachloroethene	2.9	2.0	ug/L	2	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/13/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	2.3	2.0	ug/L	2	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Trichloroethene	27	2.0	ug/L	2	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	95		%	2	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	95		%	2	10/13/22	MH	70 - 130 %
% Toluene-d8 (2x)	96		%	2	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	103		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/13/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	98		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50292

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R6-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.141	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.222	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.154	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	0.237	0.001	mg/L	1	10/11/22	CPP	SW6010D
Chloride	45.5	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/06/22 01:07	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 01:07	BS/GD	E300.0
Sulfate	7.9	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.10	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Client MS/MSD	Completed				10/17/22		
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1-Dichloroethane	5.3	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50292

Client ID: 22A-AE109R6-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromoethane	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/17/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/17/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/17/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/17/22	MH	SW8260C
Benzene	ND	1.4	ug/L	2	10/17/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/17/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
cis-1,2-Dichloroethene	180	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/17/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/17/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Tetrachloroethene	7.0	2.0	ug/L	2	10/17/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/17/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,2-Dichloroethene	3.0	2.0	ug/L	2	10/17/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
Trichloroethene	120	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Vinyl chloride	3.9	2.0	ug/L	2	10/17/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	101		%	2	10/17/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	98		%	2	10/17/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	90		%	2	10/17/22	MH	70 - 130 %
% Toluene-d8 (2x)	102		%	2	10/17/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	104		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/17/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	1.3	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	76		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50293

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R8-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50293
Client ID: 22A-AE109R8-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	6.0	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	1.6	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50293

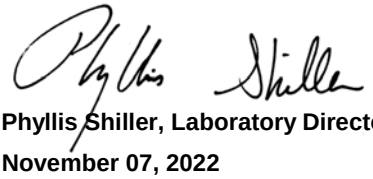
Client ID: 22A-AE109R8-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

November 07, 2022

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	14:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50294

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA10-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.046	0.004	mg/L	1	10/11/22	CPP	SW6010D
Arsenic (Dissolved)	0.038	0.004	mg/L	1	10/10/22	CPP	SW6010D
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50295

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/11/22	CPP	SW6010D
Arsenic (Dissolved)	0.006	0.004	mg/L	1	10/10/22	CPP	SW6010D
Iron (Dissolved)	0.118	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.728	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.227	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	0.748	0.001	mg/L	1	10/11/22	CPP	SW6010D
Chloride	155	10.0	mg/L	2	10/06/22	B/E/G	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/06/22 23:13	B/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 07:51	BS/GD	E300.0
Sulfate	16.4	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.17	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1-Dichloroethane	26	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50295

Client ID: 22A-AE26R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/13/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/13/22	MH	SW8260C
Benzene	ND	3.5	ug/L	5	10/13/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/13/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/13/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/13/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	45	5.0	ug/L	5	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/13/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Tetrachloroethene	410	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/13/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	9.5	5.0	ug/L	5	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
Trichloroethene	730	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Vinyl chloride	75	5.0	ug/L	5	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	103		%	5	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	95		%	5	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/13/22	MH	70 - 130 %
% Toluene-d8 (5x)	102		%	5	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	90		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	16	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

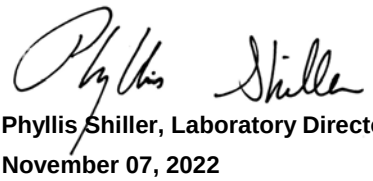
MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50296

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethane	24	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethene	5.1	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/14/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50296

Client ID: 22A-AE26R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/14/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/14/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/14/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,2-Dichloroethene	600	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Tetrachloroethene	360	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/14/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,2-Dichloroethene	39	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Trichloroethene	490	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Vinyl chloride	140	5.0	ug/L	5	10/14/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	101		%	5	10/14/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	10/14/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	90		%	5	10/14/22	MH	70 - 130 %
% Toluene-d8 (5x)	101		%	5	10/14/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	92		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	10/13/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50296
Client ID: 22A-AE26R4-100522-1

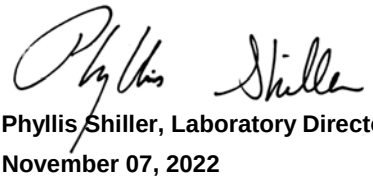
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	97		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/14/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	13:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50297

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/11/22	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/10/22	CPP	SW6010D
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50297

Client ID: 22A-AE26S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	27	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	20	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	1.0	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	11	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	1.1	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/13/22	MH	70 - 130 %

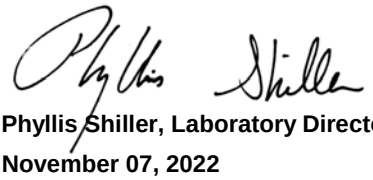
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50297
Client ID: 22A-AE26S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	92		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	98		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	94		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	88		%	10	10/15/22	MH	70 - 130 %
% Toluene-d8 (10x)	98		%	10	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50298

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE27R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.070	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	1.07	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.069	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	1.01	0.001	mg/L	1	10/11/22	CPP	SW6010D
Chloride	967	125	mg/L	25	10/06/22	B/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/06/22 23:33	B/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 08:01	BS/GD	E300.0
Sulfate	21.1	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.70	0.10	mg/L	2	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	6.5	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50298

Client ID: 22A-AE27R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/13/22	MH	SW8260C
Benzene	ND	1.4	ug/L	2	10/13/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	120	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/13/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Tetrachloroethene	130	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/13/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Trichloroethene	240	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	95		%	2	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	92		%	2	10/13/22	MH	70 - 130 %
% Toluene-d8 (2x)	100		%	2	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	92		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50299

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE24-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/14/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/14/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/14/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/14/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,2-Dichloroethene	11	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Tetrachloroethene	710	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/14/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Trichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	103		%	5	10/14/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	10/14/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	94		%	5	10/14/22	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	10/14/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	104		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	90		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	95		%	100	10/13/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50299
Client ID: 22A-AE24-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	97		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/14/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	79		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50300

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE24-100522-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/14/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/14/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/14/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/14/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,2-Dichloroethene	13	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Tetrachloroethene	650	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/14/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Trichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	103		%	5	10/14/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	97		%	5	10/14/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	90		%	5	10/14/22	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	10/14/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	100		%	100	10/13/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50300
Client ID: 22A-AE24-100522-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/14/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	80		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50301

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE23S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50301

Client ID: 22A-AE23S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	9.6	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	94	10	ug/L	10	10/17/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	16	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	90		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	10/17/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	96		%	10	10/17/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	94		%	10	10/17/22	MH	70 - 130 %

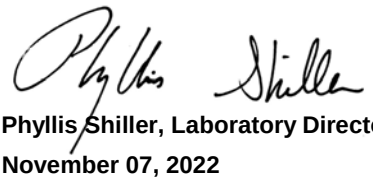
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50301
Client ID: 22A-AE23S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	97		%	10	10/17/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50302

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE23R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	1100	500	ug/L	500	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,1-Dichloroethane	890	500	ug/L	500	10/15/22	MH	SW8260C
1,1-Dichloroethene	530	500	ug/L	500	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	500	ug/L	500	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	250	ug/L	500	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	370	ug/L	500	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	500	ug/L	500	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	240	ug/L	500	10/15/22	MH	SW8260C
2-Hexanone	ND	1000	ug/L	500	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	250	ug/L	500	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	1000	ug/L	500	10/15/22	MH	SW8260C
Acetone	ND	6300	ug/L	500	10/15/22	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50302

Client ID: 22A-AE23R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromochloromethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromodichloromethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromoform	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromomethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Carbon Disulfide	ND	810	ug/L	500	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	130	ug/L	500	10/15/22	MH	SW8260C
Chlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Chloroethane	ND	500	ug/L	500	10/15/22	MH	SW8260C
Chloroform	ND	130	ug/L	500	10/15/22	MH	SW8260C
Chloromethane	ND	190	ug/L	500	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	140	130	ug/L	500	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Dibromochloromethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Dibromomethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	200	ug/L	500	10/15/22	MH	SW8260C
Ethylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Isopropylbenzene	ND	450	ug/L	500	10/15/22	MH	SW8260C
m&p-Xylene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	1000	ug/L	500	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	130	ug/L	500	10/15/22	MH	SW8260C
Methylene chloride	ND	250	ug/L	500	10/15/22	MH	SW8260C
Naphthalene	ND	250	ug/L	500	10/15/22	MH	SW8260C
n-Butylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
n-Propylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
o-Xylene	ND	500	ug/L	500	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	500	ug/L	500	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Styrene	ND	130	ug/L	500	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Tetrachloroethene	39000	10000	ug/L	10000	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	1300	ug/L	500	10/15/22	MH	SW8260C
Toluene	3300	500	ug/L	500	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	130	ug/L	500	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Trichloroethene	140000	10000	ug/L	10000	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	500	ug/L	500	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	500	ug/L	500	10/15/22	MH	SW8260C
Vinyl chloride	ND	130	ug/L	500	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (500x)	100		%	500	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	96		%	500	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	94		%	500	10/15/22	MH	70 - 130 %
% Toluene-d8 (500x)	112		%	500	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10000x)	99		%	10000	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10000x)	95		%	10000	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10000x)	93		%	10000	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50302
Client ID: 22A-AE23R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10000x)	99		%	10000	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	20000	ug/L	500	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.6	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	Interference		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

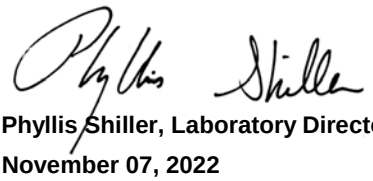
Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

The 1,4-Dioxane surrogate was impacted by the large concentration of trichloroethylene. The 1,4-Dioxane was not impacted.

Dioxane
Due to matrix interference from non-target compounds in the sample, surrogate could not be reported.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50303

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethane	160	100	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethene	65	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Hexanone	ND	200	ug/L	100	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	350	ug/L	100	10/13/22	MH	SW8260C
Acetone	ND	2500	ug/L	100	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50303

Client ID: 22A-AE28R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	10/13/22	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	10/13/22	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromoform	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	100	10/13/22	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroform	ND	50	ug/L	100	10/13/22	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	4900	1000	ug/L	1000	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	100	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	10/13/22	MH	SW8260C
Methylene chloride	ND	50	ug/L	100	10/13/22	MH	SW8260C
Naphthalene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Styrene	ND	100	ug/L	100	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Tetrachloroethene	8600	1000	ug/L	1000	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	10/13/22	MH	SW8260C
Toluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	760	100	ug/L	100	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Trichloroethene	18000	1000	ug/L	1000	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Vinyl chloride	930	100	ug/L	100	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	88		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	95		%	100	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (1000x)	101		%	1000	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (1000x)	95		%	1000	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (1000x)	95		%	1000	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50303
Client ID: 22A-AE28R1-100522-1

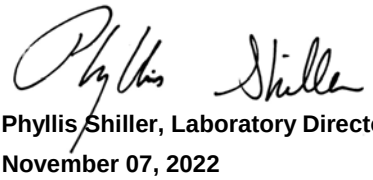
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (1000x)	98		%	1000	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	100	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50304

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	1.04	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	2.11	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	1.08	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	2.22	0.010	mg/L	10	10/18/22	TH	SW6010D
Chloride	39.0	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/06/22 08:11	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 08:11	BS/GD	E300.0
Sulfate	19.4	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.27	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethane	190	100	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethene	65	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	100	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50304

Client ID: 22A-AE28R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Hexanone	ND	200	ug/L	100	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	350	ug/L	100	10/13/22	MH	SW8260C
Acetone	ND	2500	ug/L	100	10/13/22	MH	SW8260C
Benzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	10/13/22	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	10/13/22	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromoform	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	100	10/13/22	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroform	ND	50	ug/L	100	10/13/22	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	1700	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	100	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	10/13/22	MH	SW8260C
Methylene chloride	ND	50	ug/L	100	10/13/22	MH	SW8260C
Naphthalene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Styrene	ND	100	ug/L	100	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Tetrachloroethene	26000	1000	ug/L	1000	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	10/13/22	MH	SW8260C
Toluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	260	100	ug/L	100	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50304
Client ID: 22A-AE28R2-100522-1

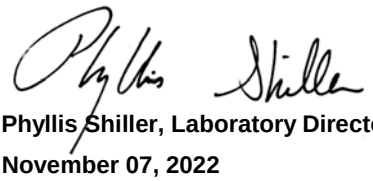
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Trichloroethene	26000	1000	ug/L	1000	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Vinyl chloride	260	100	ug/L	100	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	106		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	89		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	95		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	95		%	100	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (1000x)	101		%	1000	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (1000x)	96		%	1000	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (1000x)	95		%	1000	10/15/22	MH	70 - 130 %
% Toluene-d8 (1000x)	99		%	1000	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	100	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	35	0.40	ug/l	1	10/15/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	86		%	1	10/15/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/13/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

November 07, 2022

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645681 (mg/L), QC Sample No: CM50292 (CM50292, CM50294, CM50295, CM50297, CM50298, CM50304)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	102	101	1.0	104	104	0.0	80 - 120	20
Iron	BRL	0.010	0.154	0.167	8.10	104	102	1.9	105	104	1.0	80 - 120	20
Manganese	BRL	0.001	0.237	0.239	0.80	103	102	1.0	105	104	1.0	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645566 (mg/L), QC Sample No: CM50292 (CM50292, CM50294, CM50295, CM50297, CM50298, CM50304)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	92.4	88.9	3.9	89.0	88.6	0.5	80 - 120	20
Iron	BRL	0.011	0.141	0.141	0	94.0	90.7	3.6	89.0	89.0	0.0	80 - 120	20
Manganese	BRL	0.001	0.222	0.223	0.40	95.1	91.6	3.7	90.3	90.3	0.0	80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

November 07, 2022

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 646308 (mg/L), QC Sample No: CM50292 (CM50292, CM50295, CM50298, CM50304)														
Sulfide	BRL	0.05	0.10	0.11	NC	92.3			94.3			90 - 110	20	
Comment:														
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.														
QA/QC Batch 646084 (mg/L), QC Sample No: CM50292 (CM50292, CM50295, CM50298, CM50304)														
Total Organic Carbon	BRL	1.0	1.2	1.2	NC	103			93.0			85 - 115	20	
Comment:														
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.														
QA/QC Batch 645712 (mg/L), QC Sample No: CM50292 (CM50292)														
Chloride	BRL	5.0	45.5	45.2	0.70	95.1			91.8			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	<0.05	<0.05	NC	92.8			91.8			90 - 110	20	
Nitrite as Nitrogen	BRL	0.01	<0.01	<0.01	NC	107			104			90 - 110	20	
Sulfate	BRL	5.0	7.9	7.6	NC	95.2			96.6			90 - 110	20	
QA/QC Batch 645713 (mg/L), QC Sample No: CM50439 (CM50292, CM50295, CM50298, CM50304)														
Chloride	BRL	5.0	52.5	51.1	2.70	93.4			91.7			90 - 110	20	
Nitrate as Nitrogen	BRL	0.05	0.96	0.96	0	90.4			88.4			90 - 110	20	m
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	103			94.3			90 - 110	20	
Sulfate	BRL	5.0	57.4	56.6	1.40	94.4			101			90 - 110	20	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

November 07, 2022

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 645824 (ug/l), QC Sample No: CM50292 (CM50290, CM50292, CM50295, CM50299, CM50300, CM50302)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	86	75	13.7	101	102	1.0	70 - 130	20	
% 1,4-dioxane-d8	83	%	75	81	7.7	80	79	1.3	70 - 130	20	
QA/QC Batch 646800 (ug/l), QC Sample No: CM58047 (CM50304)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	78	70	10.8	68			70 - 130	20	m
% 1,4-dioxane-d8	103	%	97	85	13.2	85			70 - 130	20	
QA/QC Batch 647511 (ug/L), QC Sample No: CM50292 (CM50292 (2X))											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	99	104	4.9	98	113	14.2	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	88	87	1.1	90	101	11.5	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	97	112	14.4	99	112	12.3	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	94	112	17.5	104	119	13.5	70 - 130	20	
1,1-Dichloroethane	ND	1.0	89	93	4.4	89	104	15.5	70 - 130	20	
1,1-Dichloroethene	ND	1.0	88	88	0.0	97	110	12.6	70 - 130	20	
1,1-Dichloropropene	ND	1.0	91	92	1.1	102	116	12.8	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	105	123	15.8	114	130	13.1	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	95	109	13.7	98	112	13.3	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	118	10.7	110	127	14.3	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	96	93	3.2	92	104	12.2	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	107	128	17.9	106	123	14.8	70 - 130	20	
1,2-Dibromoethane	ND	1.0	98	111	12.4	98	113	14.2	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	94	99	5.2	94	106	12.0	70 - 130	20	
1,2-Dichloroethane	ND	1.0	93	106	13.1	100	112	11.3	70 - 130	20	
1,2-Dichloropropane	ND	1.0	92	101	9.3	98	113	14.2	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	96	91	5.3	92	105	13.2	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	95	96	1.0	93	105	12.1	70 - 130	20	
1,3-Dichloropropane	ND	1.0	97	109	11.7	98	112	13.3	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	95	97	2.1	93	105	12.1	70 - 130	20	
1,4-dioxane	ND	100	101	102	1.0	92	106	14.1	40 - 160	20	
2,2-Dichloropropane	ND	1.0	91	98	7.4	97	110	12.6	70 - 130	20	
2-Chlorotoluene	ND	1.0	97	93	4.2	94	106	12.0	70 - 130	20	
2-Hexanone	ND	5.0	92	119	25.6	103	119	14.4	40 - 160	20	r
4-Chlorotoluene	ND	1.0	98	95	3.1	95	106	10.9	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	89	122	31.3	107	124	14.7	40 - 160	20	r
Acetone	ND	5.0	85	110	25.6	98	111	12.4	40 - 160	20	r
Benzene	ND	0.70	93	96	3.2	98	112	13.3	70 - 130	20	
Bromobenzene	ND	1.0	98	100	2.0	96	109	12.7	70 - 130	20	
Bromochloromethane	ND	1.0	91	104	13.3	95	109	13.7	70 - 130	20	
Bromodichloromethane	ND	0.50	92	106	14.1	101	115	13.0	70 - 130	20	
Bromoform	ND	1.0	96	114	17.1	101	116	13.8	70 - 130	20	

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Bromomethane	ND	1.0	93	81	13.8	55	78	34.6	40 - 160	20	r
Carbon Disulfide	ND	1.0	86	85	1.2	88	100	12.8	70 - 130	20	
Carbon tetrachloride	ND	1.0	85	87	2.3	96	108	11.8	70 - 130	20	
Chlorobenzene	ND	1.0	94	96	2.1	93	105	12.1	70 - 130	20	
Chloroethane	ND	1.0	86	87	1.2	90	103	13.5	70 - 130	20	
Chloroform	ND	1.0	90	92	2.2	94	99	5.2	70 - 130	20	
Chloromethane	ND	1.0	90	92	2.2	93	105	12.1	40 - 160	20	
cis-1,3-Dichloropropene	ND	0.40	96	110	13.6	104	118	12.6	70 - 130	20	
Dibromochloromethane	ND	0.50	98	111	12.4	100	115	14.0	70 - 130	20	
Dibromomethane	ND	1.0	97	114	16.1	106	120	12.4	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	84	87	3.5	104	117	11.8	40 - 160	20	
Di-isopropyl ether	ND	1.0	87	105	18.8	95	109	13.7	70 - 130	20	
Ethyl ether	ND	1.0	82	100	19.8	88	101	13.8	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	89	113	23.8	99	114	14.1	70 - 130	20	r
Ethylbenzene	ND	1.0	95	93	2.1	95	107	11.9	70 - 130	20	
Hexachlorobutadiene	ND	0.40	89	89	0.0	94	116	21.0	70 - 130	20	r
Isopropylbenzene	ND	1.0	96	89	7.6	95	107	11.9	70 - 130	20	
m&p-Xylene	ND	1.0	94	94	0.0	94	106	12.0	70 - 130	20	
Methyl ethyl ketone	ND	5.0	87	118	30.2	107	118	9.8	40 - 160	20	r
Methyl t-butyl ether (MTBE)	ND	1.0	89	114	24.6	98	116	16.8	70 - 130	20	r
Methylene chloride	ND	1.0	82	92	11.5	86	96	11.0	70 - 130	20	
Naphthalene	ND	1.0	110	132	18.2	116	133	13.7	70 - 130	20	l,m
n-Butylbenzene	ND	1.0	92	88	4.4	95	113	17.3	70 - 130	20	
n-Propylbenzene	ND	1.0	94	89	5.5	94	106	12.0	70 - 130	20	
o-Xylene	ND	1.0	95	95	0.0	94	106	12.0	70 - 130	20	
p-Isopropyltoluene	ND	1.0	93	88	5.5	93	107	14.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	91	87	4.5	94	108	13.9	70 - 130	20	
Styrene	ND	1.0	97	102	5.0	98	111	12.4	70 - 130	20	
tert-amyl methyl ether	ND	1.0	90	116	25.2	102	118	14.5	70 - 130	20	r
tert-Butylbenzene	ND	1.0	94	88	6.6	92	105	13.2	70 - 130	20	
Tetrachloroethene	ND	1.0	89	89	0.0	93	108	14.9	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	83	105	23.4	87	101	14.9	70 - 130	20	r
Toluene	ND	1.0	93	97	4.2	98	113	14.2	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	91	92	1.1	91	105	14.3	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	97	116	17.8	106	123	14.8	70 - 130	20	
Trichlorofluoromethane	ND	1.0	86	88	2.3	105	117	10.8	70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	78	80	2.5	97	110	12.6	70 - 130	20	
Vinyl chloride	ND	1.0	91	90	1.1	98	113	14.2	70 - 130	20	
% 1,2-dichlorobenzene-d4	102	%	99	102	3.0	102	102	0.0	70 - 130	20	
% Bromofluorobenzene	100	%	98	103	5.0	101	103	2.0	70 - 130	20	
% Dibromofluoromethane	91	%	92	93	1.1	89	90	1.1	70 - 130	20	
% Toluene-d8	100	%	100	100	0.0	103	104	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646725 (ug/L), QC Sample No: CM51230 (CM50288, CM50291 (100X) , CM50292 (100X) , CM50295 (100X) , CM50296 (100X) , CM50298 (100X) , CM50299 (100X) , CM50300 (100X) , CM50303 (100X) , CM50304 (100X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	100	107	6.8				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	106	111	4.6				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	99	105	5.9				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	100	106	5.8				70 - 130	20	

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1-Dichloroethane	ND	1.0	111	117	5.3				70 - 130	20
1,1-Dichloroethene	ND	1.0	103	108	4.7				70 - 130	20
1,1-Dichloropropene	ND	1.0	101	107	5.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	96	106	9.9				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	100	109	8.6				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	98	108	9.7				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	101	111	9.4				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	84	89	5.8				70 - 130	20
1,2-Dibromoethane	ND	1.0	101	108	6.7				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	102	110	7.5				70 - 130	20
1,2-Dichloroethane	ND	1.0	114	120	5.1				70 - 130	20
1,2-Dichloropropane	ND	1.0	106	112	5.5				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	103	110	6.6				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	104	111	6.5				70 - 130	20
1,3-Dichloropropane	ND	1.0	106	112	5.5				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	103	110	6.6				70 - 130	20
1,4-dioxane	ND	100	100	105	4.9				40 - 160	20
2,2-Dichloropropane	ND	1.0	99	106	6.8				70 - 130	20
2-Chlorotoluene	ND	1.0	104	114	9.2				70 - 130	20
2-Hexanone	ND	5.0	84	91	8.0				40 - 160	20
4-Chlorotoluene	ND	1.0	106	113	6.4				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	91	94	3.2				40 - 160	20
Acetone	ND	5.0	101	106	4.8				40 - 160	20
Benzene	ND	0.70	104	111	6.5				70 - 130	20
Bromobenzene	ND	1.0	105	115	9.1				70 - 130	20
Bromochloromethane	ND	1.0	104	113	8.3				70 - 130	20
Bromodichloromethane	ND	0.50	93	100	7.3				70 - 130	20
Bromoform	ND	1.0	81	90	10.5				70 - 130	20
Bromomethane	ND	1.0	118	142	18.5				40 - 160	20
Carbon Disulfide	ND	1.0	91	95	4.3				70 - 130	20
Carbon tetrachloride	ND	1.0	101	102	1.0				70 - 130	20
Chlorobenzene	ND	1.0	107	111	3.7				70 - 130	20
Chloroethane	ND	1.0	113	117	3.5				70 - 130	20
Chloroform	ND	1.0	110	117	6.2				70 - 130	20
Chloromethane	ND	1.0	114	122	6.8				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	107	115	7.2				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	89	98	9.6				70 - 130	20
Dibromochloromethane	ND	0.50	90	98	8.5				70 - 130	20
Dibromomethane	ND	1.0	100	109	8.6				70 - 130	20
Dichlorodifluoromethane	ND	1.0	104	107	2.8				40 - 160	20
Di-isopropyl ether	ND	1.0	114	121	6.0				70 - 130	20
Ethyl ether	ND	1.0	104	109	4.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	102	108	5.7				70 - 130	20
Ethylbenzene	ND	1.0	105	113	7.3				70 - 130	20
Hexachlorobutadiene	ND	0.40	94	98	4.2				70 - 130	20
Isopropylbenzene	ND	1.0	100	110	9.5				70 - 130	20
m&p-Xylene	ND	1.0	104	111	6.5				70 - 130	20
Methyl ethyl ketone	ND	5.0	113	114	0.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	105	5.9				70 - 130	20
Methylene chloride	ND	1.0	95	100	5.1				70 - 130	20
Naphthalene	ND	1.0	91	100	9.4				70 - 130	20
n-Butylbenzene	ND	1.0	101	110	8.5				70 - 130	20
n-Propylbenzene	ND	1.0	102	109	6.6				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
o-Xylene	ND	1.0	101	109	7.6				70 - 130	20	
p-Isopropyltoluene	ND	1.0	101	108	6.7				70 - 130	20	
sec-Butylbenzene	ND	1.0	102	110	7.5				70 - 130	20	
Styrene	ND	1.0	105	112	6.5				70 - 130	20	
tert-amyl methyl ether	ND	1.0	92	96	4.3				70 - 130	20	
tert-Butylbenzene	ND	1.0	102	111	8.5				70 - 130	20	
Tetrachloroethene	ND	1.0	102	107	4.8				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	98	105	6.9				70 - 130	20	
Toluene	ND	1.0	102	110	7.5				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	112	120	6.9				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	92	101	9.3				70 - 130	20	
Trichloroethene	ND	1.0	104	111	6.5				70 - 130	20	
Trichlorofluoromethane	ND	1.0	107	111	3.7				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	94	96	2.1				70 - 130	20	
Vinyl chloride	ND	1.0	112	119	6.1				70 - 130	20	
% 1,2-dichlorobenzene-d4	102	%	99	103	4.0				70 - 130	20	
% Bromofluorobenzene	93	%	98	98	0.0				70 - 130	20	
% Dibromofluoromethane	104	%	103	103	0.0				70 - 130	20	
% Toluene-d8	97	%	96	98	2.1				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647344 (ug/L), QC Sample No: CM51232 (CM50297 (10X) , CM50301, CM50302 (500X, 10000X) , CM50303 (1000X) , CM50304 (1000X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	111	113	1.8	104	112	7.4	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	119	122	2.5	128	135	5.3	70 - 130	20	m
1,1,2,2-Tetrachloroethane	ND	0.50	104	105	1.0	87	95	8.8	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	102	106	3.8	90	99	9.5	70 - 130	20	
1,1-Dichloroethane	ND	1.0	104	105	1.0	111	120	7.8	70 - 130	20	
1,1-Dichloroethene	ND	1.0	109	112	2.7	127	136	6.8	70 - 130	20	m
1,1-Dichloropropene	ND	1.0	114	119	4.3	128	137	6.8	70 - 130	20	m
1,2,3-Trichlorobenzene	ND	1.0	111	114	2.7	93	105	12.1	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	102	100	2.0	86	95	9.9	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	109	114	4.5	97	109	11.7	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	113	116	2.6	117	124	5.8	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	111	112	0.9	90	99	9.5	70 - 130	20	
1,2-Dibromoethane	ND	1.0	110	109	0.9	92	101	9.3	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	108	109	0.9	101	109	7.6	70 - 130	20	
1,2-Dichloroethane	ND	1.0	102	103	1.0	95	102	7.1	70 - 130	20	
1,2-Dichloropropane	ND	1.0	103	106	2.9	99	108	8.7	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	116	119	2.6	121	128	5.6	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	108	111	2.7	106	114	7.3	70 - 130	20	
1,3-Dichloropropane	ND	1.0	106	108	1.9	93	102	9.2	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	105	108	2.8	103	110	6.6	70 - 130	20	
1,4-dioxane	ND	100	108	101	6.7	95	105	10.0	40 - 160	20	
2,2-Dichloropropane	ND	1.0	113	118	4.3	110	117	6.2	70 - 130	20	
2-Chlorotoluene	ND	1.0	110	114	3.6	113	121	6.8	70 - 130	20	
2-Hexanone	ND	5.0	99	98	1.0	73	83	12.8	40 - 160	20	
4-Chlorotoluene	ND	1.0	111	114	2.7	113	120	6.0	70 - 130	20	

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
4-Methyl-2-pentanone	ND	5.0	98	99	1.0	70	78	10.8	40 - 160	20	
Acetone	ND	5.0	90	94	4.3	73	90	20.9	40 - 160	20	r
Benzene	ND	0.70	106	110	3.7	111	119	7.0	70 - 130	20	
Bromobenzene	ND	1.0	108	110	1.8	102	110	7.5	70 - 130	20	
Bromochloromethane	ND	1.0	104	103	1.0	98	107	8.8	70 - 130	20	
Bromodichloromethane	ND	0.50	107	111	3.7	100	108	7.7	70 - 130	20	
Bromoform	ND	1.0	114	113	0.9	94	106	12.0	70 - 130	20	
Bromomethane	ND	1.0	123	127	3.2	104	140	29.5	40 - 160	20	r
Carbon Disulfide	ND	1.0	101	102	1.0	116	123	5.9	70 - 130	20	
Carbon tetrachloride	ND	1.0	120	126	4.9	126	134	6.2	70 - 130	20	m
Chlorobenzene	ND	1.0	106	107	0.9	105	113	7.3	70 - 130	20	
Chloroethane	ND	1.0	102	103	1.0	118	125	5.8	70 - 130	20	
Chloroform	ND	1.0	99	108	8.7	107	115	7.2	70 - 130	20	
Chloromethane	ND	1.0	92	91	1.1	102	108	5.7	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	104	106	1.9	117	129	9.8	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	107	111	3.7	95	104	9.0	70 - 130	20	
Dibromochloromethane	ND	0.50	111	112	0.9	96	103	7.0	70 - 130	20	
Dibromomethane	ND	1.0	106	107	0.9	95	104	9.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	77	79	2.6	105	108	2.8	40 - 160	20	
Di-isopropyl ether	ND	1.0	101	101	0.0	89	99	10.6	70 - 130	20	
Ethyl ether	ND	1.0	96	93	3.2	80	89	10.7	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	101	102	1.0	84	94	11.2	70 - 130	20	
Ethylbenzene	ND	1.0	112	114	1.8	117	125	6.6	70 - 130	20	
Hexachlorobutadiene	ND	0.40	123	124	0.8	124	132	6.3	70 - 130	20	m
Isopropylbenzene	ND	1.0	116	121	4.2	124	132	6.3	70 - 130	20	m
m&p-Xylene	ND	1.0	111	113	1.8	117	124	5.8	70 - 130	20	
Methyl ethyl ketone	ND	5.0	100	101	1.0	74	83	11.5	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	102	1.0	80	92	14.0	70 - 130	20	
Methylene chloride	ND	1.0	92	94	2.2	91	98	7.4	70 - 130	20	
Naphthalene	ND	1.0	110	112	1.8	87	99	12.9	70 - 130	20	
n-Butylbenzene	ND	1.0	126	128	1.6	132	142	7.3	70 - 130	20	m
n-Propylbenzene	ND	1.0	115	119	3.4	123	131	6.3	70 - 130	20	m
o-Xylene	ND	1.0	109	112	2.7	110	118	7.0	70 - 130	20	
p-Isopropyltoluene	ND	1.0	122	124	1.6	129	138	6.7	70 - 130	20	m
sec-Butylbenzene	ND	1.0	122	126	3.2	132	140	5.9	70 - 130	20	m
Styrene	ND	1.0	111	113	1.8	108	116	7.1	70 - 130	20	
tert-amyl methyl ether	ND	1.0	102	105	2.9	83	92	10.3	70 - 130	20	
tert-Butylbenzene	ND	1.0	118	122	3.3	127	136	6.8	70 - 130	20	m
Tetrachloroethene	ND	1.0	112	115	2.6	NC	NC	NC	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	103	98	5.0	71	76	6.8	70 - 130	20	
Toluene	ND	1.0	107	112	4.6	113	120	6.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	105	106	0.9	119	129	8.1	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	109	111	1.8	89	98	9.6	70 - 130	20	
Trichloroethene	ND	1.0	106	111	4.6	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	113	115	1.8	137	143	4.3	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	108	111	2.7	127	137	7.6	70 - 130	20	m
Vinyl chloride	ND	1.0	104	106	1.9	148	161	8.4	70 - 130	20	m
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0	98	99	1.0	70 - 130	20	
% Bromofluorobenzene	96	%	99	99	0.0	97	98	1.0	70 - 130	20	
% Dibromofluoromethane	92	%	110	109	0.9	99	98	1.0	70 - 130	20	
% Toluene-d8	99	%	100	101	1.0	104	104	0.0	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Comment:										
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%. The RPD criteria for the LCS/LCSD is 20%, The MS/MSD RPD criteria is listed above.										
QA/QC Batch 646962 (ug/L), QC Sample No: CM60510 (CM50289, CM50290, CM50291 (2X) , CM50293, CM50295 (5X) , CM50297, CM50298 (2X))										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	119	124	4.1				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	101	105	3.9				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	120	125	4.1				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	111	119	7.0				70 - 130	20
1,1-Dichloroethane	ND	1.0	102	107	4.8				70 - 130	20
1,1-Dichloroethene	ND	1.0	104	110	5.6				70 - 130	20
1,1-Dichloropropene	ND	1.0	112	118	5.2				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	132	136	3.0				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	118	130	9.7				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	128	133	3.8				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	115	122	5.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	129	131	1.5				70 - 130	20
1,2-Dibromoethane	ND	1.0	117	123	5.0				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	113	119	5.2				70 - 130	20
1,2-Dichloroethane	ND	1.0	111	116	4.4				70 - 130	20
1,2-Dichloropropane	ND	1.0	107	112	4.6				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	115	122	5.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	111	118	6.1				70 - 130	20
1,3-Dichloropropane	ND	1.0	118	121	2.5				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	111	118	6.1				70 - 130	20
1,4-dioxane	ND	100	100	109	8.6				40 - 160	20
2,2-Dichloropropane	ND	1.0	102	107	4.8				70 - 130	20
2-Chlorotoluene	ND	1.0	114	121	6.0				70 - 130	20
2-Hexanone	ND	5.0	123	127	3.2				40 - 160	20
4-Chlorotoluene	ND	1.0	115	121	5.1				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	116	122	5.0				40 - 160	20
Acetone	ND	5.0	117	124	5.8				40 - 160	20
Benzene	ND	0.70	104	111	6.5				70 - 130	20
Bromobenzene	ND	1.0	114	120	5.1				70 - 130	20
Bromochloromethane	ND	1.0	106	111	4.6				70 - 130	20
Bromodichloromethane	ND	0.50	111	117	5.3				70 - 130	20
Bromoform	ND	1.0	117	121	3.4				70 - 130	20
Bromomethane	ND	1.0	84	92	9.1				40 - 160	20
Carbon Disulfide	ND	1.0	96	103	7.0				70 - 130	20
Carbon tetrachloride	ND	1.0	106	112	5.5				70 - 130	20
Chlorobenzene	ND	1.0	109	115	5.4				70 - 130	20
Chloroethane	ND	1.0	100	105	4.9				70 - 130	20
Chloroform	ND	1.0	100	107	6.8				70 - 130	20
Chloromethane	ND	1.0	92	97	5.3				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	103	114	10.1				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	112	117	4.4				70 - 130	20
Dibromochloromethane	ND	0.50	120	126	4.9				70 - 130	20
Dibromomethane	ND	1.0	116	122	5.0				70 - 130	20
Dichlorodifluoromethane	ND	1.0	94	98	4.2				40 - 160	20
Di-isopropyl ether	ND	1.0	109	114	4.5				70 - 130	20
Ethyl ether	ND	1.0	107	111	3.7				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Ethyl tert-butyl ether	ND	1.0	112	117	4.4				70 - 130	20	
Ethylbenzene	ND	1.0	111	117	5.3				70 - 130	20	
Hexachlorobutadiene	ND	0.40	123	132	7.1				70 - 130	20	I
Isopropylbenzene	ND	1.0	114	120	5.1				70 - 130	20	
m&p-Xylene	ND	1.0	110	117	6.2				70 - 130	20	
Methyl ethyl ketone	ND	5.0	127	130	2.3				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	113	117	3.5				70 - 130	20	
Methylene chloride	ND	1.0	96	102	6.1				70 - 130	20	
Naphthalene	ND	1.0	137	139	1.4				70 - 130	20	I
n-Butylbenzene	ND	1.0	125	134	6.9				70 - 130	20	I
n-Propylbenzene	ND	1.0	114	122	6.8				70 - 130	20	
o-Xylene	ND	1.0	110	116	5.3				70 - 130	20	
p-Isopropyltoluene	ND	1.0	118	126	6.6				70 - 130	20	
sec-Butylbenzene	ND	1.0	118	127	7.3				70 - 130	20	
Styrene	ND	1.0	114	120	5.1				70 - 130	20	
tert-amyl methyl ether	ND	1.0	113	120	6.0				70 - 130	20	
tert-Butylbenzene	ND	1.0	116	123	5.9				70 - 130	20	
Tetrachloroethene	ND	1.0	104	109	4.7				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	100	101	1.0				70 - 130	20	
Toluene	ND	1.0	106	111	4.6				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	100	106	5.8				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	116	122	5.0				70 - 130	20	
Trichloroethene	ND	1.0	104	110	5.6				70 - 130	20	
Trichlorofluoromethane	ND	1.0	107	111	3.7				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	96	100	4.1				70 - 130	20	
Vinyl chloride	ND	1.0	104	111	6.5				70 - 130	20	
% 1,2-dichlorobenzene-d4	103	%	102	102	0.0				70 - 130	20	
% Bromofluorobenzene	96	%	98	98	0.0				70 - 130	20	
% Dibromofluoromethane	93	%	92	92	0.0				70 - 130	20	
% Toluene-d8	96	%	98	98	0.0				70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647737 (ug/L), QC Sample No: CM61181 (CM50301 (10X))

Volatiles - Ground Water

Tetrachloroethene	ND	1.0	100	107	6.8				70 - 130	20	
% 1,2-dichlorobenzene-d4	102	%	100	100	0.0				70 - 130	20	
% Bromofluorobenzene	99	%	98	99	1.0				70 - 130	20	
% Dibromofluoromethane	105	%	102	88	14.7				70 - 130	20	
% Toluene-d8	99	%	100	100	0.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646964 (ug/L), QC Sample No: CM61588 (CM50296 (5X) , CM50299 (5X) , CM50300 (5X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	118	118	0.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	97	96	1.0				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	120	119	0.8				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	111	110	0.9				70 - 130	20	

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1-Dichloroethane	ND	1.0	100	100	0.0				70 - 130	20	
1,1-Dichloroethene	ND	1.0	105	103	1.9				70 - 130	20	
1,1-Dichloropropene	ND	1.0	119	118	0.8				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	134	135	0.7				70 - 130	20	I
1,2,3-Trichloropropane	ND	1.0	120	119	0.8				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	130	130	0.0				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	119	119	0.0				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	130	132	1.5				70 - 130	20	I
1,2-Dibromoethane	ND	1.0	120	118	1.7				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	116	116	0.0				70 - 130	20	
1,2-Dichloroethane	ND	1.0	110	110	0.0				70 - 130	20	
1,2-Dichloropropane	ND	1.0	109	108	0.9				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	119	120	0.8				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	116	115	0.9				70 - 130	20	
1,3-Dichloropropane	ND	1.0	119	118	0.8				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	116	114	1.7				70 - 130	20	
1,4-dioxane	ND	100	110	108	1.8				40 - 160	20	
2,2-Dichloropropane	ND	1.0	105	103	1.9				70 - 130	20	
2-Chlorotoluene	ND	1.0	118	118	0.0				70 - 130	20	
2-Hexanone	ND	5.0	125	121	3.3				40 - 160	20	
4-Chlorotoluene	ND	1.0	118	119	0.8				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	119	119	0.0				40 - 160	20	
Acetone	ND	5.0	108	106	1.9				40 - 160	20	
Benzene	ND	0.70	110	108	1.8				70 - 130	20	
Bromobenzene	ND	1.0	117	118	0.9				70 - 130	20	
Bromochloromethane	ND	1.0	102	103	1.0				70 - 130	20	
Bromodichloromethane	ND	0.50	111	111	0.0				70 - 130	20	
Bromoform	ND	1.0	118	119	0.8				70 - 130	20	
Bromomethane	ND	1.0	72	79	9.3				40 - 160	20	
Carbon Disulfide	ND	1.0	99	98	1.0				70 - 130	20	
Carbon tetrachloride	ND	1.0	101	101	0.0				70 - 130	20	
Chlorobenzene	ND	1.0	110	111	0.9				70 - 130	20	
Chloroethane	ND	1.0	99	98	1.0				70 - 130	20	
Chloroform	ND	1.0	96	96	0.0				70 - 130	20	
Chloromethane	ND	1.0	88	89	1.1				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	104	104	0.0				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	115	114	0.9				70 - 130	20	
Dibromochloromethane	ND	0.50	121	120	0.8				70 - 130	20	
Dibromomethane	ND	1.0	114	114	0.0				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	97	96	1.0				40 - 160	20	
Di-isopropyl ether	ND	1.0	109	109	0.0				70 - 130	20	
Ethyl ether	ND	1.0	103	102	1.0				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	112	113	0.9				70 - 130	20	
Ethylbenzene	ND	1.0	115	114	0.9				70 - 130	20	
Hexachlorobutadiene	ND	0.40	129	132	2.3				70 - 130	20	I
Isopropylbenzene	ND	1.0	120	120	0.0				70 - 130	20	
m&p-Xylene	ND	1.0	114	113	0.9				70 - 130	20	
Methyl ethyl ketone	ND	5.0	115	115	0.0				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	112	112	0.0				70 - 130	20	
Methylene chloride	ND	1.0	93	94	1.1				70 - 130	20	
Naphthalene	ND	1.0	137	137	0.0				70 - 130	20	I
n-Butylbenzene	ND	1.0	129	131	1.5				70 - 130	20	I
n-Propylbenzene	ND	1.0	120	119	0.8				70 - 130	20	

QA/QC Data

SDG I.D.: GCM50288

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
o-Xylene	ND	1.0	114	114	0.0				70 - 130	20
p-Isopropyltoluene	ND	1.0	124	124	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	123	125	1.6				70 - 130	20
Styrene	ND	1.0	117	116	0.9				70 - 130	20
tert-amyl methyl ether	ND	1.0	119	118	0.8				70 - 130	20
tert-Butylbenzene	ND	1.0	121	121	0.0				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	97	97	0.0				70 - 130	20
Toluene	ND	1.0	109	109	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	100	100	0.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	118	116	1.7				70 - 130	20
Trichloroethene	ND	1.0	107	106	0.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	102	101	1.0				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	95	93	2.1				70 - 130	20
Vinyl chloride	ND	1.0	104	103	1.0				70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	101	102	1.0				70 - 130	20
% Bromofluorobenzene	97	%	97	98	1.0				70 - 130	20
% Dibromofluoromethane	88	%	88	92	4.4				70 - 130	20
% Toluene-d8	96	%	99	99	0.0				70 - 130	20

Comment:

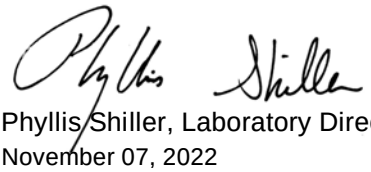
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
November 07, 2022

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50288	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM50288	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM50288	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM50288	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM50288	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM50288	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM50288	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM50288	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM50289	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM50289	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM50289	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM50289	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM50289	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM50289	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM50289	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM50289	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM50290	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM50290	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM50290	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM50290	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM50290	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM50290	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4.6	0.20	0.3	0.3	ug/l
CM50290	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	4.6	0.20	0.3	0.3	ug/l
CM50290	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	4.6	0.20	0.3	0.3	ug/l
CM50290	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM50291	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM50291	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM50291	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	27	2.0	5	5	ug/L
CM50291	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	180	100	20	20	ug/L
CM50291	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM50291	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM50291	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM50291	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	2.0	5	5	ug/L
CM50291	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	100	20	20	ug/L
CM50291	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM50291	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	2.0	5	5	ug/L
CM50291	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	100	20	20	ug/L
CM50291	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	100	70	70	ug/L
CM50291	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM50291	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	27	2.0	5	5	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50291	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	2.0	5	5	ug/L
CM50291	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	100	20	20	ug/L
CM50291	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	0.3	0.3	ug/L
CM50291	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	80	0.3	0.3	ug/L
CM50291	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	80	0.3	0.3	ug/L
CM50292	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM50292	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM50292	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM50292	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	120	100	5	5	ug/L
CM50292	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	180	100	20	20	ug/L
CM50292	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	3.9	2.0	2	2	ug/L
CM50292	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM50292	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	7.0	2.0	5	5	ug/L
CM50292	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM50292	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	100	5	5	ug/L
CM50292	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	7.0	2.0	5	5	ug/L
CM50292	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.9	2.0	2	2	ug/L
CM50292	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	180	100	20	20	ug/L
CM50292	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM50292	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	3.9	2.0	2	2	ug/L
CM50292	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	180	100	20	20	ug/L
CM50292	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	100	5	5	ug/L
CM50292	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	7.0	2.0	5	5	ug/L
CM50292	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	3.9	2.0	2	2	ug/L
CM50292	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	100	5	5	ug/L
CM50292	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM50292	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	180	100	70	70	ug/L
CM50292	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	100	5	5	ug/L
CM50292	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	180	100	20	20	ug/L
CM50292	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	3.9	2.0	2	2	ug/L
CM50292	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.3	0.20	0.3	0.3	ug/l
CM50292	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	1.3	0.20	0.3	0.3	ug/l
CM50292	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	1.3	0.20	0.3	0.3	ug/l
CM50292	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	0.3	0.3	ug/L
CM50293	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM50293	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM50293	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM50293	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM50293	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM50293	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50293	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM50293	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM50294	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.046	0.004	0.01	0.01	mg/L
CM50294	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.046	0.004	0.01	0.01	mg/L
CM50294	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.046	0.004	0.01	0.01	mg/L
CM50294	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.038	0.004	0.01	0.01	mg/L
CM50294	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.038	0.004	0.01	0.01	mg/L
CM50294	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.038	0.004	0.01	0.01	mg/L
CM50295	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM50295	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50295	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50295	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	730	100	5	5	ug/L
CM50295	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	45	5.0	20	20	ug/L
CM50295	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	75	5.0	2	2	ug/L
CM50295	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	410	100	5	5	ug/L
CM50295	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM50295	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM50295	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM50295	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	730	100	5	5	ug/L
CM50295	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50295	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	410	100	5	5	ug/L
CM50295	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	75	5.0	2	2	ug/L
CM50295	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	45	5.0	20	20	ug/L
CM50295	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50295	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM50295	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM50295	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	75	5.0	2	2	ug/L
CM50295	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	45	5.0	20	20	ug/L
CM50295	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	410	100	50	50	ug/L
CM50295	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	730	100	5	5	ug/L
CM50295	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM50295	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	730	100	5	5	ug/L
CM50295	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM50295	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	410	100	5	5	ug/L
CM50295	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	75	5.0	2	2	ug/L
CM50295	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	45	5.0	20	20	ug/L
CM50295	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	75	5.0	2	2	ug/L
CM50295	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	410	100	50	50	ug/L
CM50295	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	730	100	5	5	ug/L
CM50295	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	16	0.20	0.3	0.3	ug/l

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50295	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	0.20	0.3	0.3	ug/l
CM50295	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	16	0.20	0.3	0.3	ug/l
CM50295	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM50295	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.728	0.001	0.43	0.43	mg/L
CM50295	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.748	0.001	0.43	0.43	mg/L
CM50296	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	140	5.0	2	2	ug/L
CM50296	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM50296	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50296	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50296	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	490	100	5	5	ug/L
CM50296	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	600	100	20	20	ug/L
CM50296	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	360	100	5	5	ug/L
CM50296	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM50296	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM50296	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM50296	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50296	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	360	100	5	5	ug/L
CM50296	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	5.0	2	2	ug/L
CM50296	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	490	100	5	5	ug/L
CM50296	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50296	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM50296	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	600	100	20	20	ug/L
CM50296	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM50296	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	490	100	5	5	ug/L
CM50296	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	360	100	50	50	ug/L
CM50296	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	5.0	2	2	ug/L
CM50296	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	600	100	20	20	ug/L
CM50296	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	140	5.0	2	2	ug/L
CM50296	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM50296	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM50296	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	600	100	70	70	ug/L
CM50296	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	360	100	5	5	ug/L
CM50296	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	490	100	5	5	ug/L
CM50296	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	490	100	5	5	ug/L
CM50296	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	360	100	50	50	ug/L
CM50296	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	600	100	20	20	ug/L
CM50296	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	140	5.0	2	2	ug/L
CM50296	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM50296	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	200	0.3	0.3	ug/L
CM50296	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	200	0.3	0.3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50297	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM50297	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM50297	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM50297	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	27	10	20	20	ug/L
CM50297	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	11	1.0	5	5	ug/L
CM50297	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	20	1.0	5	5	ug/L
CM50297	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	11	1.0	5	5	ug/L
CM50297	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM50297	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	27	10	20	20	ug/L
CM50297	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	20	1.0	5	5	ug/L
CM50297	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	11	1.0	5	5	ug/L
CM50297	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	27	10	20	20	ug/L
CM50297	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	20	1.0	5	5	ug/L
CM50297	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	11	1.0	5	5	ug/L
CM50297	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM50297	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	27	10	20	20	ug/L
CM50297	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	11	1.0	5	5	ug/L
CM50297	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM50297	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM50297	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM50298	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	130	100	5	5	ug/L
CM50298	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM50298	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	120	100	20	20	ug/L
CM50298	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.0075	0.0075	ug/L
CM50298	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00075	0.00075	ug/L
CM50298	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.47	0.47	ug/L
CM50298	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	240	100	5	5	ug/L
CM50298	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.0	0.00033	0.00033	ug/L
CM50298	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	240	100	5	5	ug/L
CM50298	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	100	5	5	ug/L
CM50298	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	120	100	20	20	ug/L
CM50298	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.50	0.02	0.02	ug/L
CM50298	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	120	100	20	20	ug/L
CM50298	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	100	50	50	ug/L
CM50298	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	240	100	5	5	ug/L
CM50298	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	120	100	70	70	ug/L
CM50298	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	100	5	5	ug/L
CM50298	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.50	0.02	0.02	ug/L
CM50298	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	240	100	5	5	ug/L
CM50298	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	100	50	50	ug/L
CM50298	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	120	100	20	20	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50298	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	240	100	5	5	ug/L
CM50298	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	80	0.3	0.3	ug/L
CM50298	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	80	0.3	0.3	ug/L
CM50298	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	80	0.3	0.3	ug/L
CM50298	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.07	0.001	0.43	0.43	mg/L
CM50298	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.01	0.001	0.43	0.43	mg/L
CM50299	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM50299	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM50299	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM50299	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM50299	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50299	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50299	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	710	100	5	5	ug/L
CM50299	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	710	100	5	5	ug/L
CM50299	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50299	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50299	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM50299	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM50299	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	710	100	50	50	ug/L
CM50299	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM50299	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	710	100	5	5	ug/L
CM50299	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM50299	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	710	100	50	50	ug/L
CM50299	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM50300	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2.5	0.00033	0.00033	ug/L
CM50300	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	650	100	5	5	ug/L
CM50300	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.6	0.6	ug/L
CM50300	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50300	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.47	0.47	ug/L
CM50300	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.0075	0.0075	ug/L
CM50300	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1.3	0.00075	0.00075	ug/L
CM50300	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50300	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM50300	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM50300	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	650	100	5	5	ug/L
CM50300	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM50300	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	650	100	50	50	ug/L
CM50300	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM50300	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	650	100	5	5	ug/L
CM50300	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50300	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	650	100	50	50	ug/L
CM50300	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	0.3	0.3	ug/L
CM50301	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	16	1.0	5	5	ug/L
CM50301	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	94	10	5	5	ug/L
CM50301	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM50301	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM50301	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM50301	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	1.0	5	5	ug/L
CM50301	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	94	10	5	5	ug/L
CM50301	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM50301	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	16	1.0	5	5	ug/L
CM50301	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	94	10	50	50	ug/L
CM50301	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM50301	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	16	1.0	5	5	ug/L
CM50301	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	94	10	5	5	ug/L
CM50301	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	16	1.0	5	5	ug/L
CM50301	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	94	10	50	50	ug/L
CM50301	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM50301	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM50301	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM50302	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	0.47	0.47	ug/L
CM50302	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	890	500	70	70	ug/L
CM50302	$8260GWR-WI	4-Methyl-2-pentanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1000	350	350	ug/L
CM50302	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1000	38	38	ug/L
CM50302	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	7	7	ug/L
CM50302	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	140	130	20	20	ug/L
CM50302	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	0.00075	0.00075	ug/L
CM50302	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	70	70	ug/L
CM50302	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	56	56	ug/L
CM50302	$8260GWR-WI	Chlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	250	0.00033	0.00033	ug/L
CM50302	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	4	4	ug/L
CM50302	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	3	3	ug/L
CM50302	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,3-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	0.0075	0.0075	ug/L
CM50302	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	3	3	ug/L
CM50302	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	60	60	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50302	$8260GWR-WI	Chloroform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	50	50	ug/L
CM50302	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	80	80	ug/L
CM50302	$8260GWR-WI	Toluene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	3300	500	1000	1000	ug/L
CM50302	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	39000	10000	5	5	ug/L
CM50302	$8260GWR-WI	Styrene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	Naphthalene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	250	140	140	ug/L
CM50302	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	250	5	5	ug/L
CM50302	$8260GWR-WI	Bromobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	62	62	ug/L
CM50302	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	1000	38	38	ug/L
CM50302	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	7	7	ug/L
CM50302	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	0.6	0.6	ug/L
CM50302	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	8.3	8.3	ug/L
CM50302	$8260GWR-WI	1,1,1-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1100	500	200	200	ug/L
CM50302	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	140000	10000	5	5	ug/L
CM50302	$8260GWR-WI	Bromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	83	83	ug/L
CM50302	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	0.47	0.47	ug/L
CM50302	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	130	70	70	ug/L
CM50302	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,3-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	3	3	ug/L
CM50302	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	0.02	0.02	ug/L
CM50302	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	250	100	100	ug/L
CM50302	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	70	70	ug/L
CM50302	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	530	500	7	7	ug/L
CM50302	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	890	500	70	70	ug/L
CM50302	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,1,1-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	1100	500	200	200	ug/L
CM50302	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1000	350	350	ug/L
CM50302	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	70	70	ug/L
CM50302	$8260GWR-WI	Chlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	Chloroform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	50	50	ug/L
CM50302	$8260GWR-WI	Styrene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	100	100	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50302	$8260GWR-WI	Toluene	MA / CMR 310.40.1600 / GW-1 (mg/l)	3300	500	1000	1000	ug/L
CM50302	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Naphthalene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	250	140	140	ug/L
CM50302	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140	130	20	20	ug/L
CM50302	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	80	80	ug/L
CM50302	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	250	5	5	ug/L
CM50302	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	39000	10000	5	5	ug/L
CM50302	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	0.5	0.5	ug/L
CM50302	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	7	7	ug/L
CM50302	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	3	3	ug/L
CM50302	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	0.6	0.6	ug/L
CM50302	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	140000	10000	5	5	ug/L
CM50302	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	0.5	0.5	ug/L
CM50302	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	130	4	4	ug/L
CM50302	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	530	500	80	80	ug/L
CM50302	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140	130	20	20	ug/L
CM50302	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	50	50	ug/L
CM50302	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	9	9	ug/L
CM50302	$8260GWR-WI	Chloroform	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	50	50	ug/L
CM50302	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	20	20	ug/L
CM50302	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	10	10	ug/L
CM50302	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	3	3	ug/L
CM50302	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	6	6	ug/L
CM50302	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	60	60	ug/L
CM50302	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	140000	10000	5	5	ug/L
CM50302	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	7	7	ug/L
CM50302	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	80	80	ug/L
CM50302	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	39000	10000	50	50	ug/L
CM50302	$8260GWR-WI	Styrene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	4-Methyl-2-pentanone	MA / GROUNDWATER STANDARDS / GW-1	ND	1000	350	350	ug/L
CM50302	$8260GWR-WI	Styrene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / GROUNDWATER STANDARDS / GW-1	ND	130	70	70	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50302	$8260GWR-WI	Naphthalene	MA / GROUNDWATER STANDARDS / GW-1	ND	250	140	140	ug/L
CM50302	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	250	5	5	ug/L
CM50302	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	0.6	0.6	ug/L
CM50302	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	39000	10000	5	5	ug/L
CM50302	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	Toluene	MA / GROUNDWATER STANDARDS / GW-1	3300	500	1000	1000	ug/L
CM50302	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140000	10000	5	5	ug/L
CM50302	$8260GWR-WI	1,3-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	10	10	ug/L
CM50302	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	130	4	4	ug/L
CM50302	$8260GWR-WI	Chlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	70	70	ug/L
CM50302	$8260GWR-WI	Chloroform	MA / GROUNDWATER STANDARDS / GW-1	ND	130	70	70	ug/L
CM50302	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	0.02	0.02	ug/L
CM50302	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	530	500	7	7	ug/L
CM50302	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	890	500	70	70	ug/L
CM50302	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	140	130	70	70	ug/L
CM50302	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	3	3	ug/L
CM50302	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	130	5	5	ug/L
CM50302	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	1,1,1-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	1100	500	200	200	ug/L
CM50302	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	7	7	ug/L
CM50302	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140000	10000	5	5	ug/L
CM50302	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	3	3	ug/L
CM50302	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	ND	130	80	80	ug/L
CM50302	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-2	ND	130	60	60	ug/L
CM50302	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	6	6	ug/L
CM50302	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	530	500	80	80	ug/L
CM50302	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	20	20	ug/L
CM50302	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	10	10	ug/L
CM50302	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	9	9	ug/L
CM50302	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	140	130	20	20	ug/L
CM50302	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-2	ND	130	50	50	ug/L
CM50302	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	5	5	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50302	$8260GWR-WI	Chloroform	MA / GROUNDWATER STANDARDS / GW-2	ND	130	50	50	ug/L
CM50302	$8260GWR-WI	Styrene	MA / GROUNDWATER STANDARDS / GW-2	ND	130	100	100	ug/L
CM50302	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	39000	10000	50	50	ug/L
CM50302	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	130	2	2	ug/L
CM50302	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-3	39000	10000	30000	30000	ug/L
CM50302	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	140000	10000	5000	5000	ug/L
CM50302	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	9.6	0.20	0.3	0.3	ug/l
CM50302	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.6	0.20	0.3	0.3	ug/l
CM50302	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	9.6	0.20	0.3	0.3	ug/l
CM50302	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	20000	0.3	0.3	ug/L
CM50303	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4900	1000	20	20	ug/L
CM50303	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.00075	0.00075	ug/L
CM50303	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.0075	0.0075	ug/L
CM50303	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	8.3	8.3	ug/L
CM50303	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	7	7	ug/L
CM50303	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.47	0.47	ug/L
CM50303	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.00033	0.00033	ug/L
CM50303	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	3	3	ug/L
CM50303	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	7	7	ug/L
CM50303	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	4	4	ug/L
CM50303	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	38	38	ug/L
CM50303	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.6	0.6	ug/L
CM50303	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	18000	1000	5	5	ug/L
CM50303	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	930	100	2	2	ug/L
CM50303	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	760	100	80	80	ug/L
CM50303	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.47	0.47	ug/L
CM50303	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	3	3	ug/L
CM50303	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	8600	1000	5	5	ug/L
CM50303	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	160	100	70	70	ug/L
CM50303	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	5	5	ug/L
CM50303	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	38	38	ug/L
CM50303	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50303	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	4	4	ug/L
CM50303	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	18000	1000	5	5	ug/L
CM50303	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CM50303	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	930	100	2	2	ug/L
CM50303	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4900	1000	20	20	ug/L
CM50303	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.6	0.6	ug/L
CM50303	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	760	100	80	80	ug/L
CM50303	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CM50303	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8600	1000	5	5	ug/L
CM50303	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CM50303	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CM50303	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	65	25	7	7	ug/L
CM50303	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CM50303	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.02	0.02	ug/L
CM50303	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	160	100	70	70	ug/L
CM50303	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	20	20	ug/L
CM50303	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	9	9	ug/L
CM50303	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	760	100	80	80	ug/L
CM50303	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8600	1000	50	50	ug/L
CM50303	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	7	7	ug/L
CM50303	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	6	6	ug/L
CM50303	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4900	1000	20	20	ug/L
CM50303	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	10	10	ug/L
CM50303	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	18000	1000	5	5	ug/L
CM50303	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	3	3	ug/L
CM50303	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	930	100	2	2	ug/L
CM50303	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	8600	1000	5	5	ug/L
CM50303	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	18000	1000	5	5	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50303	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	760	100	100	100	ug/L
CM50303	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	930	100	2	2	ug/L
CM50303	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CM50303	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	160	100	70	70	ug/L
CM50303	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	3	3	ug/L
CM50303	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.6	0.6	ug/L
CM50303	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	25	4	4	ug/L
CM50303	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	10	10	ug/L
CM50303	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4900	1000	70	70	ug/L
CM50303	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.02	0.02	ug/L
CM50303	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	65	25	7	7	ug/L
CM50303	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	7	7	ug/L
CM50303	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	3	3	ug/L
CM50303	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	20	20	ug/L
CM50303	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	18000	1000	5	5	ug/L
CM50303	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	9	9	ug/L
CM50303	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	10	10	ug/L
CM50303	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	930	100	2	2	ug/L
CM50303	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4900	1000	20	20	ug/L
CM50303	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	6	6	ug/L
CM50303	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	760	100	80	80	ug/L
CM50303	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	5	5	ug/L
CM50303	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	8600	1000	50	50	ug/L
CM50303	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CM50303	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	18000	1000	5000	5000	ug/L
CM50303	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	4000	0.3	0.3	ug/L
CM50303	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	4000	0.3	0.3	ug/L
CM50303	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	4000	0.3	0.3	ug/L
CM50304	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	7	7	ug/L
CM50304	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	7	7	ug/L
CM50304	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.00075	0.00075	ug/L
CM50304	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.00033	0.00033	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50304	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.0075	0.0075	ug/L
CM50304	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	260	100	80	80	ug/L
CM50304	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	8.3	8.3	ug/L
CM50304	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.47	0.47	ug/L
CM50304	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	3	3	ug/L
CM50304	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	4	4	ug/L
CM50304	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	3	3	ug/L
CM50304	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	38	38	ug/L
CM50304	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	200	38	38	ug/L
CM50304	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.47	0.47	ug/L
CM50304	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1700	100	20	20	ug/L
CM50304	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	5	5	ug/L
CM50304	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	190	100	70	70	ug/L
CM50304	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.6	0.6	ug/L
CM50304	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	260	100	2	2	ug/L
CM50304	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.6	0.6	ug/L
CM50304	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CM50304	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CM50304	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	7	7	ug/L
CM50304	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1700	100	20	20	ug/L
CM50304	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	5	5	ug/L
CM50304	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	4	4	ug/L
CM50304	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	65	25	7	7	ug/L
CM50304	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	260	100	2	2	ug/L
CM50304	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	190	100	70	70	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50304	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	260	100	80	80	ug/L
CM50304	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.02	0.02	ug/L
CM50304	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	0.5	0.5	ug/L
CM50304	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	3	3	ug/L
CM50304	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	3	3	ug/L
CM50304	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	20	20	ug/L
CM50304	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	10	10	ug/L
CM50304	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	260	100	80	80	ug/L
CM50304	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	9	9	ug/L
CM50304	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1700	100	20	20	ug/L
CM50304	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	6	6	ug/L
CM50304	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	260	100	2	2	ug/L
CM50304	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	26000	1000	50	50	ug/L
CM50304	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	7	7	ug/L
CM50304	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.6	0.6	ug/L
CM50304	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	260	100	100	100	ug/L
CM50304	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	50	5	5	ug/L
CM50304	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	260	100	2	2	ug/L
CM50304	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	190	100	70	70	ug/L
CM50304	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	0.02	0.02	ug/L
CM50304	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	3	3	ug/L
CM50304	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	25	4	4	ug/L
CM50304	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	10	10	ug/L
CM50304	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	25	2	2	ug/L

Monday, November 07, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM50288 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM50304	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	65	25	7	7	ug/L
CM50304	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1700	100	70	70	ug/L
CM50304	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	9	9	ug/L
CM50304	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	260	100	2	2	ug/L
CM50304	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	10	10	ug/L
CM50304	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1700	100	20	20	ug/L
CM50304	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	26000	1000	5	5	ug/L
CM50304	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	6	6	ug/L
CM50304	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	26000	1000	50	50	ug/L
CM50304	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	20	20	ug/L
CM50304	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	5	5	ug/L
CM50304	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	260	100	80	80	ug/L
CM50304	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	7	7	ug/L
CM50304	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	25	3	3	ug/L
CM50304	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	25	2	2	ug/L
CM50304	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	26000	1000	5000	5000	ug/L
CM50304	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	35	0.40	0.3	0.3	ug/l
CM50304	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	35	0.40	0.3	0.3	ug/l
CM50304	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	35	0.40	0.3	0.3	ug/l
CM50304	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	4000	0.3	0.3	ug/L
CM50304	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	4000	0.3	0.3	ug/L
CM50304	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	4000	0.3	0.3	ug/L
CM50304	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.11	0.001	0.43	0.43	mg/L
CM50304	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.22	0.010	0.43	0.43	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM50288, CM50289, CM50290, CM50291, CM50292, CM50293, CM50294, CM50295, CM50296, CM50297, CM50298, CM50299, CM50300, CM50301, CM50302, CM50303, CM50304

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

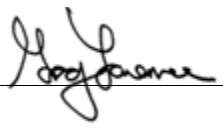
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Monday, November 07, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

SDG Comments

The client requested volatiles by 624 and semi-volatiles by 625. The RCP narrative is provided at the request of the client. The following analytes from the 6010 Metals list were not reported: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Volatile 8260 analysis:
1,4-Dioxane does not meet the GW-1. This compound is analyzed by method 522 or 8270SIM to achieve this criteria.

Not all requested reporting levels were achieved due to the presence of target and non target compounds. Please refer to the Sample Criteria Exceedances section of this report.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/10/22-1 Adam Werner, Chemist 10/10/22

CM50290 (1X), CM50292 (1X), CM50295 (1X), CM50299 (1X), CM50300 (1X), CM50302 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1010_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 10/14/22-1 Adam Werner, Chemist 10/14/22

CM50304 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1014_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

522 - DIOXANE

QC (Batch Specific):

Batch 646800 (CM58047)

CM50304

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

QC (Site Specific):

Batch 645824 (CM50292)

CM50290, CM50292, CM50295, CM50299, CM50300, CM50302

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/11/22-1 Greg Danielewski, Chemist 10/11/22

CM50292 , CM50295 , CM50298 , CM50304

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Site Specific):

Batch 646084 (CM50292)

CM50292, CM50295, CM50298, CM50304

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 646308 (CM50292)

CM50292, CM50295, CM50298, CM50304

All LCS recoveries were within 85 - 115 with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

Wet Chemistry Analysis

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 10/05/22-1 Brian Sheriden, Greg Danielewski, Chemist 10/05/22

CM50292 , CM50295 , CM50298 , CM50304

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 10/06/22-2 Brian Sheriden, Eric Geyer, Chemist 10/06/22

CM50295 , CM50298

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 645713 (CM50439)

CM50292, CM50295, CM50298, CM50304

All LCS recoveries were within 90 - 110 with the following exceptions: None.

QC (Site Specific):

Batch 645712 (CM50292)

CM50292

All LCS recoveries were within 90 - 110 with the following exceptions: None.
All MS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 10/18/22 12:26 Tina Hall, Chemist 10/18/22

CM50304

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

November 07, 2022

SDG I.D.: GCM50288

ICP Metals Narration

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/10/22 08:40 Cindy Pearce, Chemist 10/10/22

CM50292, CM50294, CM50295, CM50297, CM50298, CM50304

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/11/22 08:00 Cindy Pearce, Chemist 10/11/22

CM50292, CM50294, CM50295, CM50297, CM50298, CM50304

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Site Specific):

Batch 645566 (CM50292)

CM50292, CM50294, CM50295, CM50297, CM50298, CM50304

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645681 (CM50292)

CM50292, CM50294, CM50295, CM50297, CM50298, CM50304

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 75 - 125 with the following exceptions: None.
All MSD recoveries were within 75 - 125 with the following exceptions: None.
All MS/MSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646962 (Samples: CM50289, CM50290, CM50291, CM50293, CM50295, CM50297, CM50298): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, Hexachlorobutadiene, Naphthalene, n-Butylbenzene)

QC Batch 646964 (Samples: CM50296, CM50299, CM50300): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2,3-Trichlorobenzene, 1,2-Dibromo-3-chloropropane, Hexachlorobutadiene, Naphthalene, n-Butylbenzene)

QC Batch 647511 (Samples: CM50292): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (2-Hexanone, 4-Methyl-2-pentanone, Acetone, Ethyl tert-butyl ether, Methyl ethyl ketone, Methyl t-butyl ether (MTBE), tert-amyl methyl ether, Tetrahydrofuran (THF))

The MS/MSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Bromomethane, Hexachlorobutadiene)

The QC recovery for one analyte are above the upper range but was not reported in the sample(s), therefore no significant bias is suspected. (Naphthalene)

Instrument:

CHEM15 10/12/22-2 Harry Mullin, Chemist 10/12/22

CM50288 (1X), CM50291 (100X), CM50292 (100X), CM50295 (100X), CM50296 (100X), CM50298 (100X), CM50299 (100X), CM50300 (100X), CM50303 (100X), CM50304 (100X)

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1012_28-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2-Dichloroethane 22%H (20%), Bromomethane 30%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM17 10/13/22-1 Michael Hahn, Chemist 10/13/22

CM50289 (1X), CM50290 (1X), CM50291 (2X), CM50293 (1X), CM50295 (5X), CM50297 (1X), CM50298 (2X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

VOA Narration

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1013_02-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
88% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,1,2,2-Tetrachloroethane 21%H (20%), 1,2,3-Trichlorobenzene 29%H (20%), 1,2,4-Trichlorobenzene 25%H (20%), 2-Hexanone 25%H (20%), Bromomethane 30%L (20%), Dibromochloromethane 21%H (20%), Hexachlorobutadiene 27%H (20%), Methyl ethyl ketone 28%H (20%), n-Butylbenzene 24%H (20%), Naphthalene 31%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.037 (0.05), 2-Hexanone 0.079 (0.1), Acetone 0.040 (0.1), Bromoform 0.078 (0.1), Methyl ethyl ketone 0.077 (0.1), Tetrahydrofuran (THF) 0.042 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

CHEM17 10/14/22-1 Michael Hahn, Chemist 10/14/22

CM50296 (5X), CM50299 (5X), CM50300 (5X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1014_01-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
91% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2,3-Trichlorobenzene 29%H (20%), 1,2,4-Trichlorobenzene 27%H (20%), 1,2-Dibromo-3-chloropropane 29%H (20%), 2-Hexanone 24%H (20%), Bromomethane 38%L (20%), Hexachlorobutadiene 26%H (20%), n-Butylbenzene 24%H (20%), Naphthalene 33%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.040 (0.05), 2-Hexanone 0.078 (0.1), Acetone 0.039 (0.1), Bromoform 0.077 (0.1), Methyl ethyl ketone 0.068 (0.1), Tetrahydrofuran

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

VOA Narration

(THF) 0.040 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

CHEM17 10/15/22-1 Michael Hahn, Chemist 10/15/22

CM50297 (10X), CM50301 (1X), CM50302 (500X, 10000X), CM50303 (1000X), CM50304 (1000X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-101422):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 22% (20%), Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.034 (0.05), 2-Hexanone 0.072 (0.1), 4-Methyl-2-pentanone 0.094 (0.1), Acetone 0.041 (0.1), Bromoform 0.070 (0.1), Methyl ethyl ketone 0.067 (0.1), Tetrahydrofuran (THF) 0.044 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.034 (0.05), Acetone 0.041 (0.05), Tetrahydrofuran (THF) 0.044 (0.05)

Continuing Calibration Verification (CHEM17/1015_01-VT-101422) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
89% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,1,1-Trichloroethane 22%H (20%), Hexachlorobutadiene 21%H (20%), n-Butylbenzene 24%H (20%), p-Isopropyltoluene 22%H (20%), sec-Butylbenzene 21%H (20%), Trichlorotrifluoroethane 22%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.039 (0.05), 2-Hexanone 0.072 (0.1), 4-Methyl-2-pentanone 0.098 (0.1), Acetone 0.036 (0.1), Bromoform 0.080 (0.1), Methyl ethyl ketone 0.070 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.034 (0.05), Acetone 0.041 (0.05), Tetrahydrofuran (THF) 0.044 (0.05)

CHEM17 10/17/22-1 Michael Hahn, Chemist 10/17/22

CM50301 (10X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-101622):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM17/1017_02-VT-101622) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

VOA Narration

The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM17 10/17/22-2 Michael Hahn, Chemist 10/17/22

CM50292 (1X, 2X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-101622):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.062 (0.1), 4-Methyl-2-pentanone 0.080 (0.1), Acetone 0.035 (0.1), Bromoform 0.069 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.040 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.040 (0.05)

Continuing Calibration Verification (CHEM17/1017_31-VT-101622) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2,2-Tetrachloroethane 0.289 (0.3), 1,2-Dibromo-3-chloropropane 0.034 (0.05), 2-Hexanone 0.066 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.036 (0.1), Bromoform 0.076 (0.1), Methyl ethyl ketone 0.064 (0.1), Tetrahydrofuran (THF) 0.041 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.040 (0.05)

QC (Batch Specific):

Batch 646725 (CM51230) CHEM15 10/12/2022-2

CM50288(1X), CM50291(100X), CM50292(100X), CM50295(100X), CM50296(100X), CM50298(100X), CM50299(100X), CM50300(100X), CM50303(100X), CM50304(100X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646962 (CM60510) CHEM17 10/13/2022-1

CM50289(1X), CM50290(1X), CM50291(2X), CM50293(1X), CM50295(5X), CM50297(1X), CM50298(2X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(132%), Naphthalene(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(136%), 1,2,4-Trichlorobenzene(133%), 1,2-Dibromo-3-chloropropane(131%), Hexachlorobutadiene(132%), Naphthalene(139%), n-Butylbenzene(134%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

VOA Narration

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646964 (CM61588) CHEM17 10/14/2022-1

CM50296(5X), CM50299(5X), CM50300(5X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(134%), Naphthalene(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(135%), 1,2-Dibromo-3-chloropropane(132%), Hexachlorobutadiene(132%), Naphthalene(137%), n-Butylbenzene(131%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647344 (CM51232) CHEM17 10/15/2022-1

CM50297(10X), CM50301(1X), CM50302(500X, 10000X), CM50303(1000X), CM50304(1000X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647737 (CM61181) CHEM17 10/17/2022-1

CM50301(10X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 647511 (CM50292) CHEM17 10/17/2022-2

CM50292(2X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Naphthalene(132%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: 2-Hexanone(25.6%), 4-Methyl-2-pentanone(31.3%), Acetone(25.6%), Ethyl tert-butyl ether(23.8%), Methyl ethyl ketone(30.2%), Methyl t-butyl ether (MTBE)(24.6%), tert-amyl methyl ether(25.2%), Tetrahydrofuran (THF)(23.4%)
All MS recoveries were within 70 - 130 with the following exceptions: None.
All MSD recoveries were within 70 - 130 with the following exceptions: Naphthalene(133%)
All MS/MSD RPDs were less than 20% with the following exceptions: Bromomethane(34.6%), Hexachlorobutadiene(21.0%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

November 07, 2022

SDG I.D.: GCM50288

VOA Narration

The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.0 °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Date Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2318)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 10/5/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
50288	22A-TB01-100422-1	GW	10/4/2022	600	2							X									
50289	22A-AE109R1-100422-1	GW	10/4/2022	1350	3							X									
50290	22A-AE109R2-100422-1	GW	10/4/2022	1355	3	1						X	X								
50291	22A-AE109R4-100422-1	GW	10/4/2022	1400	3							X									
50292	22A-AE109R6-100422-1	GW	10/4/2022	1345	9	6		12				X	X				X	X	X	X	MS/MSD
50293	22A-AE109R8-100422-1	GW	10/4/2022	1405	3							X									
50294	22A-GZA10-100422-1	GW	10/4/2022	1430				2								X					
50295	22A-AE26R1-100522-1	GW	10/5/2022	1010	5	4		4				X	X	X	X	X	X	X	X	X	
50296	22A-AE26R4-100522-1	GW	10/5/2022	1135	3							X									
	~~22A-AE26R5-100522-1~~	~~GW~~	~~10/5/2022~~																		10/5/22
50297	22A-AE26S-100522-1	GW	10/5/2022	1335	3			2				X				X					
50298	22A-AE27R-100522-1	GW	10/5/2022	1645	3	1		4				X					X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/5/22	1552
[signature]	[signature]	10/5	1645

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
- ☐ Direct Exposure (Residential)
- ☐ GW
- ☐ Other

CT
- ☐ RCP Cert
- ☐ GW Protection
- ☐ SW Protection
- ☐ GA Mobility
- ☐ GB Mobility
- ☐ Residential DEC
- ☐ I/C DEC
- ☐ Other

MA
- X MCP (CAM Rpt)
- X GW-1
- X GW-2
- X GW-3
- ☐ S-1
- ☐ S-2
- ☐ S-3
- ☐ MWRA eSMART
- ☐ Other

State where samples were collected: MA

Data Format
- x PDF
- x AECOM EQuIS 4-File EDD format

Data Package
- ☐ Tier II Checklist
- ☐ Full Data Package*
- ☐ Phoenix Std Report
- ☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

Temp 2.6°C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: Dylan Potter
Client Sample - Information - Identification
Date: 10/5/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNF	Sulfide - Zn Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
50299	22A-AE24-100522-1	GW	10/5/2022	1015	3	1						X	X								
50300	22A-AE24-100522-2	GW	10/5/2022	1020	3	1						X	X								
50301	22A-AE23S-100522-1	GW	10/5/2022	1030	3							X									
50302	22A-AE23R-100522-1	GW	10/5/2022	1345	3	1						X	X								
50303	22A-AE28R1-100522-1	GW	10/5/2022	1015	3							X									
50304	22A-AE28R2-100522-1	GW	10/5/2022	1045	3	2		4				X	X				X	X	X	X	
~~50305~~	~~22A-AE28R3-100522-1~~	~~GW~~	~~10/5/2022~~																		(X) 10/5/22
~~50306~~	~~22A-AE28R4-100522-1~~	~~GW~~	~~10/5/2022~~																		(X) 10/5/22

Relinquished by:	Accepted by:	Date:	Time:
Dylan Potter	Dylan Potter	10/5/22	1:55
Dylan Potter	[illegible]	10/5	1645

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

State where samples were collected: MA

Rebecca Merz

From: Murphy, Tessa <Tessa.Murphy@aecom.com>
Sent: Thursday, October 6, 2022 9:28 AM
To: Rebecca Merz
Cc: Olson, Scott (Chelmsford); Herberich, Lori; Potter, Dylan (Chelmsford)
Subject: RE: Phoenix Labs - GCM50288, LOCKHEED-WILMINGTON MA 60688023.02.2 - COC Acknowledgement
Attachments: Field COC_Oct 05_Updated.pdf

Hi Rebecca,

Please see the following corrections for the sample acknowledgement form (also marked in attached PDF).

1. 22A-AE26R1-100522-1 does not need to be analyzed for EPH, VPH, or PAH.
2. 22A-AE23S-100522-1 should only be analyzed for VOCs.
3. 22A-AE28R1-100522-1 should only be analyzed for VOCs.

Thanks!

Tessa Murphy
Pronouns: *she, her, hers*
Entry Level Environmental Scientist
M +1-978-382-5209
tessa.murphy@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, United States
T +1-978-905-2100
aecom.com

From: SampleReceiving@phoenixlabs.com <SampleReceiving@phoenixlabs.com>
Sent: Wednesday, October 5, 2022 21:42
To: Murphy, Tessa <Tessa.Murphy@aecom.com>
Subject: Phoenix Labs - GCM50288, LOCKHEED-WILMINGTON MA 60688023.02.2 - COC Acknowledgement

This is an automated sample acknowledgement.

If you were issued a Phoenix Price Quote # for this SDG and it was not listed on the chain, please email client services with the quote number so we can ensure proper invoicing. If no quote was issued, no further action is required.

Purchase Order#: 148194

Samples Will Be Disposed After: 75 Days

GCM50288 Criteria:
GROUND WATER(17): MA GW1 (GW-1), MA GW2 (GW-2), MA GW3 (GW-3)

Please email client services only if you require criteria different than what is listed.

PHOENIX
Environmental Laboratories, Inc.

Friday, October 21, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: **LOCKHEED-WILMINGTON MA 60688023.02.2**
SDG ID: **GCM51230**
Sample ID#s: CM51230 - CM51250

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 21, 2022

SDG I.D.: GCM51230

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 21, 2022

SDG I.D.: GCM51230

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2

Client Id	Lab Id	Matrix
22A-TB01-100522-1	CM51230	GROUND WATER
22A-AE26R5-100522-1	CM51231	GROUND WATER
22A-AE28R3-100522-1	CM51232	GROUND WATER
22A-AE28R4-100522-1	CM51233	GROUND WATER
22A-AE110R1-100522-1	CM51234	GROUND WATER
22A-AE110R2-100522-1	CM51235	GROUND WATER
22A-AE110R5-100522-1	CM51236	GROUND WATER
22A-AE110R7-100522-1	CM51237	GROUND WATER
22A-STM8R-100622-1	CM51238	GROUND WATER
22A-STM8D-100622-1	CM51239	GROUND WATER
22A-STM8R1-100622-1	CM51240	GROUND WATER
22A-AE111R1-100622-1	CM51241	GROUND WATER
22A-AE111R2-100622-1	CM51242	GROUND WATER
22A-AE111R6-100622-1	CM51243	GROUND WATER
22A-AE112D-100622-1	CM51244	GROUND WATER
22A-AE109D-100622-1	CM51245	GROUND WATER
22A-GZA105R-100622-1	CM51246	GROUND WATER
22A-GZA105S-100622-1	CM51247	GROUND WATER
22A-AE112R1-100622-1	CM51248	GROUND WATER
22A-AE112R3-100622-1	CM51249	GROUND WATER
22A-AE112R5-100622-1	CM51250	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51230

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TB01-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51230

Client ID: 22A-TB01-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	93		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51230
Client ID: 22A-TB01-100522-1

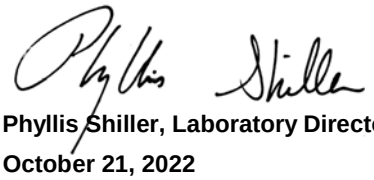
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51231

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethane	39	20	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethene	10	7.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/15/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/15/22	MH	SW8260C

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51231

Client ID: 22A-AE26R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	320	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/15/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Tetrachloroethene	1700	100	ug/L	100	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/15/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Trichloroethene	2000	100	ug/L	100	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Vinyl chloride	26	20	ug/L	20	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	95		%	20	10/15/22	MH	70 - 130 %
% Toluene-d8 (20x)	103		%	20	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	96		%	100	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	99		%	100	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51231
Client ID: 22A-AE26R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	100		%	100	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	21	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51232

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R3-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/11/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethane	58	50	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethene	16	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Hexanone	ND	100	ug/L	50	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51232

Client ID: 22A-AE28R3-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	1300	ug/L	50	10/11/22	MH	SW8260C
Benzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromodichloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromoform	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	13	ug/L	50	10/11/22	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	440	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromochloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	50	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methylene chloride	ND	25	ug/L	50	10/11/22	MH	SW8260C
Naphthalene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
o-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Styrene	ND	50	ug/L	50	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Tetrachloroethene	4400	250	ug/L	250	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/11/22	MH	SW8260C
Toluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	110	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Trichloroethene	4100	250	ug/L	250	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Vinyl chloride	550	50	ug/L	50	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	101		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	94		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	92		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	99		%	50	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (250x)	100		%	250	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (250x)	97		%	250	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51232
Client ID: 22A-AE28R3-100522-1

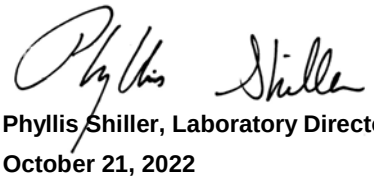
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (250x)	98		%	250	10/15/22	MH	70 - 130 %
% Toluene-d8 (250x)	98		%	250	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	15:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51233

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethane	84	50	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethene	24	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Hexanone	ND	100	ug/L	50	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/11/22	MH	SW8260C
Acetone	ND	1300	ug/L	50	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51233

Client ID: 22A-AE28R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromodichloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromoform	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	13	ug/L	50	10/11/22	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	790	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromochloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	50	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methylene chloride	ND	25	ug/L	50	10/11/22	MH	SW8260C
Naphthalene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
o-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Styrene	ND	50	ug/L	50	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Tetrachloroethene	6200	500	ug/L	500	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/11/22	MH	SW8260C
Toluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	130	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Trichloroethene	8700	500	ug/L	500	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Vinyl chloride	360	50	ug/L	50	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	102		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	96		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	93		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	103		%	50	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	100		%	500	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	95		%	500	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	96		%	500	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51233
Client ID: 22A-AE28R4-100522-1

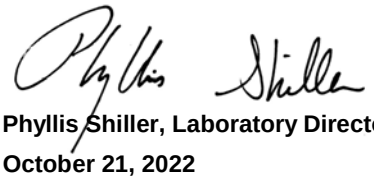
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	98		%	500	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51234

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51234

Client ID: 22A-AE110R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51234
Client ID: 22A-AE110R1-100522-1

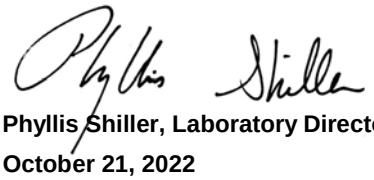
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

CM51234 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51235

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	4.3	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

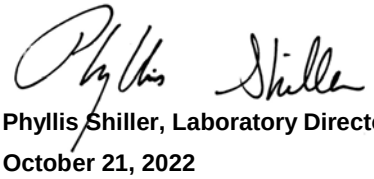
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51235
Client ID: 22A-AE110R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51236

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51236

Client ID: 22A-AE110R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	1.9	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

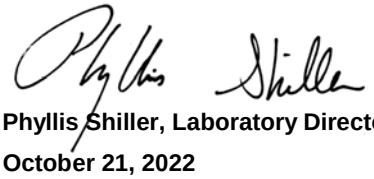
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51236
Client ID: 22A-AE110R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51237

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R7-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51237

Client ID: 22A-AE110R7-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	1.9	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

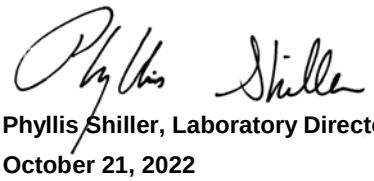
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51237
Client ID: 22A-AE110R7-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	2.0	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	82		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	9:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51238

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-STM8R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.113	0.011	mg/L	1	10/14/22	TH	SW6010D
Manganese (Dissolved)	0.566	0.001	mg/L	1	10/14/22	TH	SW6010D
Iron	0.260	0.010	mg/L	1	10/14/22	TH	SW6010D
Manganese	0.554	0.001	mg/L	1	10/14/22	TH	SW6010D
Chloride	119	10.0	mg/L	2	10/08/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/07/22 04:09	B/E/G	E300.0
Nitrate as Nitrogen	1.31	0.10	mg/L	2	10/08/22 05:22	BS/GD	E300.0
Sulfate	23.5	10.0	mg/L	2	10/08/22	BS/GD	E300.0
Sulfide	0.11	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.7	1.0	mg/L	1	10/10/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/06/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51238

Client ID: 22A-STM8R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	10	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.5	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	2.8	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51238
Client ID: 22A-STM8R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	12	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.64	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	10:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51239

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-STM8D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/19/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/19/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51239
Client ID: 22A-STM8D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/19/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
cis-1,2-Dichloroethene	6.9	1.0	ug/L	1	10/19/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.8	1.0	ug/L	1	10/19/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/19/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/19/22	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/19/22	MH	70 - 130 %
% Dibromofluoromethane	91		%	1	10/19/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/19/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/19/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51239
Client ID: 22A-STM8D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.29	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51240

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-STM8R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	0.011	0.004	mg/L	1	10/14/22	TH	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	10/14/22	TH	SW6010D
Manganese (Dissolved)	0.198	0.001	mg/L	1	10/14/22	TH	SW6010D
Iron	0.049	0.010	mg/L	1	10/14/22	TH	SW6010D
Manganese	0.208	0.001	mg/L	1	10/14/22	TH	SW6010D
Chloride	109	10.0	mg/L	2	10/08/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/07/22 04:19	B/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/07/22 04:19	B/E/G	E300.0
Sulfate	25.4	5.0	mg/L	1	10/07/22	B/E/G	E300.0
Sulfide	0.07	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.3	1.0	mg/L	1	10/10/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/06/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51240

Client ID: 22A-STM8R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C

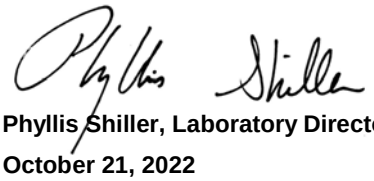
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51240
Client ID: 22A-STM8R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	2.1	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.29	0.20	ug/l	1	10/12/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	10/12/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51241

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE111R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51241

Client ID: 22A-AE111R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	1.5	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

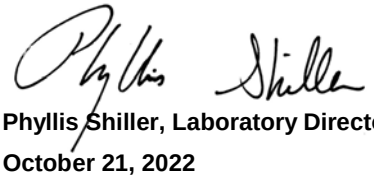
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51241
Client ID: 22A-AE111R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51242

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE111R2-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/16/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51242
Client ID: 22A-AE111R2-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	1.7	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	MH	SW8260C (OXY)

Ver 1

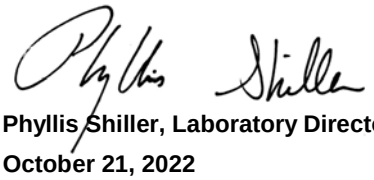
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51242
Client ID: 22A-AE111R2-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51243

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE111R6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51243
Client ID: 22A-AE111R6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

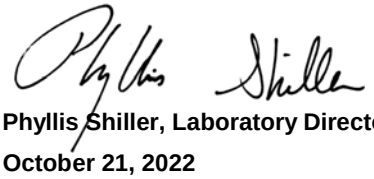
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51243
Client ID: 22A-AE111R6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	10:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51244

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/17/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/17/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/17/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/17/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/17/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/17/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/17/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/17/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Tetrachloroethene	1.1	1.0	ug/L	1	10/17/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/17/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/17/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/17/22	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/17/22	MH	70 - 130 %

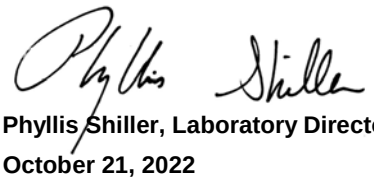
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51244
Client ID: 22A-AE112D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	92		%	1	10/17/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/17/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/17/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51245

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/17/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51245

Client ID: 22A-AE109D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
2-Hexanone	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
Acetone	ND	25	ug/L	1	10/15/22	HM	SW8260C	
Benzene	ND	0.70	ug/L	1	10/15/22	HM	SW8260C	
Bromobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C	
Bromoform	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Bromomethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chloroform	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chloromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	HM	SW8260C	
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C	
Dibromomethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	HM	SW8260C	
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Methylene chloride	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	B
Naphthalene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
o-Xylene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Styrene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	HM	SW8260C	
Toluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	HM	SW8260C	
Trichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	10/15/22	HM	70 - 130 %	
% Bromofluorobenzene	96		%	1	10/15/22	HM	70 - 130 %	

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51245
Client ID: 22A-AE109D-100622-1

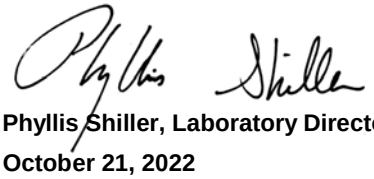
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	100		%	1	10/15/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/15/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/15/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	9:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51246

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA105R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,1-Dichloroethane	85	50	ug/L	50	10/12/22	HM	SW8260C
1,1-Dichloroethene	25	13	ug/L	50	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/12/22	HM	SW8260C
2-Hexanone	ND	100	ug/L	50	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/12/22	HM	SW8260C
Acetone	ND	1300	ug/L	50	10/12/22	HM	SW8260C

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51246

Client ID: 22A-GZA105R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Benzene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Bromobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Bromochloromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Bromodichloromethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Bromoform	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Bromomethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Carbon Disulfide	ND	250	ug/L	50	10/12/22	HM	SW8260C	
Carbon tetrachloride	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Chlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Chloroethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Chloroform	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Chloromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
cis-1,2-Dichloroethene	210	50	ug/L	50	10/12/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Dibromochloromethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Dibromomethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Dichlorodifluoromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Ethylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Hexachlorobutadiene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Isopropylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
m&p-Xylene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Methyl ethyl ketone	ND	100	ug/L	50	10/12/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Methylene chloride	ND	25	ug/L	50	10/12/22	HM	SW8260C	B
Naphthalene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
n-Butylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
n-Propylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
o-Xylene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
p-Isopropyltoluene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
sec-Butylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Styrene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
tert-Butylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Tetrachloroethene	5200	500	ug/L	500	10/16/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/12/22	HM	SW8260C	
Toluene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Trichloroethene	8000	500	ug/L	500	10/16/22	HM	SW8260C	
Trichlorofluoromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Vinyl chloride	ND	13	ug/L	50	10/12/22	HM	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4 (50x)	103		%	50	10/12/22	HM	70 - 130 %	
% Bromofluorobenzene (50x)	94		%	50	10/12/22	HM	70 - 130 %	
% Dibromofluoromethane (50x)	94		%	50	10/12/22	HM	70 - 130 %	
% Toluene-d8 (50x)	102		%	50	10/12/22	HM	70 - 130 %	
% 1,2-dichlorobenzene-d4 (500x)	98		%	500	10/16/22	HM	70 - 130 %	
% Bromofluorobenzene (500x)	96		%	500	10/16/22	HM	70 - 130 %	
% Dibromofluoromethane (500x)	103		%	500	10/16/22	HM	70 - 130 %	

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51246
Client ID: 22A-GZA105R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	99		%	500	10/16/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51247

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA105S-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.177	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	0.194	0.004	mg/L	1	10/17/22	TH	SW6010D
EPH Extraction	Completed				10/10/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/10/22	M/AL/K	SW3520C
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/06/22		MADEP EPH-19
	Completed				10/07/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51247

Client ID: 22A-GZA105S-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
2-Hexanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Acetone	ND	25	ug/L	1	10/16/22	HM	SW8260C	
Benzene	ND	0.70	ug/L	1	10/16/22	HM	SW8260C	
Bromobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Bromoform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Dibromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methylene chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	B
Naphthalene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
o-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Styrene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
tert-Butylbenzene	2.1	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	HM	SW8260C	
Toluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Trichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/16/22	HM	70 - 130 %
% Bromofluorobenzene	99		%	1	10/16/22	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	10/16/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/16/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.20	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/11/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/11/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/11/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	10/11/22	WB	40 - 140 %
% Nitrobenzene-d5	80		%	1	10/11/22	WB	40 - 140 %
% Terphenyl-d14	50		%	1	10/11/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	88		%	1	10/12/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	10/12/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	92		%	1	10/12/22	AW	40 - 140 %
% o-terphenyl (aromatic)	91		%	1	10/12/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51247

Client ID: 22A-GZA105S-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	310	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	210	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
o-Xylene	1.6	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	10/07/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	10/07/22	V	70 - 130 %

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51248

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Benzene	ND	0.70	ug/L	1	10/16/22	HM	SW8260C	
Bromobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Bromoform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Dibromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methylene chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	B
Naphthalene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
o-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Styrene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	HM	SW8260C	
Toluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Trichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	10/16/22	HM	70 - 130 %	
% Bromofluorobenzene	95		%	1	10/16/22	HM	70 - 130 %	
% Dibromofluoromethane	100		%	1	10/16/22	HM	70 - 130 %	
% Toluene-d8	101		%	1	10/16/22	HM	70 - 130 %	

Oxygenates& Dioxane

1,4-dioxane	ND	50	ug/L	1	10/16/22	HM	SW8260C (OXY)	
Diethyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)	

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51248

Client ID: 22A-AE112R1-100622-1

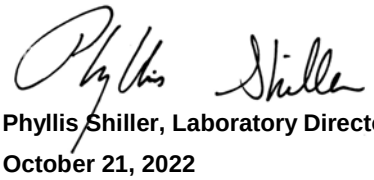
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51249

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112R3-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51249

Client ID: 22A-AE112R3-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	4.4	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

Ver 1

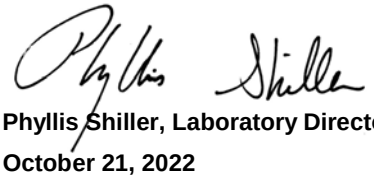
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51249
Client ID: 22A-AE112R3-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51250

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112R5-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	3.44	0.011	mg/L	1	10/17/22	TH	SW6010D
Manganese (Dissolved)	1.43	0.001	mg/L	1	10/17/22	TH	SW6010D
Iron	3.75	0.010	mg/L	1	10/14/22	TH	SW6010D
Manganese	1.39	0.001	mg/L	1	10/14/22	TH	SW6010D
Chloride	225	25.0	mg/L	5	10/08/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	10/08/22 02:49	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/07/22 04:29	B/E/G	E300.0
Sulfate	13.4	5.0	mg/L	1	10/07/22	B/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/10/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51250

Client ID: 22A-AE112R5-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	9.5	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51250
Client ID: 22A-AE112R5-100622-1

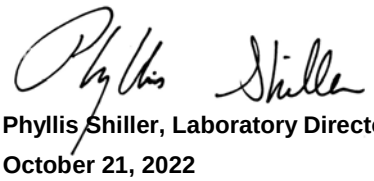
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	1.1	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 21, 2022

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645752 (mg/L), QC Sample No: CM50396 (CM51238, CM51240, CM51244, CM51245, CM51247, CM51250)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	99.2	100	0.8	105			80 - 120	20
Iron	BRL	0.010	0.280	0.277	1.10	98.9	99.3	0.4	99.9			80 - 120	20
Manganese	BRL	0.001	0.023	0.024	4.30	98.8	99.0	0.2	101			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645758 (mg/L), QC Sample No: CM50914 (CM51238, CM51240)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	85.4	85.8	0.5	92.1			80 - 120	20
Iron	BRL	0.011	0.914	0.896	2.00	89.2	89.2	0.0	92.5			80 - 120	20
Manganese	BRL	0.001	0.130	0.128	1.60	91.0	90.7	0.3	93.3			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 645989 (mg/L), QC Sample No: CM51244 (CM51244, CM51245, CM51247, CM51250)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	87.1	86.6	0.6	93.9			80 - 120	20
Iron	BRL	0.011	0.049	0.048	NC	89.8	88.3	1.7	90.2			80 - 120	20
Manganese	BRL	0.001	0.169	0.168	0.60	90.9	89.6	1.4	91.4			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 21, 2022

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 646308 (mg/L), QC Sample No: CM50292 (CM51238, CM51240, CM51250)													
Sulfide	BRL	0.05	0.10	0.11	NC	92.3			94.3			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 646283 (mg/L), QC Sample No: CM51122 (CM51238, CM51240, CM51250)													
Total Organic Carbon	BRL	1.0	3.5	3.6	NC	105			88.0			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 646161 (mg/L), QC Sample No: CM50468 (CM51238, CM51240)													
Chloride	BRL	5.0	10.4	10.2	NC	95.6			95.3			90 - 110	20
Sulfate	BRL	5.0	6.0	5.9	NC	93.7			92.5			90 - 110	20
QA/QC Batch 646346 (mg/L), QC Sample No: CM51229 (CM51238, CM51240, CM51250)													
Chloride	BRL	5.0	32.6	33.2	1.80	95.4			102			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.17	0.16	NC	97.8			104			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	97.1			109			90 - 110	20
Sulfate	BRL	5.0	5.4	5.3	NC	98.5			105			90 - 110	20
QA/QC Batch 646182 (mg/L), QC Sample No: CM52516 (CM51250)													
Chloride	BRL	5.0	10.2	10.0	NC	91.9			92.9			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	0.10	0.10	NC	91.3			91.7			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	101			103			90 - 110	20
Sulfate	BRL	5.0	<5.0	<5.0	NC	93.1			98.2			90 - 110	20
QA/QC Batch 646161 (mg/L), QC Sample No: CM50468 (CM51238, CM51240)													
Nitrate as Nitrogen	BRL	0.05	0.09	0.08	NC	95.3			98.9			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 21, 2022

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 646216 (ug/l), QC Sample No: CM51184 (CM51231, CM51237, CM51238, CM51239, CM51240)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	74	79	6.5	70			70 - 130	20	
% 1,4-dioxane-d8	74	%	76	70	8.2	85			70 - 130	20	
QA/QC Batch 646087 (ug/L), QC Sample No: CM49157 (CM51247)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	84	78	7.4				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	92	106	14.1				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	76	71	6.8				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
C9 - Nonane	ND	10	58	43	29.7				40 - 140	25	r
C-10 Decane	ND	10	70	59	17.1				40 - 140	25	
C12 - Dodecane	ND	10	82	75	8.9				40 - 140	25	
C14 - Tetradecane	ND	10	91	88	3.4				40 - 140	25	
C16 - Hexadecane	ND	10	97	96	1.0				40 - 140	25	
C18 - Octadecane	ND	10	108	109	0.9				40 - 140	25	
C19 - Nonadecane	ND	10	102	104	1.9				40 - 140	25	
C20 - Eicosane	ND	10	104	104	0.0				40 - 140	25	
C22 - Docosane	ND	10	106	107	0.9				40 - 140	25	
C24 - Tetracosane	ND	10	107	109	1.9				40 - 140	25	
C26 - Hexacosane	ND	10	104	108	3.8				40 - 140	25	
C28 - Octacosane	ND	10	99	106	6.8				40 - 140	25	
C30 - Tricotane	ND	10	89	104	15.5				40 - 140	25	
C36 - Hexatriacontane	ND	10	24	103	124.4				40 - 140	25	l,r
% 1-chlorooctadecane (aliphatic)	72	%	44	92	70.6				40 - 140	25	r
% o-terphenyl (aromatic)	77	%	42	74	55.2				40 - 140	25	r
% 2-Fluorobiphenyl (Fractionation)	78	%	80	72	10.5				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	77	%	69	63	9.1				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 646143 (ug/L), QC Sample No: CM50315 (CM51247)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	56	53	5.5				40 - 140	20	
Acenaphthene	ND	0.50	51	49	4.0				40 - 140	20	
Acenaphthylene	ND	0.10	44	42	4.7				40 - 140	20	
Anthracene	ND	0.10	49	46	6.3				40 - 140	20	
Benz(a)anthracene	ND	0.05	73	67	8.6				40 - 140	20	
Benzo(a)pyrene	ND	0.20	53	50	5.8				40 - 140	20	
Benzo(b)fluoranthene	ND	0.07	59	55	7.0				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	56	52	7.4				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(k)fluoranthene	ND	0.10	51	50	2.0				40 - 140	20	
Chrysene	ND	0.05	53	49	7.8				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	56	52	7.4				40 - 140	20	
Fluoranthene	ND	0.50	47	43	8.9				40 - 140	20	
Fluorene	ND	0.10	52	49	5.9				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.10	59	55	7.0				40 - 140	20	
Naphthalene	ND	0.50	56	52	7.4				40 - 140	20	
Phenanthrene	ND	0.06	58	55	5.3				40 - 140	20	
Pyrene	ND	0.07	54	50	7.7				40 - 140	20	
% 2-Fluorobiphenyl	44	%	47	45	4.3				40 - 140	20	
% Nitrobenzene-d5	53	%	58	55	5.3				40 - 140	20	
% Terphenyl-d14	42	%	49	42	15.4				40 - 140	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 647511 (ug/L), QC Sample No: CM50292 (CM51244)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	99	104	4.9	98	113	14.2	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	88	87	1.1	90	101	11.5	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	97	112	14.4	99	112	12.3	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	94	112	17.5	104	119	13.5	70 - 130	20	
1,1-Dichloroethane	ND	1.0	89	93	4.4	89	104	15.5	70 - 130	20	
1,1-Dichloroethene	ND	1.0	88	88	0.0	97	110	12.6	70 - 130	20	
1,1-Dichloropropene	ND	1.0	91	92	1.1	102	116	12.8	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	105	123	15.8	114	130	13.1	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	95	109	13.7	98	112	13.3	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	118	10.7	110	127	14.3	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	96	93	3.2	92	104	12.2	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	107	128	17.9	106	123	14.8	70 - 130	20	
1,2-Dibromoethane	ND	1.0	98	111	12.4	98	113	14.2	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	94	99	5.2	94	106	12.0	70 - 130	20	
1,2-Dichloroethane	ND	1.0	93	106	13.1	100	112	11.3	70 - 130	20	
1,2-Dichloropropane	ND	1.0	92	101	9.3	98	113	14.2	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	96	91	5.3	92	105	13.2	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	95	96	1.0	93	105	12.1	70 - 130	20	
1,3-Dichloropropane	ND	1.0	97	109	11.7	98	112	13.3	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	95	97	2.1	93	105	12.1	70 - 130	20	
1,4-dioxane	ND	100	101	102	1.0	92	106	14.1	40 - 160	20	
2,2-Dichloropropane	ND	1.0	91	98	7.4	97	110	12.6	70 - 130	20	
2-Chlorotoluene	ND	1.0	97	93	4.2	94	106	12.0	70 - 130	20	
2-Hexanone	ND	5.0	92	119	25.6	103	119	14.4	40 - 160	20	r
4-Chlorotoluene	ND	1.0	98	95	3.1	95	106	10.9	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	89	122	31.3	107	124	14.7	40 - 160	20	r
Acetone	ND	5.0	85	110	25.6	98	111	12.4	40 - 160	20	r
Benzene	ND	0.70	93	96	3.2	98	112	13.3	70 - 130	20	
Bromobenzene	ND	1.0	98	100	2.0	96	109	12.7	70 - 130	20	
Bromochloromethane	ND	1.0	91	104	13.3	95	109	13.7	70 - 130	20	
Bromodichloromethane	ND	0.50	92	106	14.1	101	115	13.0	70 - 130	20	
Bromoform	ND	1.0	96	114	17.1	101	116	13.8	70 - 130	20	
Bromomethane	ND	1.0	93	81	13.8	55	78	34.6	40 - 160	20	r
Carbon Disulfide	ND	1.0	86	85	1.2	88	100	12.8	70 - 130	20	

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbon tetrachloride	ND	1.0	85	87	2.3	96	108	11.8	70 - 130	20	
Chlorobenzene	ND	1.0	94	96	2.1	93	105	12.1	70 - 130	20	
Chloroethane	ND	1.0	86	87	1.2	90	103	13.5	70 - 130	20	
Chloroform	ND	1.0	90	92	2.2	94	99	5.2	70 - 130	20	
Chloromethane	ND	1.0	90	92	2.2	93	105	12.1	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	89	95	6.5	NC	NC	NC	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	96	110	13.6	104	118	12.6	70 - 130	20	
Dibromochloromethane	ND	0.50	98	111	12.4	100	115	14.0	70 - 130	20	
Dibromomethane	ND	1.0	97	114	16.1	106	120	12.4	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	84	87	3.5	104	117	11.8	40 - 160	20	
Di-isopropyl ether	ND	1.0	87	105	18.8	95	109	13.7	70 - 130	20	
Ethyl ether	ND	1.0	82	100	19.8	88	101	13.8	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	89	113	23.8	99	114	14.1	70 - 130	20	r
Ethylbenzene	ND	1.0	95	93	2.1	95	107	11.9	70 - 130	20	
Hexachlorobutadiene	ND	0.40	89	89	0.0	94	116	21.0	70 - 130	20	r
Isopropylbenzene	ND	1.0	96	89	7.6	95	107	11.9	70 - 130	20	
m&p-Xylene	ND	1.0	94	94	0.0	94	106	12.0	70 - 130	20	
Methyl ethyl ketone	ND	5.0	87	118	30.2	107	118	9.8	40 - 160	20	r
Methyl t-butyl ether (MTBE)	ND	1.0	89	114	24.6	98	116	16.8	70 - 130	20	r
Methylene chloride	ND	1.0	82	92	11.5	86	96	11.0	70 - 130	20	
Naphthalene	ND	1.0	110	132	18.2	116	133	13.7	70 - 130	20	l,m
n-Butylbenzene	ND	1.0	92	88	4.4	95	113	17.3	70 - 130	20	
n-Propylbenzene	ND	1.0	94	89	5.5	94	106	12.0	70 - 130	20	
o-Xylene	ND	1.0	95	95	0.0	94	106	12.0	70 - 130	20	
p-Isopropyltoluene	ND	1.0	93	88	5.5	93	107	14.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	91	87	4.5	94	108	13.9	70 - 130	20	
Styrene	ND	1.0	97	102	5.0	98	111	12.4	70 - 130	20	
tert-amyl methyl ether	ND	1.0	90	116	25.2	102	118	14.5	70 - 130	20	r
tert-Butylbenzene	ND	1.0	94	88	6.6	92	105	13.2	70 - 130	20	
Tetrachloroethene	ND	1.0	89	89	0.0	93	108	14.9	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	83	105	23.4	87	101	14.9	70 - 130	20	r
Toluene	ND	1.0	93	97	4.2	98	113	14.2	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	91	92	1.1	91	105	14.3	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	97	116	17.8	106	123	14.8	70 - 130	20	
Trichloroethene	ND	1.0	92	93	1.1	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	86	88	2.3	105	117	10.8	70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	78	80	2.5	97	110	12.6	70 - 130	20	
Vinyl chloride	ND	1.0	91	90	1.1	98	113	14.2	70 - 130	20	
% 1,2-dichlorobenzene-d4	102	%	99	102	3.0	102	102	0.0	70 - 130	20	
% Bromofluorobenzene	100	%	98	103	5.0	101	103	2.0	70 - 130	20	
% Dibromofluoromethane	91	%	92	93	1.1	89	90	1.1	70 - 130	20	
% Toluene-d8	100	%	100	100	0.0	103	104	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647343 (ug/L), QC Sample No: CM50906 (CM51245, CM51246 (500X) , CM51247, CM51248)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	106	112	5.5	106	89	17.4	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	109	116	6.2	119	102	15.4	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	91	101	10.4	93	79	16.3	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	99	108	8.7	105	89	16.5	70 - 130	20	

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1-Dichloroethane	ND	1.0	106	113	6.4	115	97	17.0	70 - 130	20
1,1-Dichloroethene	ND	1.0	116	124	6.7	129	112	14.1	70 - 130	20
1,1-Dichloropropene	ND	1.0	113	120	6.0	117	101	14.7	70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	104	114	9.2	86	81	6.0	70 - 130	20
1,2,3-Trichloropropane	ND	1.0	91	97	6.4	92	79	15.2	70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	110	117	6.2	94	88	6.6	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	103	109	5.7	94	85	10.1	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	85	96	12.2	81	70	14.6	70 - 130	20
1,2-Dibromoethane	ND	1.0	98	107	8.8	101	86	16.0	70 - 130	20
1,2-Dichlorobenzene	ND	1.0	101	108	6.7	93	84	10.2	70 - 130	20
1,2-Dichloroethane	ND	1.0	100	108	7.7	105	88	17.6	70 - 130	20
1,2-Dichloropropane	ND	1.0	101	110	8.5	110	93	16.7	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	104	112	7.4	96	86	11.0	70 - 130	20
1,3-Dichlorobenzene	ND	1.0	102	108	5.7	93	83	11.4	70 - 130	20
1,3-Dichloropropane	ND	1.0	102	109	6.6	105	87	18.8	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	103	108	4.7	93	84	10.2	70 - 130	20
1,4-dioxane	ND	100	99	104	4.9	101	89	12.6	40 - 160	20
2,2-Dichloropropane	ND	1.0	106	116	9.0	112	95	16.4	70 - 130	20
2-Chlorotoluene	ND	1.0	105	111	5.6	97	86	12.0	70 - 130	20
2-Hexanone	ND	5.0	77	87	12.2	77	64	18.4	40 - 160	20
4-Chlorotoluene	ND	1.0	104	112	7.4	97	90	7.5	70 - 130	20
4-Methyl-2-pentanone	ND	5.0	78	90	14.3	85	70	19.4	40 - 160	20
Acetone	ND	5.0	82	89	8.2	88	73	18.6	40 - 160	20
Benzene	ND	0.70	106	113	6.4	113	98	14.2	70 - 130	20
Bromobenzene	ND	1.0	103	113	9.3	103	90	13.5	70 - 130	20
Bromochloromethane	ND	1.0	108	116	7.1	111	95	15.5	70 - 130	20
Bromodichloromethane	ND	0.50	104	110	5.6	107	92	15.1	70 - 130	20
Bromoform	ND	1.0	106	113	6.4	103	86	18.0	70 - 130	20
Bromomethane	ND	1.0	112	125	11.0	64	71	10.4	40 - 160	20
Carbon Disulfide	ND	1.0	116	121	4.2	124	107	14.7	70 - 130	20
Carbon tetrachloride	ND	1.0	119	108	9.7	112	98	13.3	70 - 130	20
Chlorobenzene	ND	1.0	105	113	7.3	106	92	14.1	70 - 130	20
Chloroethane	ND	1.0	114	117	2.6	124	103	18.5	70 - 130	20
Chloroform	ND	1.0	107	116	8.1	114	95	18.2	70 - 130	20
Chloromethane	ND	1.0	106	109	2.8	109	94	14.8	40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	109	114	4.5	108	97	10.7	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	102	108	5.7	102	87	15.9	70 - 130	20
Dibromochloromethane	ND	0.50	104	111	6.5	105	89	16.5	70 - 130	20
Dibromomethane	ND	1.0	99	107	7.8	103	86	18.0	70 - 130	20
Dichlorodifluoromethane	ND	1.0	137	139	1.4	140	121	14.6	40 - 160	20
Di-isopropyl ether	ND	1.0	102	108	5.7	105	89	16.5	70 - 130	20
Ethyl ether	ND	1.0	99	105	5.9	105	88	17.6	70 - 130	20
Ethyl tert-butyl ether	ND	1.0	97	105	7.9	101	85	17.2	70 - 130	20
Ethylbenzene	ND	1.0	107	115	7.2	104	91	13.3	70 - 130	20
Hexachlorobutadiene	ND	0.40	117	123	5.0	105	96	9.0	70 - 130	20
Isopropylbenzene	ND	1.0	109	117	7.1	102	92	10.3	70 - 130	20
m&p-Xylene	ND	1.0	108	114	5.4	102	90	12.5	70 - 130	20
Methyl ethyl ketone	ND	5.0	81	94	14.9	86	70	20.5	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	95	102	7.1	98	82	17.8	70 - 130	20
Methylene chloride	1.0	1.0	103	109	5.7	108	93	14.9	70 - 130	20
Naphthalene	ND	1.0	92	99	7.3	78	72	8.0	70 - 130	20
n-Butylbenzene	ND	1.0	110	117	6.2	97	89	8.6	70 - 130	20
n-Propylbenzene	ND	1.0	106	112	5.5	97	88	9.7	70 - 130	20

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
o-Xylene	ND	1.0	104	112	7.4	101	87	14.9	70 - 130	20	
p-Isopropyltoluene	ND	1.0	110	119	7.9	100	90	10.5	70 - 130	20	
sec-Butylbenzene	ND	1.0	111	117	5.3	103	90	13.5	70 - 130	20	
Styrene	ND	1.0	108	117	8.0	105	90	15.4	70 - 130	20	
tert-amyl methyl ether	ND	1.0	93	101	8.2	97	83	15.6	70 - 130	20	
tert-Butylbenzene	ND	1.0	108	116	7.1	102	90	12.5	70 - 130	20	
Tetrachloroethene	ND	1.0	106	113	6.4	102	93	9.2	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	82	91	10.4	87	72	18.9	70 - 130	20	
Toluene	ND	1.0	105	113	7.3	109	95	13.7	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	109	115	5.4	115	101	13.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	101	107	5.8	102	87	15.9	70 - 130	20	
Trichloroethene	ND	1.0	108	114	5.4	113	97	15.2	70 - 130	20	
Trichlorofluoromethane	ND	1.0	129	136	5.3	143	123	15.0	70 - 130	20	l,m
Trichlorotrifluoroethane	ND	1.0	119	126	5.7	119	106	11.6	70 - 130	20	
Vinyl chloride	ND	1.0	122	127	4.0	131	114	13.9	70 - 130	20	m
% 1,2-dichlorobenzene-d4	98	%	98	99	1.0	98	97	1.0	70 - 130	20	
% Bromofluorobenzene	95	%	99	98	1.0	98	97	1.0	70 - 130	20	
% Dibromofluoromethane	101	%	104	103	1.0	99	99	0.0	70 - 130	20	
% Toluene-d8	101	%	100	101	1.0	100	100	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646725 (ug/L), QC Sample No: CM51230 (CM51230)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	100	107	6.8				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	106	111	4.6				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	99	105	5.9				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	100	106	5.8				70 - 130	20	
1,1-Dichloroethane	ND	1.0	111	117	5.3				70 - 130	20	
1,1-Dichloroethene	ND	1.0	103	108	4.7				70 - 130	20	
1,1-Dichloropropene	ND	1.0	101	107	5.8				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	96	106	9.9				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	100	109	8.6				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	98	108	9.7				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	101	111	9.4				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	84	89	5.8				70 - 130	20	
1,2-Dibromoethane	ND	1.0	101	108	6.7				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	102	110	7.5				70 - 130	20	
1,2-Dichloroethane	ND	1.0	114	120	5.1				70 - 130	20	
1,2-Dichloropropane	ND	1.0	106	112	5.5				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	103	110	6.6				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	104	111	6.5				70 - 130	20	
1,3-Dichloropropane	ND	1.0	106	112	5.5				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	103	110	6.6				70 - 130	20	
1,4-dioxane	ND	100	100	105	4.9				40 - 160	20	
2,2-Dichloropropane	ND	1.0	99	106	6.8				70 - 130	20	
2-Chlorotoluene	ND	1.0	104	114	9.2				70 - 130	20	
2-Hexanone	ND	5.0	84	91	8.0				40 - 160	20	
4-Chlorotoluene	ND	1.0	106	113	6.4				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	91	94	3.2				40 - 160	20	
Acetone	ND	5.0	101	106	4.8				40 - 160	20	

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzene	ND	0.70	104	111	6.5				70 - 130	20
Bromobenzene	ND	1.0	105	115	9.1				70 - 130	20
Bromochloromethane	ND	1.0	104	113	8.3				70 - 130	20
Bromodichloromethane	ND	0.50	93	100	7.3				70 - 130	20
Bromoform	ND	1.0	81	90	10.5				70 - 130	20
Bromomethane	ND	1.0	118	142	18.5				40 - 160	20
Carbon Disulfide	ND	1.0	91	95	4.3				70 - 130	20
Carbon tetrachloride	ND	1.0	101	102	1.0				70 - 130	20
Chlorobenzene	ND	1.0	107	111	3.7				70 - 130	20
Chloroethane	ND	1.0	113	117	3.5				70 - 130	20
Chloroform	ND	1.0	110	117	6.2				70 - 130	20
Chloromethane	ND	1.0	114	122	6.8				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	107	115	7.2				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	89	98	9.6				70 - 130	20
Dibromochloromethane	ND	0.50	90	98	8.5				70 - 130	20
Dibromomethane	ND	1.0	100	109	8.6				70 - 130	20
Dichlorodifluoromethane	ND	1.0	104	107	2.8				40 - 160	20
Di-isopropyl ether	ND	1.0	114	121	6.0				70 - 130	20
Ethyl ether	ND	1.0	104	109	4.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	102	108	5.7				70 - 130	20
Ethylbenzene	ND	1.0	105	113	7.3				70 - 130	20
Hexachlorobutadiene	ND	0.40	94	98	4.2				70 - 130	20
Isopropylbenzene	ND	1.0	100	110	9.5				70 - 130	20
m&p-Xylene	ND	1.0	104	111	6.5				70 - 130	20
Methyl ethyl ketone	ND	5.0	113	114	0.9				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	99	105	5.9				70 - 130	20
Methylene chloride	ND	1.0	95	100	5.1				70 - 130	20
Naphthalene	ND	1.0	91	100	9.4				70 - 130	20
n-Butylbenzene	ND	1.0	101	110	8.5				70 - 130	20
n-Propylbenzene	ND	1.0	102	109	6.6				70 - 130	20
o-Xylene	ND	1.0	101	109	7.6				70 - 130	20
p-Isopropyltoluene	ND	1.0	101	108	6.7				70 - 130	20
sec-Butylbenzene	ND	1.0	102	110	7.5				70 - 130	20
Styrene	ND	1.0	105	112	6.5				70 - 130	20
tert-amyl methyl ether	ND	1.0	92	96	4.3				70 - 130	20
tert-Butylbenzene	ND	1.0	102	111	8.5				70 - 130	20
Tetrachloroethene	ND	1.0	102	107	4.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	98	105	6.9				70 - 130	20
Toluene	ND	1.0	102	110	7.5				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	112	120	6.9				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	92	101	9.3				70 - 130	20
Trichloroethene	ND	1.0	104	111	6.5				70 - 130	20
Trichlorofluoromethane	ND	1.0	107	111	3.7				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	94	96	2.1				70 - 130	20
Vinyl chloride	ND	1.0	112	119	6.1				70 - 130	20
% 1,2-dichlorobenzene-d4	102	%	99	103	4.0				70 - 130	20
% Bromofluorobenzene	93	%	98	98	0.0				70 - 130	20
% Dibromofluoromethane	104	%	103	103	0.0				70 - 130	20
% Toluene-d8	97	%	96	98	2.1				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Comment:											
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.											
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%. The RPD criteria for the LCS/LCSD is 20%, The MS/MSD RPD criteria is listed above.											
QA/QC Batch 647344 (ug/L), QC Sample No: CM51232 (CM51231 (20X, 100X) , CM51232 (250X) , CM51233 (500X) , CM51234, CM51235, CM51236, CM51237, CM51238, CM51240, CM51241, CM51243)											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	111	113	1.8	104	112	7.4	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	119	122	2.5	128	135	5.3	70 - 130	20	m
1,1,2,2-Tetrachloroethane	ND	0.50	104	105	1.0	87	95	8.8	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	102	106	3.8	90	99	9.5	70 - 130	20	
1,1-Dichloroethane	ND	1.0	104	105	1.0	111	120	7.8	70 - 130	20	
1,1-Dichloroethene	ND	1.0	109	112	2.7	127	136	6.8	70 - 130	20	m
1,1-Dichloropropene	ND	1.0	114	119	4.3	128	137	6.8	70 - 130	20	m
1,2,3-Trichlorobenzene	ND	1.0	111	114	2.7	93	105	12.1	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	102	100	2.0	86	95	9.9	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	109	114	4.5	97	109	11.7	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	113	116	2.6	117	124	5.8	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	111	112	0.9	90	99	9.5	70 - 130	20	
1,2-Dibromoethane	ND	1.0	110	109	0.9	92	101	9.3	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	108	109	0.9	101	109	7.6	70 - 130	20	
1,2-Dichloroethane	ND	1.0	102	103	1.0	95	102	7.1	70 - 130	20	
1,2-Dichloropropane	ND	1.0	103	106	2.9	99	108	8.7	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	116	119	2.6	121	128	5.6	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	108	111	2.7	106	114	7.3	70 - 130	20	
1,3-Dichloropropane	ND	1.0	106	108	1.9	93	102	9.2	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	105	108	2.8	103	110	6.6	70 - 130	20	
1,4-dioxane	ND	100	108	101	6.7	95	105	10.0	40 - 160	20	
2,2-Dichloropropane	ND	1.0	113	118	4.3	110	117	6.2	70 - 130	20	
2-Chlorotoluene	ND	1.0	110	114	3.6	113	121	6.8	70 - 130	20	
2-Hexanone	ND	5.0	99	98	1.0	73	83	12.8	40 - 160	20	
4-Chlorotoluene	ND	1.0	111	114	2.7	113	120	6.0	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	98	99	1.0	70	78	10.8	40 - 160	20	
Acetone	ND	5.0	90	94	4.3	73	90	20.9	40 - 160	20	r
Benzene	ND	0.70	106	110	3.7	111	119	7.0	70 - 130	20	
Bromobenzene	ND	1.0	108	110	1.8	102	110	7.5	70 - 130	20	
Bromochloromethane	ND	1.0	104	103	1.0	98	107	8.8	70 - 130	20	
Bromodichloromethane	ND	0.50	107	111	3.7	100	108	7.7	70 - 130	20	
Bromoform	ND	1.0	114	113	0.9	94	106	12.0	70 - 130	20	
Bromomethane	ND	1.0	123	127	3.2	104	140	29.5	40 - 160	20	r
Carbon Disulfide	ND	1.0	101	102	1.0	116	123	5.9	70 - 130	20	
Carbon tetrachloride	ND	1.0	120	126	4.9	126	134	6.2	70 - 130	20	m
Chlorobenzene	ND	1.0	106	107	0.9	105	113	7.3	70 - 130	20	
Chloroethane	ND	1.0	102	103	1.0	118	125	5.8	70 - 130	20	
Chloroform	ND	1.0	99	108	8.7	107	115	7.2	70 - 130	20	
Chloromethane	ND	1.0	92	91	1.1	102	108	5.7	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	104	106	1.9	117	129	9.8	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	107	111	3.7	95	104	9.0	70 - 130	20	
Dibromochloromethane	ND	0.50	111	112	0.9	96	103	7.0	70 - 130	20	
Dibromomethane	ND	1.0	106	107	0.9	95	104	9.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	77	79	2.6	105	108	2.8	40 - 160	20	

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Di-isopropyl ether	ND	1.0	101	101	0.0	89	99	10.6	70 - 130	20	
Ethyl ether	ND	1.0	96	93	3.2	80	89	10.7	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	101	102	1.0	84	94	11.2	70 - 130	20	
Ethylbenzene	ND	1.0	112	114	1.8	117	125	6.6	70 - 130	20	
Hexachlorobutadiene	ND	0.40	123	124	0.8	124	132	6.3	70 - 130	20	m
Isopropylbenzene	ND	1.0	116	121	4.2	124	132	6.3	70 - 130	20	m
m&p-Xylene	ND	1.0	111	113	1.8	117	124	5.8	70 - 130	20	
Methyl ethyl ketone	ND	5.0	100	101	1.0	74	83	11.5	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	103	102	1.0	80	92	14.0	70 - 130	20	
Methylene chloride	ND	1.0	92	94	2.2	91	98	7.4	70 - 130	20	
Naphthalene	ND	1.0	110	112	1.8	87	99	12.9	70 - 130	20	
n-Butylbenzene	ND	1.0	126	128	1.6	132	142	7.3	70 - 130	20	m
n-Propylbenzene	ND	1.0	115	119	3.4	123	131	6.3	70 - 130	20	m
o-Xylene	ND	1.0	109	112	2.7	110	118	7.0	70 - 130	20	
p-Isopropyltoluene	ND	1.0	122	124	1.6	129	138	6.7	70 - 130	20	m
sec-Butylbenzene	ND	1.0	122	126	3.2	132	140	5.9	70 - 130	20	m
Styrene	ND	1.0	111	113	1.8	108	116	7.1	70 - 130	20	
tert-amyl methyl ether	ND	1.0	102	105	2.9	83	92	10.3	70 - 130	20	
tert-Butylbenzene	ND	1.0	118	122	3.3	127	136	6.8	70 - 130	20	m
Tetrachloroethene	ND	1.0	112	115	2.6	NC	NC	NC	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	103	98	5.0	71	76	6.8	70 - 130	20	
Toluene	ND	1.0	107	112	4.6	113	120	6.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	105	106	0.9	119	129	8.1	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	109	111	1.8	89	98	9.6	70 - 130	20	
Trichloroethene	ND	1.0	106	111	4.6	NC	NC	NC	70 - 130	20	
Trichlorofluoromethane	ND	1.0	113	115	1.8	137	143	4.3	70 - 130	20	m
Trichlorotrifluoroethane	ND	1.0	108	111	2.7	127	137	7.6	70 - 130	20	m
Vinyl chloride	ND	1.0	104	106	1.9	148	161	8.4	70 - 130	20	m
% 1,2-dichlorobenzene-d4	100	%	99	100	1.0	98	99	1.0	70 - 130	20	
% Bromofluorobenzene	96	%	99	99	0.0	97	98	1.0	70 - 130	20	
% Dibromofluoromethane	92	%	110	109	0.9	99	98	1.0	70 - 130	20	
% Toluene-d8	99	%	100	101	1.0	104	104	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646560 (ug/L), QC Sample No: CM51233 (CM51232 (50X) , CM51233 (50X) , CM51246 (50X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	116	110	5.3				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	95	93	2.1				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	118	109	7.9				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	108	99	8.7				70 - 130	20	
1,1-Dichloroethane	ND	1.0	99	95	4.1				70 - 130	20	
1,1-Dichloroethene	ND	1.0	98	95	3.1				70 - 130	20	
1,1-Dichloropropene	ND	1.0	104	104	0.0				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	128	119	7.3				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	115	114	0.9				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	124	116	6.7				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	114	112	1.8				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	132	114	14.6				70 - 130	20	I
1,2-Dibromoethane	ND	1.0	116	107	8.1				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	112	108	3.6				70 - 130	20	

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichloroethane	ND	1.0	107	99	7.8				70 - 130	20
1,2-Dichloropropane	ND	1.0	102	98	4.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	112	0.0				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	111	108	2.7				70 - 130	20
1,3-Dichloropropane	ND	1.0	115	108	6.3				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	112	110	1.8				70 - 130	20
1,4-dioxane	ND	100	108	100	7.7				40 - 160	20
2,2-Dichloropropane	ND	1.0	94	90	4.3				70 - 130	20
2-Chlorotoluene	ND	1.0	113	112	0.9				70 - 130	20
2-Hexanone	ND	5.0	115	101	13.0				40 - 160	20
4-Chlorotoluene	ND	1.0	114	113	0.9				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	112	95	16.4				40 - 160	20
Acetone	ND	5.0	108	93	14.9				40 - 160	20
Benzene	ND	0.70	102	99	3.0				70 - 130	20
Bromobenzene	ND	1.0	113	110	2.7				70 - 130	20
Bromochloromethane	ND	1.0	105	97	7.9				70 - 130	20
Bromodichloromethane	ND	0.50	107	100	6.8				70 - 130	20
Bromoform	ND	1.0	115	107	7.2				70 - 130	20
Bromomethane	ND	1.0	95	97	2.1				40 - 160	20
Carbon Disulfide	ND	1.0	92	91	1.1				70 - 130	20
Carbon tetrachloride	ND	1.0	97	98	1.0				70 - 130	20
Chlorobenzene	ND	1.0	107	105	1.9				70 - 130	20
Chloroethane	ND	1.0	97	96	1.0				70 - 130	20
Chloroform	ND	1.0	98	92	6.3				70 - 130	20
Chloromethane	ND	1.0	88	86	2.3				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	102	102	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	106	100	5.8				70 - 130	20
Dibromochloromethane	ND	0.50	119	110	7.9				70 - 130	20
Dibromomethane	ND	1.0	111	101	9.4				70 - 130	20
Dichlorodifluoromethane	ND	1.0	83	82	1.2				40 - 160	20
Di-isopropyl ether	ND	1.0	105	97	7.9				70 - 130	20
Ethyl ether	ND	1.0	102	90	12.5				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	108	97	10.7				70 - 130	20
Ethylbenzene	ND	1.0	108	108	0.0				70 - 130	20
Hexachlorobutadiene	ND	0.40	110	107	2.8				70 - 130	20
Isopropylbenzene	ND	1.0	111	112	0.9				70 - 130	20
m&p-Xylene	ND	1.0	108	107	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	117	103	12.7				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	109	97	11.7				70 - 130	20
Methylene chloride	ND	1.0	94	88	6.6				70 - 130	20
Naphthalene	ND	1.0	132	120	9.5				70 - 130	20
n-Butylbenzene	ND	1.0	117	115	1.7				70 - 130	20
n-Propylbenzene	ND	1.0	112	112	0.0				70 - 130	20
o-Xylene	ND	1.0	107	106	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	113	0.0				70 - 130	20
sec-Butylbenzene	ND	1.0	113	112	0.9				70 - 130	20
Styrene	ND	1.0	112	109	2.7				70 - 130	20
tert-amyl methyl ether	ND	1.0	109	98	10.6				70 - 130	20
tert-Butylbenzene	ND	1.0	112	111	0.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	96	84	13.3				70 - 130	20
Toluene	ND	1.0	102	99	3.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	98	96	2.1				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	110	101	8.5				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Trichlorofluoromethane	ND	1.0	97	95	2.1				70 - 130	20	
Trichlorotrifluoroethane	ND	1.0	88	84	4.7				70 - 130	20	
Vinyl chloride	ND	1.0	98	98	0.0				70 - 130	20	
% 1,2-dichlorobenzene-d4	103	%	102	101	1.0				70 - 130	20	
% Bromofluorobenzene	95	%	97	96	1.0				70 - 130	20	
% Dibromofluoromethane	94	%	93	91	2.2				70 - 130	20	
% Toluene-d8	95	%	97	97	0.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647576 (ug/L), QC Sample No: CM51242 (CM51242, CM51249, CM51250)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	99	1.0	97	99	2.0	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	122	124	1.6	124	122	1.6	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	113	110	2.7	114	114	0.0	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	104	104	0.0	103	105	1.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	113	120	6.0	116	118	1.7	70 - 130	20	
1,1-Dichloroethene	ND	1.0	124	136	9.2	129	127	1.6	70 - 130	20	l
1,1-Dichloropropene	ND	1.0	153	129	17.0	129	126	2.4	70 - 130	20	l
1,2,3-Trichlorobenzene	ND	1.0	109	113	3.6	108	109	0.9	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	111	110	0.9	119	121	1.7	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	109	2.8	104	106	1.9	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	110	112	1.8	108	110	1.8	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	92	88	4.4	92	93	1.1	70 - 130	20	
1,2-Dibromoethane	ND	1.0	107	105	1.9	106	107	0.9	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	113	3.6	109	111	1.8	70 - 130	20	
1,2-Dichloroethane	ND	1.0	124	108	13.8	122	124	1.6	70 - 130	20	
1,2-Dichloropropane	ND	1.0	101	104	2.9	101	104	2.9	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	114	116	1.7	111	114	2.7	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	108	109	0.9	105	107	1.9	70 - 130	20	
1,3-Dichloropropane	ND	1.0	113	110	2.7	111	113	1.8	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	110	112	1.8	107	110	2.8	70 - 130	20	
1,4-dioxane	ND	100	110	110	0.0	109	114	4.5	40 - 160	20	
2,2-Dichloropropane	ND	1.0	110	114	3.6	84	84	0.0	70 - 130	20	
2-Chlorotoluene	ND	1.0	110	112	1.8	107	112	4.6	70 - 130	20	
2-Hexanone	ND	5.0	103	98	5.0	100	100	0.0	40 - 160	20	
4-Chlorotoluene	ND	1.0	110	113	2.7	107	111	3.7	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	98	3.0	101	102	1.0	40 - 160	20	
Acetone	ND	5.0	111	118	6.1	115	117	1.7	40 - 160	20	
Benzene	ND	0.70	129	115	11.5	128	134	4.6	70 - 130	20	m
Bromobenzene	ND	1.0	108	107	0.9	105	107	1.9	70 - 130	20	
Bromochloromethane	ND	1.0	101	109	7.6	102	106	3.8	70 - 130	20	
Bromodichloromethane	ND	0.50	100	100	0.0	98	101	3.0	70 - 130	20	
Bromoform	ND	1.0	91	88	3.4	87	90	3.4	70 - 130	20	
Bromomethane	ND	1.0	114	124	8.4	121	119	1.7	40 - 160	20	
Carbon Disulfide	ND	1.0	108	117	8.0	109	106	2.8	70 - 130	20	
Carbon tetrachloride	ND	1.0	113	116	2.6	118	116	1.7	70 - 130	20	
Chlorobenzene	ND	1.0	110	111	0.9	101	103	2.0	70 - 130	20	
Chloroethane	ND	1.0	120	126	4.9	128	121	5.6	70 - 130	20	
Chloroform	ND	1.0	113	121	6.8	115	117	1.7	70 - 130	20	

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Chloromethane	ND	1.0	118	120	1.7	123	119	3.3	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	112	120	6.9	113	118	4.3	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	94	95	1.1	87	89	2.3	70 - 130	20	
Dibromochloromethane	ND	0.50	99	96	3.1	94	97	3.1	70 - 130	20	
Dibromomethane	ND	1.0	107	108	0.9	106	106	0.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	147	146	0.7	148	141	4.8	40 - 160	20	
Di-isopropyl ether	ND	1.0	98	106	7.8	100	101	1.0	70 - 130	20	
Ethyl ether	ND	1.0	100	106	5.8	101	101	0.0	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	98	104	5.9	101	102	1.0	70 - 130	20	
Ethylbenzene	ND	1.0	114	114	0.0	112	114	1.8	70 - 130	20	
Hexachlorobutadiene	ND	0.40	113	113	0.0	104	106	1.9	70 - 130	20	
Isopropylbenzene	ND	1.0	112	113	0.9	111	112	0.9	70 - 130	20	
m&p-Xylene	ND	1.0	114	115	0.9	113	114	0.9	70 - 130	20	
Methyl ethyl ketone	ND	5.0	148	111	28.6	120	111	7.8	40 - 160	20	r
Methyl t-butyl ether (MTBE)	ND	1.0	104	111	6.5	105	106	0.9	70 - 130	20	
Methylene chloride	ND	1.0	105	117	10.8	107	108	0.9	70 - 130	20	
Naphthalene	ND	1.0	109	108	0.9	108	109	0.9	70 - 130	20	
n-Butylbenzene	ND	1.0	124	126	1.6	120	120	0.0	70 - 130	20	
n-Propylbenzene	ND	1.0	115	115	0.0	111	114	2.7	70 - 130	20	
o-Xylene	ND	1.0	106	106	0.0	104	105	1.0	70 - 130	20	
p-Isopropyltoluene	ND	1.0	116	117	0.9	113	113	0.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	120	121	0.8	119	119	0.0	70 - 130	20	
Styrene	ND	1.0	112	110	1.8	107	112	4.6	70 - 130	20	
tert-amyl methyl ether	ND	1.0	108	97	10.7	106	109	2.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	114	115	0.9	112	114	1.8	70 - 130	20	
Tetrachloroethene	ND	1.0	108	109	0.9	105	105	0.0	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	114	111	2.7	110	111	0.9	70 - 130	20	
Toluene	ND	1.0	107	110	2.8	102	104	1.9	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	113	124	9.3	114	116	1.7	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	93	93	0.0	87	88	1.1	70 - 130	20	
Trichloroethene	ND	1.0	109	109	0.0	109	109	0.0	70 - 130	20	
Trichlorofluoromethane	ND	1.0	146	152	4.0	150	145	3.4	70 - 130	20	l,m
Trichlorotrifluoroethane	ND	1.0	125	132	5.4	128	121	5.6	70 - 130	20	l
Vinyl chloride	ND	1.0	135	134	0.7	137	134	2.2	70 - 130	20	l,m
% 1,2-dichlorobenzene-d4	100	%	98	100	2.0	101	100	1.0	70 - 130	20	
% Bromofluorobenzene	95	%	98	96	2.1	98	97	1.0	70 - 130	20	
% Dibromofluoromethane	95	%	98	102	4.0	97	97	0.0	70 - 130	20	
% Toluene-d8	98	%	96	97	1.0	96	97	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 648045 (ug/L), QC Sample No: CM61519 (CM51239)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	109	117	7.1				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	102	108	5.7				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	113	119	5.2				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	110	124	12.0				70 - 130	20	
1,1-Dichloroethane	ND	1.0	99	104	4.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	99	103	4.0				70 - 130	20	
1,1-Dichloropropene	ND	1.0	101	108	6.7				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	120	129	7.2				70 - 130	20	

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2,3-Trichloropropane	ND	1.0	110	118	7.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	119	126	5.7				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	103	106	2.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	121	129	6.4				70 - 130	20
1,2-Dibromoethane	ND	1.0	112	120	6.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	103	110	6.6				70 - 130	20
1,2-Dichloroethane	ND	1.0	105	119	12.5				70 - 130	20
1,2-Dichloropropane	ND	1.0	102	114	11.1				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	103	107	3.8				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	103	108	4.7				70 - 130	20
1,3-Dichloropropane	ND	1.0	109	120	9.6				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	103	108	4.7				70 - 130	20
1,4-dioxane	ND	100	111	112	0.9				40 - 160	20
2,2-Dichloropropane	ND	1.0	102	106	3.8				70 - 130	20
2-Chlorotoluene	ND	1.0	103	108	4.7				70 - 130	20
2-Hexanone	ND	5.0	109	119	8.8				40 - 160	20
4-Chlorotoluene	ND	1.0	104	108	3.8				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	112	125	11.0				40 - 160	20
Acetone	ND	5.0	107	118	9.8				40 - 160	20
Benzene	ND	0.70	102	110	7.5				70 - 130	20
Bromobenzene	ND	1.0	106	112	5.5				70 - 130	20
Bromochloromethane	ND	1.0	107	117	8.9				70 - 130	20
Bromodichloromethane	ND	0.50	107	120	11.5				70 - 130	20
Bromoform	ND	1.0	111	122	9.4				70 - 130	20
Bromomethane	ND	1.0	87	94	7.7				40 - 160	20
Carbon Disulfide	ND	1.0	91	97	6.4				70 - 130	20
Carbon tetrachloride	ND	1.0	106	114	7.3				70 - 130	20
Chlorobenzene	ND	1.0	102	108	5.7				70 - 130	20
Chloroethane	ND	1.0	96	99	3.1				70 - 130	20
Chloroform	ND	1.0	102	110	7.5				70 - 130	20
Chloromethane	ND	1.0	91	97	6.4				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	100	107	6.8				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	109	121	10.4				70 - 130	20
Dibromochloromethane	ND	0.50	111	120	7.8				70 - 130	20
Dibromomethane	ND	1.0	113	125	10.1				70 - 130	20
Dichlorodifluoromethane	ND	1.0	91	95	4.3				40 - 160	20
Di-isopropyl ether	ND	1.0	105	113	7.3				70 - 130	20
Ethyl ether	ND	1.0	101	108	6.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	109	120	9.6				70 - 130	20
Ethylbenzene	ND	1.0	102	108	5.7				70 - 130	20
Hexachlorobutadiene	ND	0.40	108	115	6.3				70 - 130	20
Isopropylbenzene	ND	1.0	102	106	3.8				70 - 130	20
m&p-Xylene	ND	1.0	103	107	3.8				70 - 130	20
Methyl ethyl ketone	ND	5.0	109	127	15.3				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	111	122	9.4				70 - 130	20
Methylene chloride	ND	1.0	93	102	9.2				70 - 130	20
Naphthalene	ND	1.0	123	135	9.3				70 - 130	20
n-Butylbenzene	ND	1.0	108	113	4.5				70 - 130	20
n-Propylbenzene	ND	1.0	102	106	3.8				70 - 130	20
o-Xylene	ND	1.0	105	109	3.7				70 - 130	20
p-Isopropyltoluene	ND	1.0	104	108	3.8				70 - 130	20
sec-Butylbenzene	ND	1.0	104	107	2.8				70 - 130	20
Styrene	ND	1.0	108	114	5.4				70 - 130	20

QA/QC Data

SDG I.D.: GCM51230

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
tert-amyl methyl ether	ND	1.0	108	122	12.2				70 - 130	20
tert-Butylbenzene	ND	1.0	102	106	3.8				70 - 130	20
Tetrachloroethene	ND	1.0	99	107	7.8				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	111	125	11.9				70 - 130	20
Toluene	ND	1.0	103	112	8.4				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	99	104	4.9				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	114	128	11.6				70 - 130	20
Trichloroethene	ND	1.0	100	107	6.8				70 - 130	20
Trichlorofluoromethane	ND	1.0	104	108	3.8				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	96	99	3.1				70 - 130	20
Vinyl chloride	ND	1.0	98	104	5.9				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	102	102	0.0				70 - 130	20
% Bromofluorobenzene	99	%	102	102	0.0				70 - 130	20
% Dibromofluoromethane	108	%	105	107	1.9				70 - 130	20
% Toluene-d8	98	%	100	101	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646125 (ug/L), QC Sample No: CM50973 (CM51247)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	98	102	4.0				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	97	99	2.0				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	98	102	4.0				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	97	99	2.0				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	103	106	2.9				70 - 130	25
Benzene	ND	1.0	98	102	4.0				70 - 130	25
Ethyl Benzene	ND	1.0	98	101	3.0				70 - 130	25
MTBE	ND	1.0	104	105	1.0				70 - 130	25
Naphthalene	ND	5.0	104	103	1.0				70 - 130	25
Toluene	ND	1.0	99	103	4.0				70 - 130	25
m,p-Xylenes	ND	2.0	100	104	3.9				70 - 130	25
o-Xylene	ND	1.0	97	100	3.0				70 - 130	25
% 2,5-Dibromotoluene (PID)	83	%	94	96	2.1				70 - 130	25
% 2,5-Dibromotoluene (FID)	88	%	97	97	0.0				70 - 130	25

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 21, 2022

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51230	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51230	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51230	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51230	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51230	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51230	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51230	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM51230	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM51231	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM51231	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	5	5	ug/L
CM51231	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM51231	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	38	38	ug/L
CM51231	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	3	3	ug/L
CM51231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	320	20	20	20	ug/L
CM51231	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.6	0.6	ug/L
CM51231	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.00075	0.00075	ug/L
CM51231	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM51231	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2000	100	5	5	ug/L
CM51231	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	4	4	ug/L
CM51231	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	10	0.00033	0.00033	ug/L
CM51231	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1700	100	5	5	ug/L
CM51231	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.47	0.47	ug/L
CM51231	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	26	20	2	2	ug/L
CM51231	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	5.0	0.0075	0.0075	ug/L
CM51231	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM51231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	320	20	20	20	ug/L
CM51231	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.6	0.6	ug/L
CM51231	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM51231	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.5	0.5	ug/L
CM51231	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2000	100	5	5	ug/L
CM51231	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	26	20	2	2	ug/L
CM51231	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1700	100	5	5	ug/L
CM51231	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	10	7.0	7	7	ug/L
CM51231	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	0.02	0.02	ug/L
CM51231	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L
CM51231	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	3	3	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51231	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	4	4	ug/L
CM51231	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2000	100	5	5	ug/L
CM51231	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1700	100	50	50	ug/L
CM51231	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	26	20	2	2	ug/L
CM51231	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	3	3	ug/L
CM51231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	320	20	20	20	ug/L
CM51231	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	10	7.0	7	7	ug/L
CM51231	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	26	20	2	2	ug/L
CM51231	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	1700	100	5	5	ug/L
CM51231	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	2000	100	5	5	ug/L
CM51231	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	3	3	ug/L
CM51231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	320	20	70	70	ug/L
CM51231	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	4	4	ug/L
CM51231	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.02	0.02	ug/L
CM51231	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	5.0	0.6	0.6	ug/L
CM51231	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM51231	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	3	3	ug/L
CM51231	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	5.0	2	2	ug/L
CM51231	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	320	20	20	20	ug/L
CM51231	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	1700	100	50	50	ug/L
CM51231	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	26	20	2	2	ug/L
CM51231	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	2000	100	5	5	ug/L
CM51231	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	21	0.20	0.3	0.3	ug/l
CM51231	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	21	0.20	0.3	0.3	ug/l
CM51231	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	21	0.20	0.3	0.3	ug/l
CM51231	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	800	0.3	0.3	ug/L
CM51232	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM51232	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.0075	0.0075	ug/L
CM51232	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM51232	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM51232	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.6	0.6	ug/L
CM51232	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	8.3	8.3	ug/L
CM51232	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM51232	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51232	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	4	4	ug/L
CM51232	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM51232	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.00033	0.00033	ug/L
CM51232	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4100	250	5	5	ug/L
CM51232	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM51232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	440	50	20	20	ug/L
CM51232	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	4400	250	5	5	ug/L
CM51232	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L
CM51232	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	110	50	80	80	ug/L
CM51232	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	550	50	2	2	ug/L
CM51232	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM51232	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.00075	0.00075	ug/L
CM51232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	4	4	ug/L
CM51232	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	7	7	ug/L
CM51232	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4100	250	5	5	ug/L
CM51232	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	440	50	20	20	ug/L
CM51232	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	550	50	2	2	ug/L
CM51232	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM51232	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	50	80	80	ug/L
CM51232	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.6	0.6	ug/L
CM51232	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	4400	250	5	5	ug/L
CM51232	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM51232	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM51232	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.02	0.02	ug/L
CM51232	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	16	13	7	7	ug/L
CM51232	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L
CM51232	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51232	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	50	80	80	ug/L
CM51232	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	3	3	ug/L
CM51232	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	9	9	ug/L
CM51232	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4400	250	50	50	ug/L
CM51232	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	10	10	ug/L
CM51232	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	6	6	ug/L
CM51232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	440	50	20	20	ug/L
CM51232	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	7	7	ug/L
CM51232	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	4100	250	5	5	ug/L
CM51232	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	550	50	2	2	ug/L
CM51232	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	4400	250	5	5	ug/L
CM51232	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	4100	250	5	5	ug/L
CM51232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	550	50	2	2	ug/L
CM51232	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	50	100	100	ug/L
CM51232	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM51232	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	16	13	7	7	ug/L
CM51232	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	3	3	ug/L
CM51232	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.6	0.6	ug/L
CM51232	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	13	4	4	ug/L
CM51232	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	10	10	ug/L
CM51232	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	440	50	70	70	ug/L
CM51232	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.02	0.02	ug/L
CM51232	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	4100	250	5	5	ug/L
CM51232	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	550	50	2	2	ug/L
CM51232	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	5	5	ug/L
CM51232	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	7	7	ug/L
CM51232	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	9	9	ug/L
CM51232	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	3	3	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51232	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	10	10	ug/L
CM51232	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	4400	250	50	50	ug/L
CM51232	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	440	50	20	20	ug/L
CM51232	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM51232	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	6	6	ug/L
CM51232	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	50	80	80	ug/L
CM51232	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM51232	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2000	0.3	0.3	ug/L
CM51232	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CM51232	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CM51233	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L
CM51233	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.0075	0.0075	ug/L
CM51233	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM51233	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM51233	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM51233	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L
CM51233	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.6	0.6	ug/L
CM51233	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM51233	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM51233	$8260GWR-WI	trans-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	130	50	80	80	ug/L
CM51233	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	790	50	20	20	ug/L
CM51233	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.00033	0.00033	ug/L
CM51233	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	8.3	8.3	ug/L
CM51233	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM51233	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	4	4	ug/L
CM51233	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.00075	0.00075	ug/L
CM51233	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	8700	500	5	5	ug/L
CM51233	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	360	50	2	2	ug/L
CM51233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	84	50	70	70	ug/L
CM51233	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	6200	500	5	5	ug/L
CM51233	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM51233	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	7	7	ug/L
CM51233	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51233	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM51233	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	4	4	ug/L
CM51233	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	84	50	70	70	ug/L
CM51233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	790	50	20	20	ug/L
CM51233	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM51233	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	130	50	80	80	ug/L
CM51233	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	360	50	2	2	ug/L
CM51233	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	6200	500	5	5	ug/L
CM51233	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.6	0.6	ug/L
CM51233	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM51233	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8700	500	5	5	ug/L
CM51233	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L
CM51233	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	24	13	7	7	ug/L
CM51233	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L
CM51233	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.02	0.02	ug/L
CM51233	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8700	500	5	5	ug/L
CM51233	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	360	50	2	2	ug/L
CM51233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	9	9	ug/L
CM51233	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	6200	500	50	50	ug/L
CM51233	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	3	3	ug/L
CM51233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	790	50	20	20	ug/L
CM51233	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	10	10	ug/L
CM51233	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	7	7	ug/L
CM51233	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	6	6	ug/L
CM51233	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	130	50	80	80	ug/L
CM51233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	130	50	100	100	ug/L
CM51233	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	6200	500	5	5	ug/L
CM51233	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51233	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	13	4	4	ug/L
CM51233	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	10	10	ug/L
CM51233	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.6	0.6	ug/L
CM51233	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	3	3	ug/L
CM51233	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.02	0.02	ug/L
CM51233	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	84	50	70	70	ug/L
CM51233	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	24	13	7	7	ug/L
CM51233	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM51233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	790	50	70	70	ug/L
CM51233	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8700	500	5	5	ug/L
CM51233	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	360	50	2	2	ug/L
CM51233	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	3	3	ug/L
CM51233	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	5	5	ug/L
CM51233	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	790	50	20	20	ug/L
CM51233	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM51233	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	9	9	ug/L
CM51233	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	7	7	ug/L
CM51233	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	6	6	ug/L
CM51233	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	10	10	ug/L
CM51233	$8260GWR-WI	trans-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	130	50	80	80	ug/L
CM51233	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	360	50	2	2	ug/L
CM51233	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	6200	500	50	50	ug/L
CM51233	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8700	500	5	5	ug/L
CM51233	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	8700	500	5000	5000	ug/L
CM51233	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2000	0.3	0.3	ug/L
CM51233	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CM51233	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CM51234	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51234	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51234	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51234	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51234	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51234	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51234	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51234	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM51235	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51235	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51235	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51235	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51235	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51235	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51235	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM51235	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM51236	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51236	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51236	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51236	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51236	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51236	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51236	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM51236	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM51237	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51237	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51237	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51237	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51237	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51237	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	2.0	0.20	0.3	0.3	ug/l
CM51237	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.0	0.20	0.3	0.3	ug/l
CM51237	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	2.0	0.20	0.3	0.3	ug/l
CM51237	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51238	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51238	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51238	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	12	1.0	5	5	ug/L
CM51238	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51238	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	12	1.0	5	5	ug/L
CM51238	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51238	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	12	1.0	5	5	ug/L
CM51238	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	12	1.0	5	5	ug/L
CM51238	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51238	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	12	1.0	5	5	ug/L
CM51238	$DIOX_LDL	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.64	0.20	0.3	0.3	ug/l
CM51238	$DIOX_LDL	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.64	0.20	0.3	0.3	ug/l
CM51238	$DIOX_LDL	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	0.64	0.20	0.3	0.3	ug/l

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51238	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51238	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.566	0.001	0.43	0.43	mg/L
CM51238	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.554	0.001	0.43	0.43	mg/L
CM51239	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51239	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51239	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51239	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51239	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51239	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51240	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51240	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51240	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51240	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51240	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51240	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51240	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.011	0.004	0.01	0.01	mg/L
CM51240	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.011	0.004	0.01	0.01	mg/L
CM51240	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.011	0.004	0.01	0.01	mg/L
CM51241	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51241	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51241	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51241	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51241	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51241	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51241	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM51241	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM51242	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51242	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51242	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51242	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51242	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51242	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM51242	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM51242	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM51243	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51243	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51243	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51243	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51243	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51243	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51243	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM51243	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM51244	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51244	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51244	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51244	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51244	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51244	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	40	0.3	0.3	ug/L
CM51244	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	0.3	0.3	ug/L
CM51244	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	40	0.3	0.3	ug/L
CM51245	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51245	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51245	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51245	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51245	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51245	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM51245	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM51245	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM51246	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM51246	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	5	5	ug/L
CM51246	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM51246	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.00075	0.00075	ug/L
CM51246	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	25	0.00033	0.00033	ug/L
CM51246	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	8000	500	5	5	ug/L
CM51246	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	4	4	ug/L
CM51246	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L
CM51246	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	3	3	ug/L
CM51246	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	5200	500	5	5	ug/L
CM51246	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM51246	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	7	7	ug/L
CM51246	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	210	50	20	20	ug/L
CM51246	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	100	38	38	ug/L
CM51246	$8260GWR-WI	1,1-Dichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	85	50	70	70	ug/L
CM51246	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51246	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.47	0.47	ug/L
CM51246	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	8.3	8.3	ug/L
CM51246	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.6	0.6	ug/L
CM51246	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	13	0.0075	0.0075	ug/L
CM51246	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM51246	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	210	50	20	20	ug/L
CM51246	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	25	5	5	ug/L
CM51246	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	7	7	ug/L
CM51246	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	5200	500	5	5	ug/L
CM51246	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.6	0.6	ug/L
CM51246	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	4	4	ug/L
CM51246	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L
CM51246	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	25	13	7	7	ug/L
CM51246	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8000	500	5	5	ug/L
CM51246	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.02	0.02	ug/L
CM51246	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	1,1-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	85	50	70	70	ug/L
CM51246	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	0.5	0.5	ug/L
CM51246	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	3	3	ug/L
CM51246	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	210	50	20	20	ug/L
CM51246	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	10	10	ug/L
CM51246	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	9	9	ug/L
CM51246	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	7	7	ug/L
CM51246	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8000	500	5	5	ug/L
CM51246	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	6	6	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51246	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	13	3	3	ug/L
CM51246	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	5200	500	50	50	ug/L
CM51246	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8000	500	5	5	ug/L
CM51246	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	25	5	5	ug/L
CM51246	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	5200	500	5	5	ug/L
CM51246	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.6	0.6	ug/L
CM51246	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	0.02	0.02	ug/L
CM51246	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,1-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	85	50	70	70	ug/L
CM51246	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	25	13	7	7	ug/L
CM51246	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	3	3	ug/L
CM51246	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	210	50	70	70	ug/L
CM51246	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	13	4	4	ug/L
CM51246	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-1	ND	13	10	10	ug/L
CM51246	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8000	500	5	5	ug/L
CM51246	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	10	10	ug/L
CM51246	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	9	9	ug/L
CM51246	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	13	2	2	ug/L
CM51246	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	7	7	ug/L
CM51246	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	210	50	20	20	ug/L
CM51246	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	5	5	ug/L
CM51246	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	5200	500	50	50	ug/L
CM51246	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	6	6	ug/L
CM51246	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	13	3	3	ug/L
CM51246	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	8000	500	5000	5000	ug/L
CM51246	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	2000	0.3	0.3	ug/L
CM51246	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CM51246	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L
CM51247	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM51247	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51247	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51247	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51247	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51247	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM51247	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM51247	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM51247	AS-WM	Arsenic	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.177	0.004	0.01	0.01	mg/L
CM51247	AS-WM	Arsenic	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.177	0.004	0.01	0.01	mg/L
CM51247	AS-WM	Arsenic	MA / GROUNDWATER STANDARDS / GW-1	0.177	0.004	0.01	0.01	mg/L
CM51247	D-AS	Arsenic (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	0.194	0.004	0.01	0.01	mg/L
CM51247	D-AS	Arsenic (Dissolved)	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.194	0.004	0.01	0.01	mg/L
CM51247	D-AS	Arsenic (Dissolved)	MA / GROUNDWATER STANDARDS / GW-1	0.194	0.004	0.01	0.01	mg/L
CM51248	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51248	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51248	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51248	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51248	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51248	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM51248	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM51248	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM51249	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51249	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51249	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51249	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51249	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51249	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM51249	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM51249	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM51250	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.00075	0.00075	ug/L
CM51250	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.50	0.00033	0.00033	ug/L
CM51250	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	0.25	0.0075	0.0075	ug/L
CM51250	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM51250	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM51250	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	ND	50	0.3	0.3	ug/L
CM51250	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM51250	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM51250	D-MN	Manganese (Dissolved)	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.43	0.001	0.43	0.43	mg/L
CM51250	MN-WM	Manganese	MA / Client Specified Criteria / LOCKHEED-WILMINGTO	1.39	0.001	0.43	0.43	mg/L

Friday, October 21, 2022

Criteria: MA: GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM51230 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LOCKHEED-WILMINGTON MA 6068802 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM51230, CM51231, CM51232, CM51233, CM51234, CM51235, CM51236, CM51237, CM51238, CM51239, CM51240, CM51241, CM51242, CM51243, CM51244, CM51245, CM51246, CM51247, CM51248, CM51249, CM51250

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

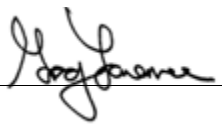
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Friday, October 21, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

SDG Comments

Metals Analysis:
The client requested a site specific list of elements which is shorter than the 6010 RCP list.

Sample(s) required a dilution for Volatiles due to the presence of target and/or non-target compounds. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

8260 Volatile Organics:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

8270 Semi-volatile Organics:
The client requested a short list for 8270 RCP Semivolatile. Only the 1,4-Dioxane is reported as requested on the chain-of-custody.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/11/22-2 Adam Werner, Chemist 10/11/22

CM51231 (1X), CM51237 (1X), CM51238 (1X), CM51239 (1X), CM51240 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1011_35-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 646216 (CM51184)

CM51231, CM51237, CM51238, CM51239, CM51240

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646087 (Samples: CM51247): -----

The LCS recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C36 - Hexatriacontane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes and two surrogate. No significant variability is suspected. (C36 - Hexatriacontane, C9 - Nonane, % 1-chlorooctadecane (aliphatic), % o-terphenyl (aromatic))

Instrument:

AU-FID4 10/11/22-1 Adam Werner, Chemist 10/11/22

CM51247 (1X)

The initial calibration (AL1010AI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 646087 (CM49157)

CM51247

All LCS recoveries were within 40 - 140 with the following exceptions: C36 - Hexatriacontane(24%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: % 1-chlorooctadecane (aliphatic)(70.6%), % o-terphenyl (aromatic)(55.2%), C36 - Hexatriacontane(124.4%), C9 - Nonane(29.7%)
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/11/22-1 Greg Danielewski, Chemist 10/11/22

CM51238 , CM51240 , CM51250

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 646283 (CM51122)

CM51238, CM51240, CM51250

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 646308 (CM50292)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

Wet Chemistry Analysis

CM51238, CM51240, CM51250

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 10/06/22-2 Brian Sheriden, Eric Geyer, Chemist 10/06/22

CM51238 , CM51240 , CM51250

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 10/07/22-1 Brian Sheriden, Greg Danielewski, Chemist 10/07/22

CM51238 , CM51240

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

IC 10/07/22-2 Brian Sheriden, Greg Danielewski, Chemist 10/07/22

CM51250

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 646161 (CM50468)

CM51238, CM51240

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 646182 (CM52516)

CM51250

All LCS recoveries were within 90 - 110 with the following exceptions: None.

Batch 646346 (CM51229)

CM51238, CM51240, CM51250

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

IC

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 10/14/22 08:33 Tina Hall, Chemist 10/14/22

CM51238, CM51240

Additional criteria for CCV and ICSAB:
Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB).The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/14/22 08:37 Tina Hall, Chemist 10/14/22

CM51238, CM51240, CM51244, CM51245, CM51247, CM51250

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/17/22 11:32 Tina Hall, Chemist 10/17/22

CM51244, CM51245, CM51247, CM51250

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 645752 (CM50396)

CM51238, CM51240, CM51244, CM51245, CM51247, CM51250

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645758 (CM50914)

CM51238, CM51240

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

October 21, 2022

SDG I.D.: GCM51230

ICP Metals Narration

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 645989 (CM51244)

CM51244, CM51245, CM51247, CM51250

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM27 10/11/22-2 Wes Bryon, Chemist 10/11/22

CM51247 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0808):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/1011_22-27_BNSIM18_0808) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 646143 (CM50315)

CM51247

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

SVOASIM Narration

VOA Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646560 (Samples: CM51232, CM51233, CM51246): -----

The LCS recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2-Dibromo-3-chloropropane, Naphthalene)

QC Batch 647343 (Samples: CM51245, CM51246, CM51247, CM51248): -----

A trace amount of an analyte was found in blank but was not reported in the sample(s), therefore no bias is suspected. (Methylene chloride)

The QC recovery for one analyte is above the upper range but was not reported in the sample(s). No significant bias is suspected. (Trichlorofluoromethane)

QC Batch 647344 (Samples: CM51231, CM51232, CM51233, CM51234, CM51235, CM51236, CM51237, CM51238, CM51240, CM51241, CM51243): -----

The MS and/or the MSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,1,1-Trichloroethane, 1,1-Dichloropropene, Carbon tetrachloride, Hexachlorobutadiene, Isopropylbenzene, n-Butylbenzene, n-Propylbenzene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Trichlorofluoromethane, Trichlorotrifluoroethane)

The MS and/or the MSD recovery is above the upper range, therefore a slight high bias is possible. (1,1-Dichloroethene, Vinyl chloride)

The MS/MSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Acetone, Bromomethane)

QC Batch 647511 (Samples: CM51244): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no significant variability is suspected. (2-Hexanone, 4-Methyl-2-pentanone, Acetone, Ethyl tert-butyl ether, Methyl ethyl ketone, Methyl t-butyl ether (MTBE), tert-amyl methyl ether, Tetrahydrofuran (THF))

The QC recovery for one analyte are above the upper range but was not reported in the sample(s), therefore no significant bias is suspected. (Naphthalene)

QC Batch 647576 (Samples: CM51242, CM51249, CM51250): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,1-Dichloroethene, 1,1-Dichloropropene, Trichlorotrifluoroethane)

The LCS/LCSD RPD exceeds the method criteria for one analyte, but this analyte was not reported in the sample(s) so no significant variability is suspected. (Methyl ethyl ketone)

The MSD recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (Benzene)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

VOA Narration

The QC recovery for one or more analytes is above the upper range but was not reported in the sample(s), therefore no significant bias is suspected. (Trichlorofluoromethane, Vinyl chloride)

QC Batch 648045 (Samples: CM51239): -----

The LCSD recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (Naphthalene)

Instrument:

CHEM15 10/12/22-2 Harry Mullin, Chemist 10/12/22

CM51230 (1X)

Initial Calibration Evaluation (CHEM15/VOA15-101122):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM15/1012_28-VOA15-101122) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2-Dichloroethane 22%H (20%), Bromomethane 30%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM16 10/15/22-2 Harry Mullin, Chemist 10/15/22

CM51245 (1X), CM51246 (500X), CM51247 (1X), CM51248 (1X)

Chem16 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM16/624_101422):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromoform 35% (20%), Bromomethane 21% (20%), Chloroethane 23% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM16/1015H33-624_101422) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon Disulfide 23%H (20%), Hexachlorobutadiene 22%H (20%), Trichlorofluoromethane 31%H (20%), Trichlorotrifluoroethane 33%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM17 10/11/22-2 Michael Hahn, Chemist 10/11/22

CM51232 (50X), CM51233 (1X, 50X), CM51246 (50X)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

VOA Narration

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-100822):
93% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 24% (20%), Dibromochloromethane 22% (20%), Tetrahydrofuran (THF) 29% (20%), trans-1,3-Dichloropropene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.063 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.035 (0.1), Bromoform 0.066 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

Continuing Calibration Verification (CHEM17/1011_29-VT-100822) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
93% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2,4-Trichlorobenzene 21%H (20%), Hexachlorobutadiene 22%H (20%), n-Butylbenzene 24%H (20%), Naphthalene 21%H (20%), p-Isopropyltoluene 21%H (20%), sec-Butylbenzene 22%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.036 (0.05), 2-Hexanone 0.067 (0.1), 4-Methyl-2-pentanone 0.085 (0.1), Acetone 0.035 (0.1), Bromoform 0.074 (0.1), Methyl ethyl ketone 0.064 (0.1), Tetrahydrofuran (THF) 0.036 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

CHEM17 10/15/22-1 Michael Hahn, Chemist 10/15/22

CM51231 (20X, 100X), CM51232 (1X, 50X, 250X), CM51233 (500X), CM51234 (1X), CM51235 (1X), CM51236 (1X), CM51237 (1X), CM51238 (1X), CM51240 (1X), CM51241 (1X), CM51243 (1X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-101422):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 22% (20%), Bromomethane 27% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.034 (0.05), 2-Hexanone 0.072 (0.1), 4-Methyl-2-pentanone 0.094 (0.1), Acetone 0.041 (0.1), Bromoform 0.070 (0.1), Methyl ethyl ketone 0.067 (0.1), Tetrahydrofuran (THF) 0.044 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.034 (0.05), Acetone 0.041 (0.05), Tetrahydrofuran (THF) 0.044 (0.05)

Continuing Calibration Verification (CHEM17/1015_01-VT-101422) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
89% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,1,1-Trichloroethane 22%H (20%), Hexachlorobutadiene 21%H (20%), n-Butylbenzene 24%H (20%), p-Isopropyltoluene 22%H (20%), sec-Butylbenzene 21%H (20%), Trichlorotrifluoroethane 22%H (20%)
The following compounds did not meet maximum % deviations: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

VOA Narration

The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.039 (0.05), 2-Hexanone 0.072 (0.1), 4-Methyl-2-pentanone 0.098 (0.1), Acetone 0.036 (0.1), Bromoform 0.080 (0.1), Methyl ethyl ketone 0.070 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.034 (0.05), Acetone 0.041 (0.05), Tetrahydrofuran (THF) 0.044 (0.05)

CHEM17 10/17/22-2 Michael Hahn, Chemist 10/17/22

CM51244 (1X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-101622):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.062 (0.1), 4-Methyl-2-pentanone 0.080 (0.1), Acetone 0.035 (0.1), Bromoform 0.069 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.040 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.040 (0.05)

Continuing Calibration Verification (CHEM17/1017_31-VT-101622) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2,2-Tetrachloroethane 0.289 (0.3), 1,2-Dibromo-3-chloropropane 0.034 (0.05), 2-Hexanone 0.066 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.036 (0.1), Bromoform 0.076 (0.1), Methyl ethyl ketone 0.064 (0.1), Tetrahydrofuran (THF) 0.041 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.040 (0.05)

CHEM17 10/19/22-1 Michael Hahn, Chemist 10/19/22

CM51239 (1X)

Chem 17 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM17/VT-101622):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05), 2-Hexanone 0.062 (0.1), 4-Methyl-2-pentanone 0.080 (0.1), Acetone 0.035 (0.1), Bromoform 0.069 (0.1), Methyl ethyl ketone 0.060 (0.1), Tetrahydrofuran (THF) 0.040 (0.05)
The following compounds did not meet the minimum response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.040 (0.05)

Continuing Calibration Verification (CHEM17/1019_02-VT-101622) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

VOA Narration

The following compounds did not meet % deviation criteria: Bromomethane 24%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: 1,2-Dibromo-3-chloropropane 0.035 (0.05), 2-Hexanone 0.065 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.040 (0.1), Bromoform 0.074 (0.1), Methyl ethyl ketone 0.068 (0.1), Tetrahydrofuran (THF) 0.042 (0.05)
The following compounds did not meet the minimum MCP response factor of 0.05: 1,2-Dibromo-3-chloropropane 0.031 (0.05), Acetone 0.035 (0.05), Tetrahydrofuran (THF) 0.040 (0.05)

CHEM23 10/16/22-1 Michael Hahn, Chemist 10/16/22

CM51242 (1X), CM51249 (1X), CM51250 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_101222):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%), Dichlorodifluoromethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.057 (0.1), Methyl ethyl ketone 0.095 (0.1), Tetrachloroethene 0.176 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1015_83-VOA23_101222) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2-Dibromo-3-chloropropane 21%L (20%), 2,2-Dichloropropane 37%L (20%), Dichlorodifluoromethane 31%H (20%), Trichlorofluoromethane 22%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.066 (0.1), Methyl ethyl ketone 0.099 (0.1), Tetrachloroethene 0.162 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 646560 (CM51233) CHEM17 10/11/2022-2

CM51232(50X), CM51233(50X), CM51246(50X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,2-Dibromo-3-chloropropane(132%), Naphthalene(132%)
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 646725 (CM51230) CHEM15 10/12/2022-2

CM51230(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647343 (CM50906) CHEM16 10/15/2022-2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

VOA Narration

CM51245(1X), CM51246(500X), CM51247(1X), CM51248(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(136%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647511 (CM50292) CHEM17 10/17/2022-2

CM51244(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Naphthalene(132%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: 2-Hexanone(25.6%), 4-Methyl-2-pentanone(31.3%), Acetone(25.6%), Ethyl tert-butyl ether(23.8%), Methyl ethyl ketone(30.2%), Methyl t-butyl ether (MTBE)(24.6%), tert-amyl methyl ether(25.2%), Tetrahydrofuran (THF)(23.4%)
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 648045 (CM61519) CHEM17 10/19/2022-1

CM51239(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: Naphthalene(135%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QC (Site Specific):

Batch 647344 (CM51232) CHEM17 10/15/2022-1

CM51231(20X, 100X), CM51232(250X), CM51233(500X), CM51234(1X), CM51235(1X), CM51236(1X), CM51237(1X), CM51238(1X), CM51240(1X), CM51241(1X), CM51243(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
All MS recoveries were within 70 - 130 with the following exceptions: n-Butylbenzene(132%), sec-Butylbenzene(132%), Trichlorofluoromethane(137%), Vinyl chloride(148%)
All MSD recoveries were within 70 - 130 with the following exceptions: 1,1,1-Trichloroethane(135%), 1,1-Dichloroethene(136%), 1,1-Dichloropropene(137%), Carbon tetrachloride(134%), Hexachlorobutadiene(132%), Isopropylbenzene(132%), n-Butylbenzene(142%), n-Propylbenzene(131%), p-Isopropyltoluene(138%), sec-Butylbenzene(140%), tert-Butylbenzene(136%), Trichlorofluoromethane(143%), Trichlorotrifluoroethane(137%), Vinyl chloride(161%)
All MS/MSD RPDs were less than 20% with the following exceptions: Acetone(20.9%), Bromomethane(29.5%)
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 21, 2022

SDG I.D.: GCM51230

VOA Narration

Batch 647576 (CM51242) CHEM23 10/16/2022-1

CM51242(1X), CM51249(1X), CM51250(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,1-Dichloropropene(153%), Trichlorofluoromethane(146%), Vinyl chloride(135%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,1-Dichloroethene(136%), Trichlorofluoromethane(152%), Trichlorotrifluoroethane(132%), Vinyl chloride(134%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: Methyl ethyl ketone(28.6%)
All MS recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(150%), Vinyl chloride(137%)
All MSD recoveries were within 70 - 130 with the following exceptions: Benzene(134%), Trichlorofluoromethane(145%), Vinyl chloride(134%)
All MS/MSD RPDs were less than 20% with the following exceptions: None.
A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 10/07/22-1 James Karabetsos, Chemist 10/07/22

CM51247 (1X)

Initial Calibration Evaluation (PIDFID/VPH_100322_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 646125 (CM50973)

CM51247(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 3.3 C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-848-5238
Dylan Potter (508-333-2316)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 10/6/22

Client Sample - Information - Identification

Matrix Codes:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved [FF] As (6010C) - HNO3	Total & Dissolved [FF] Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - UNP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (9060A) - H3PO4	Comments
51230	22A-TB01-100522-1	GW	10/5/22	0800	2							X									
51231	22A-AE26R5-100522-1	GW	10/5/22	1410	3	1						X	X								
51232	22A-AE28R3-100522-1	GW	10/5/22	1400	9							X									MS/MSD
51233	22A-AE28R4-100522-1	GW	10/5/22	1500	3							X									
51234	22A-AE110R1-100522-1	GW	10/5/22	1410	3							X									
51235	22A-AE110R2-100522-1	GW	10/5/22	1415	3							X									
51236	22A-AE110R5-100522-1	GW	10/5/22	1420	3							X									
51237	22A-AE110R7-100522-1	GW	10/5/22	1420	3	1						X	X								
51238	22A-STM8R-100622-1	GW	10/6/22	0950	3	2		4				X	X				X	X	X	X	
51239	22A-STM8D-100622-1	GW	10/6/22	1030	3	1						X	X								
51240	22A-STM9R1-100622-1	GW	10/6/22	1100	3	2		4				X	X			X	X	X	X	X	
51241	22A-AE111R1-100622-1	GW	10/6/22	1125	3							X									

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/5/22	2:40
[signature]	[signature]	10/6	1100

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

State where samples were collected: MA

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other

* SURCHARGE APPLIES

Cooler: Yes ☒ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

PHOENIX Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Temp: 3°C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Data Delivery/Contact EMails:
lori.herberich@aecom.com
scott.olson@aecom.com
tessa.murphy@aecom.com

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824 - (978) 905-2100
Contacts: Lori Herberich (Chemist) 978-302-0089 Scott Olson (PM) 978-846-5238
Dylan Potter (508-333-2318)

Project: Lockheed - Wilmington MA 60688023.02.2
Report to: Lori Herberich - Scott Olson - Tessa Murphy
Invoice to: Scott Olson & Lori Herberich
QUOTE # March 2022 (2022 -2027)

2022 Project PO: 148194

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 10/6/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water L=Liquid
RW=Raw Water SE=Sediment SL=Sludge S=Soil SO=Solid W=Wipe OIL=Oil B=Bulk

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic				VOCs (8260) - HCL + Freon 113	1,4-Dioxane (8270D SIM) - NaHSO4 for DL <0.3 ug/L	VPH - HCL (MassDEP- VPH-04-1.1 Rev 1)	EPH + PAHs - HCL & UNP (MassDEP- EPH-04-1.1 Rev 1)	Total & Dissolved (FF) As (6010C) - HNO3	Total & Dissolved (FF) Fe, Mn (6010C) - HNO3	Chloride, Nitrate, Nitrite, Sulfate (300) - USP	Sulfide - Zn-Acetate + NaOH	Total Organic Carbon (5050A) - H2SO4	Comments
51242	22A-AE11R2-100622-1	GW	10/6/22	1130	9							X									MS/MSD
51243	22A-AE111R6-100622-1	GW	10/6/22	1135	3							X									
51244	22A-AE112D-100622-1	GW	10/6/22	1000	3			2				X				X					
51245	22A-AE109D-100622-1	GW	10/6/22	1100	3			2				X				X					
51246	22A-GZA105R-100622-1	GW	10/6/22	0945	3							X									
51247	22A-GZA105S-100622-1	GW	10/6/22	1045	5	2		2				X		X	X	X					
51248	22A-AE112R1-100622-1	GW	10/6/22	1120	3							X									
51249	22A-AE112R3-100622-1	GW	10/6/22	1130	3							X									
51250	22A-AE112R5-100622-1	GW	10/6/22	1150	3							X					X	X	X	X	

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/6/22	2:00
[signature]	[signature]	10/6	1607

Comments, Special Requirements or Regulations:

Turnaround:
10 - 15 days

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
X MCP (CAM Rpt)
X GW-1
X GW-2
X GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMA
☐ Oth

Data Format
x PDF
x AECOM EQuIS 4-File EDD format

Data Package
☐ Tier II

State where samples were collect

PHOENIX
Environmental Laboratories, Inc.

Wednesday, October 26, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LMC WIMINGTON 60688023
SDG ID: GCM52356
Sample ID#s: CM52356 - CM52363

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 26, 2022

SDG I.D.: GCM52356

Project ID: LMC WIMINGTON 60688023

Client Id	Lab Id	Matrix
22A-AE109D-100622-1	CM52356	GROUND WATER
22A-AE101D-100622-1	CM52357	GROUND WATER
22A-GZA105D-100622-1	CM52358	GROUND WATER
22A-TRC201R-100622-1	CM52359	GROUND WATER
22A-GZA6-100622-1	CM52360	GROUND WATER
22A-TB01-100622-1	CM52361	GROUND WATER
22A-EB01-100622-1	CM52362	GROUND WATER
22A-EB02-100622-1	CM52363	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52356

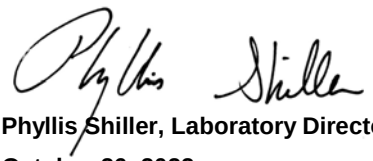
Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE109D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,4-dioxane							
1,4-dioxane	0.30	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	73		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52357

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE101D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE101D-100622-1

Phoenix I.D.: CM52357

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	80	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	7.8	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	10	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	2.4	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

Ver 1

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE101D-100622-1

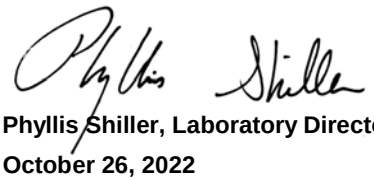
Phoenix I.D.: CM52357

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.28	0.20	ug/l	1	10/12/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	10/12/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/11/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52358

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA105D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/10/22	cv/CV	SW3510C
Semi-Volatile Extraction	Completed				10/11/22	X/K	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				10/07/22		MADEP EPH-19
	Completed				10/10/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	2.0	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	1.4	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA105D-100622-1

Phoenix I.D.: CM52358

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	65	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	12	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	42	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	8.7	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	104		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	95		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/12/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/12/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/12/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	75		%	1	10/12/22	WB	40 - 140 %
% Nitrobenzene-d5	83		%	1	10/12/22	WB	40 - 140 %
% Terphenyl-d14	67		%	1	10/12/22	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.43	0.20	ug/l	1	10/12/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/12/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/11/22	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	87		%	1	10/11/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	10/11/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	95		%	1	10/11/22	AW	40 - 140 %
% o-terphenyl (aromatic)	90		%	1	10/11/22	AW	40 - 140 %

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA105D-100622-1

Phoenix I.D.: CM52358

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	85		%	1	10/10/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	82		%	1	10/10/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	14:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52359

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TRC201R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	82	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	23	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TRC201R-100622-1

Phoenix I.D.: CM52359

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	180	50	ug/L	50	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	34	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	40	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	2.9	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/16/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	95		%	50	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	100		%	50	10/15/22	MH	70 - 130 %

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TRC201R-100622-1

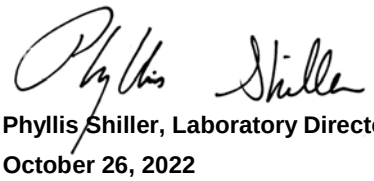
Phoenix I.D.: CM52359

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (50x)	96		%	50	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	15:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52360

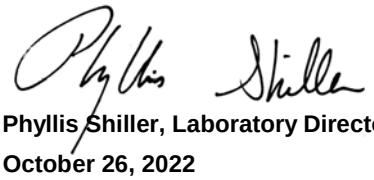
Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.008	0.004	mg/L	1	10/21/22	TH	SW6010D
Arsenic (Dissolved)	0.008	0.004	mg/L	1	10/17/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/08/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	8:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52361

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TB01-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TB01-100622-1

Phoenix I.D.: CM52361

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	1.5	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TB01-100622-1

Phoenix I.D.: CM52361

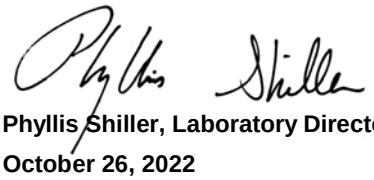
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	15:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52362

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-EB01-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/21/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/17/22	TH	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	10/17/22	TH	SW6010D
Manganese (Dissolved)	< 0.001	0.001	mg/L	1	10/17/22	TH	SW6010D
Iron	0.014	0.010	mg/L	1	10/21/22	TH	SW6010D
Manganese	< 0.001	0.001	mg/L	1	10/21/22	TH	SW6010D
Chloride	< 5.0	5.0	mg/L	1	10/07/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/07/22 22:23	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/07/22 22:23	BS/GD	E300.0
Sulfate	< 5.0	5.0	mg/L	1	10/07/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	2.1	1.0	mg/L	1	10/11/22	EG	SM5310B-14
EPH Extraction	Completed				10/10/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/12/22	X/D	SW3520C
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/08/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/07/22		MADEP EPH-19
	Completed				10/10/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-EB01-100622-1

Phoenix I.D.: CM52362

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/19/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/19/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Styrene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/19/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/19/22	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/19/22	MH	70 - 130 %
% Dibromofluoromethane	105		%	1	10/19/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/19/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/19/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/13/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/13/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/13/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/13/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/13/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/13/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/13/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/13/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/13/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/13/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/13/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/13/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/13/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/13/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/13/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/13/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/13/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	10/13/22	WB	40 - 140 %
% Nitrobenzene-d5	90		%	1	10/13/22	WB	40 - 140 %
% Terphenyl-d14	66		%	1	10/13/22	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.60	0.20	ug/l	1	10/12/22	AW	SW8270DSIM
QA/QC Surrogates							

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,4-dioxane-d8	97		%	1	10/12/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/11/22	G/G	

MA EPH Aliphatic/Aromatic Ranges

C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	61		%	1	10/12/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	55		%	1	10/12/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	54		%	1	10/12/22	AW	40 - 140 %
% o-terphenyl (aromatic)	53		%	1	10/12/22	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	87		%	1	10/10/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	83		%	1	10/10/22	V	70 - 130 %

Project ID: LMC WIMINGTON 60688023 Phoenix I.D.: CM52362
Client ID: 22A-EB01-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

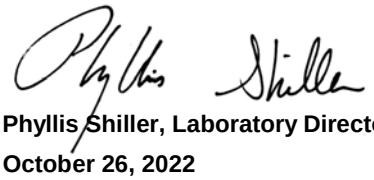
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	15:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52363

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-EB02-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-EB02-100622-1

Phoenix I.D.: CM52363

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	106		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

Ver 1

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-EB02-100622-1

Phoenix I.D.: CM52363

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 26, 2022

QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 645989 (mg/L), QC Sample No: CM51244 (CM52358, CM52360, CM52362)													
ICP Metals - Dissolved													
Arsenic	BRL	0.004	<0.004	<0.004	NC	87.1	86.6	0.6	93.9			80 - 120	20
Iron	BRL	0.011	0.049	0.048	NC	89.8	88.3	1.7	90.2			80 - 120	20
Manganese	BRL	0.001	0.169	0.168	0.60	90.9	89.6	1.4	91.4			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 646050 (mg/L), QC Sample No: CM51500 (CM52358, CM52360, CM52362)													
ICP Metals - Aqueous													
Arsenic	BRL	0.004	<0.004	<0.004	NC	97.4	97.6	0.2	104			80 - 120	20
Iron	BRL	0.010	0.078	0.080	2.50	103	103	0.0	105			80 - 120	20
Manganese	BRL	0.001	0.360	0.368	2.20	104	104	0.0	107			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 26, 2022

QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 646308 (mg/L), QC Sample No: CM50292 (CM52362)													
Sulfide	BRL	0.05	0.10	0.11	NC	92.3			94.3			90 - 110	20
Comment:													
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.													
QA/QC Batch 646361 (mg/L), QC Sample No: CM52217 (CM52362)													
Total Organic Carbon	BRL	1.0	<1.0	1.1	NC	109			102			85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 646180 (mg/L), QC Sample No: CM52066 (CM52362)													
Chloride	BRL	5.0	78.8	77.5	1.70	97.1			90.2			90 - 110	20
Nitrate as Nitrogen	BRL	0.05	1.33	1.32	0.80	93.9			90.2			90 - 110	20
Nitrite as Nitrogen	BRL	0.004	<0.004	<0.004	NC	99.3			109			90 - 110	20
Sulfate	BRL	5.0	14.4	13.9	NC	96.0			92.9			90 - 110	20

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 26, 2022

QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 646215 (ug/l), QC Sample No: CM50906 (CM52356)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	75	83	10.1	87	85	2.3	70 - 130	20	
% 1,4-dioxane-d8	80	%	82	90	9.3	71	70	1.4	70 - 130	20	
QA/QC Batch 646284 (ug/l), QC Sample No: CM52357 (CM52357, CM52358, CM52362)											
1,4dioxane - Ground Water											
1,4-dioxane	ND	0.20	73	77	5.3	82			70 - 130	20	
% 1,4-dioxane-d8	80	%	91	93	2.2	85			70 - 130	20	
QA/QC Batch 646087 (ug/L), QC Sample No: CM49157 (CM52358, CM52362)											
MAEPH - Ground Water											
C9-C18 Aliphatic Hydrocarbons 1*	ND	100	84	78	7.4				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	100	92	106	14.1				40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	100	76	71	6.8				40 - 140	25	
C11-C22 Aromatic Hydrocarbons U	ND	100							40 - 140	25	
C9 - Nonane	ND	10	58	43	29.7				40 - 140	25	r
C-10 Decane	ND	10	70	59	17.1				40 - 140	25	
C12 - Dodecane	ND	10	82	75	8.9				40 - 140	25	
C14 - Tetradecane	ND	10	91	88	3.4				40 - 140	25	
C16 - Hexadecane	ND	10	97	96	1.0				40 - 140	25	
C18 - Octadecane	ND	10	108	109	0.9				40 - 140	25	
C19 - Nonadecane	ND	10	102	104	1.9				40 - 140	25	
C20 - Eicosane	ND	10	104	104	0.0				40 - 140	25	
C22 - Docosane	ND	10	106	107	0.9				40 - 140	25	
C24 - Tetracosane	ND	10	107	109	1.9				40 - 140	25	
C26 - Hexacosane	ND	10	104	108	3.8				40 - 140	25	
C28 - Octacosane	ND	10	99	106	6.8				40 - 140	25	
C30 - Tricotane	ND	10	89	104	15.5				40 - 140	25	
C36 - Hexatriacontane	ND	10	24	103	124.4				40 - 140	25	l,r
% 1-chlorooctadecane (aliphatic)	72	%	44	92	70.6				40 - 140	25	r
% o-terphenyl (aromatic)	77	%	42	74	55.2				40 - 140	25	r
% 2-Fluorobiphenyl (Fractionation)	78	%	80	72	10.5				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	77	%	69	63	9.1				40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 646398 (ug/L), QC Sample No: CM51476 (CM52358)											
Semivolatiles by SIM, PAH - Ground Water											
2-Methylnaphthalene	ND	0.50	82	116	34.3	102	94	8.2	40 - 140	20	r
Acenaphthene	ND	0.50	77	83	7.5	83	73	12.8	40 - 140	20	
Acenaphthylene	ND	0.10	64	62	3.2	70	63	10.5	40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Anthracene	ND	0.10	72	75	4.1	76	69	9.7	40 - 140	20	
Benz(a)anthracene	ND	0.05	96	103	7.0	104	96	8.0	40 - 140	20	
Benzo(a)pyrene	ND	0.20	80	80	0.0	83	76	8.8	40 - 140	20	
Benzo(b)fluoranthene	ND	0.07	88	96	8.7	95	87	8.8	40 - 140	20	
Benzo(ghi)perylene	ND	0.02	87	90	3.4	89	83	7.0	40 - 140	20	
Benzo(k)fluoranthene	ND	0.10	79	75	5.2	79	67	16.4	40 - 140	20	
Chrysene	ND	0.05	79	83	4.9	82	76	7.6	40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	87	91	4.5	89	82	8.2	40 - 140	20	
Fluoranthene	ND	0.50	68	72	5.7	71	65	8.8	40 - 140	20	
Fluorene	ND	0.10	76	82	7.6	78	71	9.4	40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.10	88	93	5.5	91	85	6.8	40 - 140	20	
Naphthalene	ND	0.50	79	119	40.4	76	116	41.7	40 - 140	20	r
Phenanthrene	ND	0.06	90	95	5.4	98	86	13.0	40 - 140	20	
Pyrene	ND	0.07	81	84	3.6	85	78	8.6	40 - 140	20	
% 2-Fluorobiphenyl	71	%	72	73	1.4	68	70	2.9	40 - 140	20	
% Nitrobenzene-d5	81	%	89	92	3.3	84	82	2.4	40 - 140	20	
% Terphenyl-d14	65	%	71	71	0.0	61	64	4.8	40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 646616 (ug/L), QC Sample No: CM57913 (CM52362)

Semivolatiles by SIM, PAH - Ground Water

2-Methylnaphthalene	ND	0.50	97	74	26.9				40 - 140	20	r
Acenaphthene	ND	0.50	76	63	18.7				40 - 140	20	
Acenaphthylene	ND	0.10	61	52	15.9				40 - 140	20	
Anthracene	ND	0.10	73	61	17.9				40 - 140	20	
Benz(a)anthracene	ND	0.02	107	77	32.6				40 - 140	20	r
Benzo(a)pyrene	ND	0.02	75	63	17.4				40 - 140	20	
Benzo(b)fluoranthene	ND	0.02	87	74	16.1				40 - 140	20	
Benzo(ghi)perylene	ND	0.02	86	71	19.1				40 - 140	20	
Benzo(k)fluoranthene	ND	0.02	76	60	23.5				40 - 140	20	r
Chrysene	ND	0.02	76	65	15.6				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.02	86	71	19.1				40 - 140	20	
Fluoranthene	ND	0.50	70	58	18.8				40 - 140	20	
Fluorene	ND	0.10	75	63	17.4				40 - 140	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	90	74	19.5				40 - 140	20	
Naphthalene	ND	0.50	98	71	32.0				40 - 140	20	r
Phenanthrene	ND	0.06	84	68	21.1				40 - 140	20	r
Pyrene	ND	0.07	82	67	20.1				40 - 140	20	
% 2-Fluorobiphenyl	70	%	67	56	17.9				40 - 140	20	
% Nitrobenzene-d5	87	%	82	64	24.7				40 - 140	20	r
% Terphenyl-d14	66	%	69	57	19.0				40 - 140	20	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 647576 (ug/L), QC Sample No: CM51242 (CM52357, CM52358, CM52359, CM52363)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	99	1.0	97	99	2.0	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	122	124	1.6	124	122	1.6	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	113	110	2.7	114	114	0.0	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	104	104	0.0	103	105	1.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	113	120	6.0	116	118	1.7	70 - 130	20	

QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1-Dichloroethene	ND	1.0	124	136	9.2	129	127	1.6	70 - 130	20	l
1,1-Dichloropropene	ND	1.0	153	129	17.0	129	126	2.4	70 - 130	20	l
1,2,3-Trichlorobenzene	ND	1.0	109	113	3.6	108	109	0.9	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	111	110	0.9	119	121	1.7	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	109	2.8	104	106	1.9	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	110	112	1.8	108	110	1.8	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	92	88	4.4	92	93	1.1	70 - 130	20	
1,2-Dibromoethane	ND	1.0	107	105	1.9	106	107	0.9	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	113	3.6	109	111	1.8	70 - 130	20	
1,2-Dichloroethane	ND	1.0	124	108	13.8	122	124	1.6	70 - 130	20	
1,2-Dichloropropane	ND	1.0	101	104	2.9	101	104	2.9	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	114	116	1.7	111	114	2.7	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	108	109	0.9	105	107	1.9	70 - 130	20	
1,3-Dichloropropane	ND	1.0	113	110	2.7	111	113	1.8	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	110	112	1.8	107	110	2.8	70 - 130	20	
1,4-dioxane	ND	100	110	110	0.0	109	114	4.5	40 - 160	20	
2,2-Dichloropropane	ND	1.0	110	114	3.6	84	84	0.0	70 - 130	20	
2-Chlorotoluene	ND	1.0	110	112	1.8	107	112	4.6	70 - 130	20	
2-Hexanone	ND	5.0	103	98	5.0	100	100	0.0	40 - 160	20	
4-Chlorotoluene	ND	1.0	110	113	2.7	107	111	3.7	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	98	3.0	101	102	1.0	40 - 160	20	
Acetone	ND	5.0	111	118	6.1	115	117	1.7	40 - 160	20	
Benzene	ND	0.70	129	115	11.5	128	134	4.6	70 - 130	20	m
Bromobenzene	ND	1.0	108	107	0.9	105	107	1.9	70 - 130	20	
Bromochloromethane	ND	1.0	101	109	7.6	102	106	3.8	70 - 130	20	
Bromodichloromethane	ND	0.50	100	100	0.0	98	101	3.0	70 - 130	20	
Bromoform	ND	1.0	91	88	3.4	87	90	3.4	70 - 130	20	
Bromomethane	ND	1.0	114	124	8.4	121	119	1.7	40 - 160	20	
Carbon Disulfide	ND	1.0	108	117	8.0	109	106	2.8	70 - 130	20	
Carbon tetrachloride	ND	1.0	113	116	2.6	118	116	1.7	70 - 130	20	
Chlorobenzene	ND	1.0	110	111	0.9	101	103	2.0	70 - 130	20	
Chloroethane	ND	1.0	120	126	4.9	128	121	5.6	70 - 130	20	
Chloroform	ND	1.0	113	121	6.8	115	117	1.7	70 - 130	20	
Chloromethane	ND	1.0	118	120	1.7	123	119	3.3	40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	112	120	6.9	113	118	4.3	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	94	95	1.1	87	89	2.3	70 - 130	20	
Dibromochloromethane	ND	0.50	99	96	3.1	94	97	3.1	70 - 130	20	
Dibromomethane	ND	1.0	107	108	0.9	106	106	0.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	147	146	0.7	148	141	4.8	40 - 160	20	
Di-isopropyl ether	ND	1.0	98	106	7.8	100	101	1.0	70 - 130	20	
Ethyl ether	ND	1.0	100	106	5.8	101	101	0.0	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	98	104	5.9	101	102	1.0	70 - 130	20	
Ethylbenzene	ND	1.0	114	114	0.0	112	114	1.8	70 - 130	20	
Hexachlorobutadiene	ND	0.40	113	113	0.0	104	106	1.9	70 - 130	20	
Isopropylbenzene	ND	1.0	112	113	0.9	111	112	0.9	70 - 130	20	
m&p-Xylene	ND	1.0	114	115	0.9	113	114	0.9	70 - 130	20	
Methyl ethyl ketone	ND	5.0	148	111	28.6	120	111	7.8	40 - 160	20	r
Methyl t-butyl ether (MTBE)	ND	1.0	104	111	6.5	105	106	0.9	70 - 130	20	
Methylene chloride	ND	1.0	105	117	10.8	107	108	0.9	70 - 130	20	
Naphthalene	ND	1.0	109	108	0.9	108	109	0.9	70 - 130	20	
n-Butylbenzene	ND	1.0	124	126	1.6	120	120	0.0	70 - 130	20	
n-Propylbenzene	ND	1.0	115	115	0.0	111	114	2.7	70 - 130	20	
o-Xylene	ND	1.0	106	106	0.0	104	105	1.0	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
p-Isopropyltoluene	ND	1.0	116	117	0.9	113	113	0.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	120	121	0.8	119	119	0.0	70 - 130	20	
Styrene	ND	1.0	112	110	1.8	107	112	4.6	70 - 130	20	
tert-amyl methyl ether	ND	1.0	108	97	10.7	106	109	2.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	114	115	0.9	112	114	1.8	70 - 130	20	
Tetrachloroethene	ND	1.0	108	109	0.9	105	105	0.0	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	114	111	2.7	110	111	0.9	70 - 130	20	
Toluene	ND	1.0	107	110	2.8	102	104	1.9	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	113	124	9.3	114	116	1.7	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	93	93	0.0	87	88	1.1	70 - 130	20	
Trichloroethene	ND	1.0	109	109	0.0	109	109	0.0	70 - 130	20	
Trichlorofluoromethane	ND	1.0	146	152	4.0	150	145	3.4	70 - 130	20	l,m
Trichlorotrifluoroethane	ND	1.0	125	132	5.4	128	121	5.6	70 - 130	20	l
Vinyl chloride	ND	1.0	135	134	0.7	137	134	2.2	70 - 130	20	l,m
% 1,2-dichlorobenzene-d4	100	%	98	100	2.0	101	100	1.0	70 - 130	20	
% Bromofluorobenzene	95	%	98	96	2.1	98	97	1.0	70 - 130	20	
% Dibromofluoromethane	95	%	98	102	4.0	97	97	0.0	70 - 130	20	
% Toluene-d8	98	%	96	97	1.0	96	97	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647499 (ug/L), QC Sample No: CM52361 (CM52359 (50X) , CM52361)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	103	5.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	117	118	0.9				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	106	111	4.6				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	100	104	3.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	115	116	0.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	127	126	0.8				70 - 130	20	
1,1-Dichloropropene	ND	1.0	121	126	4.0				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	107	112	4.6				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	105	109	3.7				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	114	7.3				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	108	114	5.4				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	87	91	4.5				70 - 130	20	
1,2-Dibromoethane	ND	1.0	103	108	4.7				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	113	3.6				70 - 130	20	
1,2-Dichloroethane	ND	1.0	118	126	6.6				70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	104	4.9				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	111	117	5.3				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	105	110	4.7				70 - 130	20	
1,3-Dichloropropane	ND	1.0	108	113	4.5				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	108	114	5.4				70 - 130	20	
1,4-dioxane	ND	100	107	113	5.5				40 - 160	20	
2,2-Dichloropropane	ND	1.0	107	108	0.9				70 - 130	20	
2-Chlorotoluene	ND	1.0	107	114	6.3				70 - 130	20	
2-Hexanone	ND	5.0	94	97	3.1				40 - 160	20	
4-Chlorotoluene	ND	1.0	108	114	5.4				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	93	98	5.2				40 - 160	20	
Acetone	ND	5.0	109	103	5.7				40 - 160	20	
Benzene	ND	0.70	111	134	18.8				70 - 130	20	l

QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Bromobenzene	ND	1.0	105	111	5.6				70 - 130	20	
Bromochloromethane	ND	1.0	105	105	0.0				70 - 130	20	
Bromodichloromethane	ND	0.50	98	103	5.0				70 - 130	20	
Bromoform	ND	1.0	86	91	5.6				70 - 130	20	
Bromomethane	ND	1.0	118	119	0.8				40 - 160	20	
Carbon Disulfide	ND	1.0	112	110	1.8				70 - 130	20	
Carbon tetrachloride	ND	1.0	130	131	0.8				70 - 130	20	I
Chlorobenzene	ND	1.0	107	113	5.5				70 - 130	20	
Chloroethane	ND	1.0	133	130	2.3				70 - 130	20	I
Chloroform	ND	1.0	115	114	0.9				70 - 130	20	
Chloromethane	ND	1.0	118	120	1.7				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	115	118	2.6				70 - 130	20	
cis-1,3-Dichloropropene	ND	0.40	92	98	6.3				70 - 130	20	
Dibromochloromethane	ND	0.50	94	99	5.2				70 - 130	20	
Dibromomethane	ND	1.0	104	108	3.8				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	144	145	0.7				40 - 160	20	
Di-isopropyl ether	ND	1.0	105	104	1.0				70 - 130	20	
Ethyl ether	ND	1.0	105	101	3.9				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	102	105	2.9				70 - 130	20	
Ethylbenzene	ND	1.0	109	116	6.2				70 - 130	20	
Hexachlorobutadiene	ND	0.40	109	113	3.6				70 - 130	20	
Isopropylbenzene	ND	1.0	109	114	4.5				70 - 130	20	
m&p-Xylene	ND	1.0	110	115	4.4				70 - 130	20	
Methyl ethyl ketone	ND	5.0	108	103	4.7				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	107	105	1.9				70 - 130	20	
Methylene chloride	ND	1.0	112	108	3.6				70 - 130	20	
Naphthalene	ND	1.0	103	108	4.7				70 - 130	20	
n-Butylbenzene	ND	1.0	120	125	4.1				70 - 130	20	
n-Propylbenzene	ND	1.0	110	117	6.2				70 - 130	20	
o-Xylene	ND	1.0	103	109	5.7				70 - 130	20	
p-Isopropyltoluene	ND	1.0	112	117	4.4				70 - 130	20	
sec-Butylbenzene	ND	1.0	116	121	4.2				70 - 130	20	
Styrene	ND	1.0	106	114	7.3				70 - 130	20	
tert-amyl methyl ether	ND	1.0	97	113	15.2				70 - 130	20	
tert-Butylbenzene	ND	1.0	110	117	6.2				70 - 130	20	
Tetrachloroethene	ND	1.0	104	108	3.8				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	105	106	0.9				70 - 130	20	
Toluene	ND	1.0	104	109	4.7				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	117	115	1.7				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	92	96	4.3				70 - 130	20	
Trichloroethene	ND	1.0	105	110	4.7				70 - 130	20	
Trichlorofluoromethane	ND	1.0	142	142	0.0				70 - 130	20	I
Trichlorotrifluoroethane	ND	1.0	125	122	2.4				70 - 130	20	
Vinyl chloride	ND	1.0	131	132	0.8				70 - 130	20	I
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	20	
% Bromofluorobenzene	95	%	98	97	1.0				70 - 130	20	
% Dibromofluoromethane	101	%	99	98	1.0				70 - 130	20	
% Toluene-d8	96	%	97	96	1.0				70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 647784 (ug/L), QC Sample No: CM63149 (CM52362)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	5.0	110	112	1.8				70 - 130	20
1,1,1-Trichloroethane	ND	5.0	108	103	4.7				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	5.0	97	101	4.0				70 - 130	20
1,1,2-Trichloroethane	ND	5.0	100	105	4.9				70 - 130	20
1,1-Dichloroethane	ND	5.0	108	107	0.9				70 - 130	20
1,1-Dichloroethene	ND	5.0	111	108	2.7				70 - 130	20
1,1-Dichloropropene	ND	5.0	109	105	3.7				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	102	107	4.8				70 - 130	20
1,2,3-Trichloropropane	ND	5.0	103	106	2.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	5.0	106	110	3.7				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	110	111	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	5.0	99	100	1.0				70 - 130	20
1,2-Dibromoethane	ND	5.0	103	106	2.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	104	106	1.9				70 - 130	20
1,2-Dichloroethane	ND	0.60	104	107	2.8				70 - 130	20
1,2-Dichloropropane	ND	5.0	104	107	2.8				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	109	112	2.7				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	107	108	0.9				70 - 130	20
1,3-Dichloropropane	ND	5.0	106	108	1.9				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	106	109	2.8				70 - 130	20
1,4-dioxane	ND	100	106	104	1.9				40 - 160	20
2,2-Dichloropropane	ND	5.0	106	104	1.9				70 - 130	20
2-Chlorotoluene	ND	5.0	108	110	1.8				70 - 130	20
2-Hexanone	ND	5.0	83	90	8.1				40 - 160	20
4-Chlorotoluene	ND	5.0	108	111	2.7				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	86	90	4.5				40 - 160	20
Acetone	ND	10	99	96	3.1				40 - 160	20
Benzene	ND	0.70	111	102	8.5				70 - 130	20
Bromobenzene	ND	5.0	104	107	2.8				70 - 130	20
Bromochloromethane	ND	5.0	113	110	2.7				70 - 130	20
Bromodichloromethane	ND	5.0	105	107	1.9				70 - 130	20
Bromoform	ND	5.0	104	105	1.0				70 - 130	20
Bromomethane	ND	5.0	98	96	2.1				40 - 160	20
Carbon Disulfide	ND	5.0	105	104	1.0				70 - 130	20
Carbon tetrachloride	ND	5.0	109	101	7.6				70 - 130	20
Chlorobenzene	ND	1.0	106	107	0.9				70 - 130	20
Chloroethane	ND	5.0	138	136	1.5				70 - 130	20
Chloroform	ND	5.0	113	110	2.7				70 - 130	20
Chloromethane	ND	5.0	98	97	1.0				40 - 160	20
cis-1,2-Dichloroethene	ND	5.0	111	113	1.8				70 - 130	20
cis-1,3-Dichloropropene	ND	5.0	106	107	0.9				70 - 130	20
Dibromochloromethane	ND	5.0	108	110	1.8				70 - 130	20
Dibromomethane	ND	5.0	103	105	1.9				70 - 130	20
Dichlorodifluoromethane	ND	5.0	80	72	10.5				40 - 160	20
Ethyl ether	ND	5.0	95	102	7.1				70 - 130	20
Ethylbenzene	ND	1.0	107	108	0.9				70 - 130	20
Hexachlorobutadiene	ND	5.0	104	106	1.9				70 - 130	20
Isopropylbenzene	ND	1.0	106	109	2.8				70 - 130	20
m&p-Xylene	ND	1.0	110	110	0.0				70 - 130	20
Methyl ethyl ketone	ND	5.0	91	90	1.1				40 - 160	20

QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Methyl t-butyl ether (MTBE)	ND	1.0	104	108	3.8				70 - 130	20
Methylene chloride	ND	5.0	111	113	1.8				70 - 130	20
Naphthalene	ND	1.0	101	105	3.9				70 - 130	20
n-Butylbenzene	ND	1.0	110	112	1.8				70 - 130	20
n-Propylbenzene	ND	1.0	106	107	0.9				70 - 130	20
o-Xylene	ND	1.0	109	110	0.9				70 - 130	20
p-Isopropyltoluene	ND	1.0	109	112	2.7				70 - 130	20
sec-Butylbenzene	ND	1.0	107	109	1.9				70 - 130	20
Styrene	ND	1.0	112	113	0.9				70 - 130	20
tert-Butylbenzene	ND	1.0	108	109	0.9				70 - 130	20
Tetrachloroethene	ND	1.0	99	98	1.0				70 - 130	20
Tetrahydrofuran (THF)	ND	5.0	96	95	1.0				70 - 130	20
Toluene	ND	1.0	104	105	1.0				70 - 130	20
trans-1,2-Dichloroethene	ND	5.0	109	108	0.9				70 - 130	20
trans-1,3-Dichloropropene	ND	5.0	103	106	2.9				70 - 130	20
Trichloroethene	ND	5.0	99	100	1.0				70 - 130	20
Trichlorofluoromethane	ND	5.0	109	101	7.6				70 - 130	20
Trichlorotrifluoroethane	ND	5.0	103	94	9.1				70 - 130	20
Vinyl chloride	ND	5.0	105	99	5.9				70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	96	%	101	101	0.0				70 - 130	20
% Dibromofluoromethane	105	%	107	104	2.8				70 - 130	20
% Toluene-d8	100	%	100	100	0.0				70 - 130	20

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 646266 (ug/L), QC Sample No: CM52355 (CM52358, CM52362)

Volatile Petroleum Hydrocarbons - Ground Water

Unadjusted C5-C8 Aliphatics (*1)	ND	100	100	100	0.0				70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	100	105	102	2.9				70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	100	100	0.0				70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	100	105	102	2.9				70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	100	104	105	1.0				70 - 130	25
Benzene	ND	1.0	100	102	2.0				70 - 130	25
Ethyl Benzene	ND	1.0	100	101	1.0				70 - 130	25
MTBE	ND	1.0	100	100	0.0				70 - 130	25
Naphthalene	ND	5.0	95	96	1.0				70 - 130	25
Toluene	ND	1.0	101	102	1.0				70 - 130	25
m,p-Xylenes	ND	2.0	103	104	1.0				70 - 130	25
o-Xylene	ND	1.0	98	100	2.0				70 - 130	25
% 2,5-Dibromotoluene (PID)	85	%	83	84	1.2				70 - 130	25
% 2,5-Dibromotoluene (FID)	87	%	86	84	2.4				70 - 130	25

Comment:

This batch consists of a Blank, LCS and LCSD.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

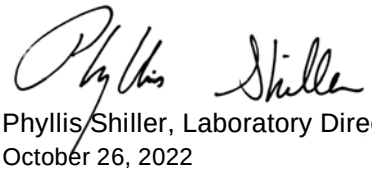
QA/QC Data

SDG I.D.: GCM52356

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director
October 26, 2022

Wednesday, October 26, 2022

Criteria: None

State: MA

Sample Criteria Exceedances Report

GCM52356 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LMC WIMINGTON 60688023 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM52356, CM52357, CM52358, CM52359, CM52360, CM52361, CM52362, CM52363

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☑	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

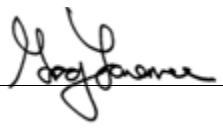
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes ☐ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: EPH, SVOASIM, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: 

Date: Wednesday, October 26, 2022

Printed Name: Greg Lawrence

Position: Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

SDG Comments

Metals Analysis:
The client requested a shorter list of elements than the 6010 MCP list. The following analytes from the 6010 Metals list were not reported: Antimony, Barium, Beryllium, Cadmium, Chromium, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

522 - DIOXANE

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM34 10/11/22-1 Adam Werner, Chemist 10/11/22

CM52356 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1011_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM34 10/12/22-1 Adam Werner, Chemist 10/12/22

CM52357 (1X), CM52358 (1X), CM52362 (1X)

Initial Calibration Evaluation (CHEM34/DIOX_0830):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM34/1012_04-DIOX_0830) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

QC (Batch Specific):

Batch 646215 (CM50906)

CM52356

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Batch 646284 (CM52357)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

522 - DIOXANE

CM52357, CM52358, CM52362

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

EPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646087 (Samples: CM52358, CM52362): -----

The LCS recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (C36 - Hexatriacontane)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes and surrogates No significant variability is suspected. (C36 - Hexatriacontane, C9 - Nonane, % 1-chlorooctadecane (aliphatic), % o-terphenyl (aromatic))

Instrument:

AU-FID3 10/11/22-1 Adam Werner, Chemist 10/11/22

CM52362 (1X)

No significant modifications were made to the EPH method, as specified in Section 11.3 of the method.

The initial calibration (AR1010BI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

AU-FID4 10/11/22-1 Adam Werner, Chemist 10/11/22

CM52358 (1X), CM52362 (1X)

The initial calibration (AL1010AI) RSD for the compound list was less than 25% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 25% except for the following compounds:None.

QC (Batch Specific):

Batch 646087 (CM49157)

CM52358, CM52362

All LCS recoveries were within 40 - 140 with the following exceptions: C36 - Hexatriacontane(24%)
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: % 1-chlorooctadecane (aliphatic)(70.6%), % o-terphenyl (aromatic)(55.2%), C36 - Hexatriacontane(124.4%), C9 - Nonane(29.7%)
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Wet Chemistry Analysis

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

Wet Chemistry Analysis

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

BECKMAN DU720 10/11/22-1 Greg Danielewski, Chemist 10/11/22

CM52362

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 646308 (CM50292)

CM52362

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 90-110% MS acceptance range 75-125%.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

Batch 646361 (CM52217)

CM52362

All LCS recoveries were within 85 - 115 with the following exceptions: None.
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

IC

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

IC 10/07/22-2 Brian Sheriden, Greg Danielewski, Chemist 10/07/22

CM52362

The initial calibration met all criteria including a standard run at the reporting level.
All method verification standards and blanks met criteria.

QC (Batch Specific):

Batch 646180 (CM52066)

CM52362

All LCS recoveries were within 90 - 110 with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ICP Metals Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Certification Report

October 26, 2022

SDG I.D.: GCM52356

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

BLUE 10/17/22 11:32 Tina Hall, Chemist 10/17/22

CM52360, CM52362

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

BLUE 10/20/22 08:16 Tina Hall, Chemist 10/20/22

CM52360, CM52362

The initial calibration met criteria.
The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.
The continuing calibration blanks were less than the reporting level for the elements reported.
The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.The linear range is defined daily by the calibration range.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 645989 (CM51244)

CM52358, CM52360, CM52362

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 646050 (CM51500)

CM52358, CM52360, CM52362

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

SVOASIM Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 646398 (Samples: CM52358): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no significant variability is suspected. (2-Methylnaphthalene, Naphthalene)

QC Batch 646616 (Samples: CM52362): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes and a surrogate. These analytes were not reported in the sample(s) so no significant variability is suspected. (2-Methylnaphthalene, Benz(a)anthracene, Benzo(k)fluoranthene, Naphthalene, Phenanthrene, % Nitrobenzene-d5)

Instrument:

CHEM27 10/12/22-1 Wes Bryon, Chemist 10/12/22

CM52358 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0808):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/1012_03-27_BNSIM18_0808) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
90% of target compounds met criteria.
The following compounds did not meet % deviation criteria: % Terphenyl-d14 23%L (20%), Fluoranthene 21%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

CHEM27 10/13/22-1 Wes Bryon, Chemist 10/13/22

Cm52362 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM27/27_BNSIM18_0808):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM27/1013_05-27_BNSIM18_0808) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.
The following compounds did not meet minimum response factors: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

SVOASIM Narration

QC (Batch Specific):

Batch 646398 (CM51476)

CM52358

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: 2-Methylnaphthalene(34.3%), Naphthalene(40.4%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

Batch 646616 (CM57913)

CM52362

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: % Nitrobenzene-d5(24.7%), 2-Methylnaphthalene(26.9%), Benz(a)anthracene(32.6%), Benzo(k)fluoranthene(23.5%), Naphthalene(32.0%), Phenanthrene(21.1%)
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 647499 (Samples: CM52359, CM52361): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Benzene, Carbon tetrachloride, Chloroethane, Trichlorofluoromethane)

The LCS/LCSD recovery is above the upper range, therefore a slight high bias is possible. (Vinyl chloride)

QC Batch 647576 (Samples: CM52357, CM52358, CM52359, CM52363): -----

The LCS or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,1-Dichloropropene, Trichlorotrifluoroethane)

The LCSD recovery is above the upper range, therefore a slight high bias is possible. (1,1-Dichloroethene)

The LCS/LCSD RPD exceeds the method criteria for one analyte, but this analyte was not reported in the sample(s). No significant variability is suspected. (Methyl ethyl ketone)

The QC recovery for one analyte are above the upper range but was not reported in the sample(s), therefore no significant bias is suspected. (Trichlorofluoromethane)

The QC recovery for one analyte are above the upper range, therefore a slight high bias is possible. (Vinyl chloride)

QC Batch 647784 (Samples: CM52362): -----

The LCS/LCSD recovery is above the upper range for one analyte that was not reported in the sample(s), therefore no significant bias is suspected. (Chloroethane)

Instrument:

CHEM23 10/15/22-2 Harry Mullin, Chemist 10/15/22

CM52359 (50X), CM52361 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_101222):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%), Dichlorodifluoromethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.057 (0.1), Methyl ethyl ketone 0.095 (0.1), Tetrachloroethene 0.176 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1015_31-VOA23_101222) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Chloroethane 21%H (20%), Dichlorodifluoromethane 39%H (20%), Trichlorofluoromethane 29%H (20%), Trichlorotrifluoroethane 23%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.057 (0.1), Methyl ethyl ketone 0.097 (0.1), Tetrachloroethene 0.176 (0.2)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

VOA Narration

The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/16/22-1 Michael Hahn, Chemist 10/16/22

CM52357 (1X), CM52358 (1X), CM52359 (1X), CM52363 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_101222):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%), Dichlorodifluoromethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.057 (0.1), Methyl ethyl ketone 0.095 (0.1), Tetrachloroethene 0.176 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1015_83-VOA23_101222) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2-Dibromo-3-chloropropane 21%L (20%), 2,2-Dichloropropane 37%L (20%), Dichlorodifluoromethane 31%H (20%), Trichlorofluoromethane 22%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.066 (0.1), Methyl ethyl ketone 0.099 (0.1), Tetrachloroethene 0.162 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/18/22-2 Harry Mullin, Chemist 10/18/22

CM52362 (1X)

Initial Calibration Evaluation (CHEM23/VOA23_101722):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 30% (20%), Bromoform 22% (20%), Chloroethane 26% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.065 (0.1), Tetrachloroethene 0.181 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1018_33-VOA23_101722) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Chloroethane 26%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.166 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 647499 (CM52361) CHEM23 10/15/2022-2

CM52359(50X), CM52361(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(133%), Trichlorofluoromethane(142%), Vinyl chloride(131%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Benzene(134%), Carbon tetrachloride(131%), Trichlorofluoromethane(142%), Vinyl chloride(132%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

VOA Narration

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647576 (CM51242) CHEM23 10/16/2022-1

CM52357(1X), CM52358(1X), CM52359(1X), CM52363(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,1-Dichloropropene(153%), Trichlorofluoromethane(146%), Vinyl chloride(135%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,1-Dichloroethene(136%), Trichlorofluoromethane(152%), Trichlorotrifluoroethane(132%), Vinyl chloride(134%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: Methyl ethyl ketone(28.6%)
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647784 (CM63149) CHEM23 10/18/2022-2

CM52362(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(138%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Chloroethane(136%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

PIDFID 10/10/22-1 James Karabetsos, Chemist 10/10/22

CM52358 (1X), CM52362 (1X)

Initial Calibration Evaluation (PIDFID/VPH_100322_T):
The following compounds exceeded %RSD criteria: None.

QC (Batch Specific):

Batch 646266 (CM52355)

CM52358(1X), CM52362(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 25% with the following exceptions: None.
This batch consists of a Blank, LCS and LCSD.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 26, 2022

SDG I.D.: GCM52356

VPH Narration

obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email Makrina Nolan: makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Temp 2.3 °C Pg of

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☐ Email:

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
978-905-2100

Project: CMC Wilmington 60688023 Project P.O: 148194
Report to: lori.herberich@aecom.com/tessa.murphy@aecom.com
Invoice to: Accounts Payable, AECOM
QUOTE # March 2022 (2022-2027)

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 10/6/22

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil
B=Bulk L=Liquid X = _____(Other)

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOCs 8260 HCl + Freon 113	1,4-Dioxane (8270D SIM)	VPH	EPH + PAHs	Total + Dissolved As	Total + Dissolved Fe, Mn	Chloride, Nitrate, Nitrite, Sulfate	Sulfide	Total Organic Carbon	MS/MSD*	GL Amber ___	Soil VOA Vials [ ] H3PO4 [ ] NAHSO4	GL Soil container ( ) methanol [ ] H2O	GL Soil container ( ) oz	40 ml VOA Vial	GL Amber 1000ml [ ] As is [ ] HCl	PL As is [ ] 250ml [ ] As is [ ] HCl	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
523560	22A-AE101D-100622-1	GW	10/6/22	1100		X								X					3							
523561	22A-AE101D-100622-1	GW	10/6/22	1410	X	X								X					X							
523562	22A-GZA105D-100622-1	GW	10/6/22	1350	X	X	X	X	X					8					5	X			2			
523563	22A-TRC201R-100622-1	GW	10/6/22	1420	X														X							
523564	22A-GZA6-100622-1	GW	10/6/22	1530					X														2			
523565	22A-TB01-100622-1	GW	10/6/22	0800	X														X							
523566	22A-EB01-100622-1	GW	10/6/22	1500	X	X	X	X	X	X	X	X	X	4					5	X	X		2	X		
523567	22A-EB02-100622-1	GW	10/6/22	1505	X														X							

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	10/7/22	10:10
[signature]	[signature]	10/7	1625

Comments, Special Requirements or Regulations:

**MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.*

Turnaround Time:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☐ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ (Residential) Direct Exposure
☐ (Comm/Industrial) Direct Exposure
☐ GA Leachability
☐ GB Leachability
☐ GA-GW Objectives
☐ GB-GW Objectives

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1 ☐ MWRA eSMART
☐ GW-2 ☐ S-1 10% CALC
☐ GW-3
☐ S-1 GW-1 ☐ S-1 GW-2 ☐ S-1 GW-3
☐ S-2 GW-1 ☐ S-2 GW-2 ☐ S-2 GW-3
☐ S-3 GW-1 ☐ S-3 GW-2 ☐ S-3 GW-3
☐ SW Protection

State where samples were collected: _____

Data Format
☐ Excel
☐ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

PEL-126 REV. 03/22

Sarah Bell

From: Murphy, Tessa <Tessa.Murphy@aecom.com>
Sent: Monday, October 10, 2022 10:11 AM
To: Sarah Bell
Cc: Herberich, Lori; Potter, Dylan (Chelmsford); Olson, Scott (Chelmsford); Rebecca Merz
Subject: RE: Phoenix Labs - GCM52356, LMC WIMINGTON 60688023 - COC Acknowledgement
Attachments: Field COC_Oct 07.pdf

Hi Sarah,

Please remove the dissolved and total arsenic analysis from sample 22A-GZA105D-100622-1.

Thanks,

Tessa Murphy
Pronouns: *she, her, hers*
Environmental Scientist
M +1-978-382-5209
tessa.murphy@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, United States
T +1-978-905-2100
aecom.com

From: Potter, Dylan (Chelmsford) <Dylan.Potter2@aecom.com>
Sent: Monday, October 10, 2022 09:58
To: Murphy, Tessa <Tessa.Murphy@aecom.com>; Olson, Scott (Chelmsford) <scott.olson@aecom.com>
Cc: Herberich, Lori <Lori.Herberich@aecom.com>
Subject: RE: Phoenix Labs - GCM52356, LMC WIMINGTON 60688023 - COC Acknowledgement

Yeah, we can remove the Arsenic

From: Murphy, Tessa <Tessa.Murphy@aecom.com>
Sent: Monday, October 10, 2022 9:37 AM
To: Olson, Scott (Chelmsford) <scott.olson@aecom.com>; Potter, Dylan (Chelmsford) <Dylan.Potter2@aecom.com>

Cc: Herberich, Lori <Lori.Herberich@aecom.com>
Subject: RE: Phoenix Labs - GCM52356, LMC WIMINGTON 60688023 - COC Acknowledgement

Good morning,

The sample 22A-GZA105D-100622-1 was marked on the COC and sample acknowledgment form as needing to be analyzed for total and dissolved arsenic, however this analysis was not needed based on the tracker. Should I cancel this analysis?

Thanks,

Tessa Murphy
Pronouns: *she, her, hers*
Environmental Scientist
M +1-978-382-5209
tessa.murphy@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824, United States
T +1-978-905-2100
aecom.com

From: SampleReceiving@phoenixlabs.com <SampleReceiving@phoenixlabs.com>
Sent: Friday, October 7, 2022 19:53
To: Murphy, Tessa <Tessa.Murphy@aecom.com>
Subject: Phoenix Labs - GCM52356, LMC WIMINGTON 60688023 - COC Acknowledgement

This is an automated sample acknowledgement.

If you were issued a Phoenix Price Quote # for this SDG and it was not listed on the chain, please email client services with the quote number so we can ensure proper invoicing. If no quote was issued, no further action is required.

Purchase Order#: 148194

Samples Will Be Disposed After: 75 Days

GCM52356 Criteria:
None.

Please email client services only if you require criteria different than what is listed.

Delivery group GCM52356 (LMC WIMINGTON 60688023) has been logged in for the following samples:

Phoenix Id	Client Id
CM52356	22A-AE109D-100622-1
CM52357	22A-AE101D-100622-1
CM52358	22A-GZA105D-100622-1
CM52359	22A-TRC201R-100622-1
CM52360	22A-GZA6-100622-1
CM52361	22A-TB01-100622-1
CM52362	22A-EB01-100622-1
CM52363	22A-EB02-100622-1

The samples in this delivery group were received at 2.3°C. (Note acceptance criteria for relevant matrices is above freezing up to 6°C)

If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.

Thank you for your business,

Phoenix Environmental Laboratories, Inc.
587 East Middle Turnpike
P.O. Box 370
Manchester, CT 06374
Tel. (860) 645-1102
Fax. (860) 645-0823
www.phoenixlabs.com

Please do not reply to this email.
cc'd:rebeccam@phoenixlabs.com;Lori.Herberich@aecom.com;Scott.Olson@aecom.com;dylan.potter@aecom.com;tessa.murphy@aecom.com

PHOENIX
Environmental Laboratories, Inc.

Sunday, October 23, 2022

Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Project ID: LMC WILMINGTON 60688023
SDG ID: GCM61538
Sample ID#s: CM61538 - CM61541

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 23, 2022

SDG I.D.: GCM61538

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

October 23, 2022

SDG I.D.: GCM61538

Project ID: LMC WILMINGTON 60688023

Client Id	Lab Id	Matrix
22A-IDW01-101122-1	CM61538	GROUND WATER
22A-IDW02-101122-1	CM61539	GROUND WATER
22A-IDW03-101122-1	CM61540	GROUND WATER
22A-IDW04-101122-1	CM61541	GROUND WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 23, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/11/22	16:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/13/22	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM61538
Phoenix ID: CM61538

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW01-101122-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,1-Dichloroethane	24	5.0	ug/L	5	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/16/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/16/22	MH	SW8260C

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW01-101122-1

Phoenix I.D.: CM61538

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/16/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/16/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/16/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/16/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	580	40	ug/L	40	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/16/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/16/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/16/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Tetrachloroethene	190	5.0	ug/L	5	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/16/22	MH	SW8260C
Toluene	370	5.0	ug/L	5	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	7.7	5.0	ug/L	5	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/16/22	MH	SW8260C
Trichloroethene	590	40	ug/L	40	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/16/22	MH	SW8260C
Vinyl chloride	32	5.0	ug/L	5	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	101		%	5	10/16/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	95		%	5	10/16/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	104		%	5	10/16/22	MH	70 - 130 %
% Toluene-d8 (5x)	94		%	5	10/16/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (40x)	100		%	40	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (40x)	94		%	40	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (40x)	98		%	40	10/15/22	MH	70 - 130 %

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW01-101122-1

Phoenix I.D.: CM61538

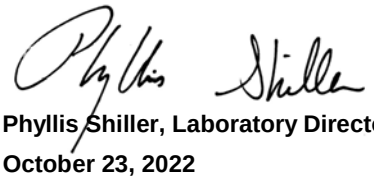
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (40x)	96		%	40	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	250	ug/L	5	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 23, 2022
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 23, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/11/22	16:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/13/22	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM61538
Phoenix ID: CM61539

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW02-101122-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	10/20/22	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	10/20/22	MH	SW8260C
1,1-Dichloroethane	28	10	ug/L	10	10/20/22	MH	SW8260C
1,1-Dichloroethene	ND	7.0	ug/L	10	10/20/22	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	10/20/22	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	10/20/22	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	10/20/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	10	10/20/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	10/20/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	10/20/22	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	10/20/22	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	10/20/22	MH	SW8260C
2-Hexanone	ND	38	ug/L	10	10/20/22	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	10/20/22	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	10/20/22	MH	SW8260C
Acetone	ND	250	ug/L	10	10/20/22	MH	SW8260C

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW02-101122-1

Phoenix I.D.: CM61539

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	10/20/22	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	10/20/22	MH	SW8260C
Bromodichloromethane	ND	3.0	ug/L	10	10/20/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	10	10/20/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	10/20/22	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	10/20/22	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
Chloroethane	ND	10	ug/L	10	10/20/22	MH	SW8260C
Chloroform	ND	10	ug/L	10	10/20/22	MH	SW8260C
Chloromethane	ND	10	ug/L	10	10/20/22	MH	SW8260C
cis-1,2-Dichloroethene	310	10	ug/L	10	10/20/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	10/20/22	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	10/20/22	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	10/20/22	MH	SW8260C
Methyl ethyl ketone	ND	38	ug/L	10	10/20/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	10/20/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	10	10/20/22	MH	SW8260C
Naphthalene	ND	10	ug/L	10	10/20/22	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
o-Xylene	ND	10	ug/L	10	10/20/22	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	10/20/22	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
Styrene	ND	10	ug/L	10	10/20/22	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	10/20/22	MH	SW8260C
Tetrachloroethene	670	10	ug/L	10	10/20/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	10/20/22	MH	SW8260C
Toluene	400	10	ug/L	10	10/20/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	10/20/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	10	10/20/22	MH	SW8260C
Trichloroethene	1200	20	ug/L	20	10/18/22	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	10/20/22	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	10/20/22	MH	SW8260C
Vinyl chloride	22	10	ug/L	10	10/20/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	101		%	10	10/20/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	95		%	10	10/20/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	101		%	10	10/20/22	MH	70 - 130 %
% Toluene-d8 (10x)	101		%	10	10/20/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	10/18/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/18/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	105		%	20	10/18/22	MH	70 - 130 %

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW02-101122-1

Phoenix I.D.: CM61539

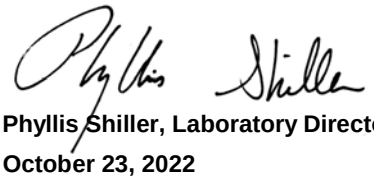
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	99		%	20	10/18/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	500	ug/L	10	10/20/22	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	10/20/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	10/20/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	10/20/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	10/20/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 23, 2022
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 23, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/11/22	16:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/13/22	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM61538
Phoenix ID: CM61540

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW03-101122-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/17/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,1-Dichloroethane	9.3	1.0	ug/L	1	10/17/22	HM	SW8260C
1,1-Dichloroethene	1.9	1.0	ug/L	1	10/17/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/17/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/17/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/17/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/17/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/17/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/17/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/17/22	HM	SW8260C

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW03-101122-1

Phoenix I.D.: CM61540

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/17/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/17/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/17/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
cis-1,2-Dichloroethene	110	40	ug/L	40	10/15/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/17/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/17/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/17/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/17/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Tetrachloroethene	230	40	ug/L	40	10/15/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/17/22	HM	SW8260C
Toluene	5.8	1.0	ug/L	1	10/17/22	HM	SW8260C
trans-1,2-Dichloroethene	2.2	1.0	ug/L	1	10/17/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/17/22	HM	SW8260C
Trichloroethene	370	40	ug/L	40	10/15/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/17/22	HM	SW8260C
Vinyl chloride	9.2	1.0	ug/L	1	10/17/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/17/22	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/17/22	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	10/17/22	HM	70 - 130 %
% Toluene-d8	92		%	1	10/17/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (40x)	100		%	40	10/15/22	HM	70 - 130 %
% Bromofluorobenzene (40x)	95		%	40	10/15/22	HM	70 - 130 %
% Dibromofluoromethane (40x)	100		%	40	10/15/22	HM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (40x)	97		%	40	10/15/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/17/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/17/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/17/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/17/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/17/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 23, 2022
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 23, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/11/22	16:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/13/22	15:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM61538
Phoenix ID: CM61541

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW04-101122-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	40	40	ug/L	40	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,1-Dichloroethane	68	40	ug/L	40	10/16/22	MH	SW8260C
1,1-Dichloroethene	19	10	ug/L	40	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	40	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	40	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	10/16/22	MH	SW8260C
2-Hexanone	ND	100	ug/L	40	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	10/16/22	MH	SW8260C
Acetone	ND	1000	ug/L	40	10/16/22	MH	SW8260C

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW04-101122-1

Phoenix I.D.: CM61541

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	40	10/16/22	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	10/16/22	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
Bromoform	ND	10	ug/L	40	10/16/22	MH	SW8260C
Bromomethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	40	10/16/22	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
Chloroethane	ND	40	ug/L	40	10/16/22	MH	SW8260C
Chloroform	ND	40	ug/L	40	10/16/22	MH	SW8260C
Chloromethane	ND	40	ug/L	40	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	230	40	ug/L	40	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	40	10/16/22	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
Dibromomethane	ND	10	ug/L	40	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	10/16/22	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	40	10/16/22	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	40	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	10/16/22	MH	SW8260C
Methylene chloride	ND	40	ug/L	40	10/16/22	MH	SW8260C
Naphthalene	ND	40	ug/L	40	10/16/22	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
o-Xylene	ND	40	ug/L	40	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
Styrene	ND	40	ug/L	40	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	10/16/22	MH	SW8260C
Tetrachloroethene	2100	40	ug/L	40	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	10/16/22	MH	SW8260C
Toluene	160	40	ug/L	40	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	40	10/16/22	MH	SW8260C
Trichloroethene	8600	200	ug/L	200	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	10/16/22	MH	SW8260C
Vinyl chloride	30	10	ug/L	40	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	101		%	40	10/16/22	MH	70 - 130 %
% Bromofluorobenzene (40x)	94		%	40	10/16/22	MH	70 - 130 %
% Dibromofluoromethane (40x)	101		%	40	10/16/22	MH	70 - 130 %
% Toluene-d8 (40x)	93		%	40	10/16/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	100		%	200	10/16/22	MH	70 - 130 %
% Bromofluorobenzene (200x)	94		%	200	10/16/22	MH	70 - 130 %
% Dibromofluoromethane (200x)	105		%	200	10/16/22	MH	70 - 130 %

Project ID: LMC WILMINGTON 60688023
Client ID: 22A-IDW04-101122-1

Phoenix I.D.: CM61541

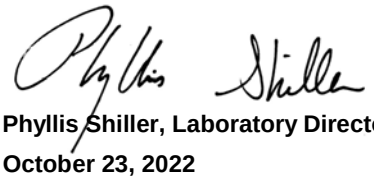
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	95		%	200	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	40	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 23, 2022
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 23, 2022

QA/QC Data

SDG I.D.: GCM61538

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 647576 (ug/L), QC Sample No: CM51242 (CM61538 (5X) , CM61541 (200X))											
Volatiles - Ground Water											
1,1,1,2-Tetrachloroethane	ND	1.0	98	99	1.0	97	99	2.0	70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	122	124	1.6	124	122	1.6	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	113	110	2.7	114	114	0.0	70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	104	104	0.0	103	105	1.9	70 - 130	20	
1,1-Dichloroethane	ND	1.0	113	120	6.0	116	118	1.7	70 - 130	20	
1,1-Dichloroethene	ND	1.0	124	136	9.2	129	127	1.6	70 - 130	20	l
1,1-Dichloropropene	ND	1.0	153	129	17.0	129	126	2.4	70 - 130	20	l
1,2,3-Trichlorobenzene	ND	1.0	109	113	3.6	108	109	0.9	70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	111	110	0.9	119	121	1.7	70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	109	2.8	104	106	1.9	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	110	112	1.8	108	110	1.8	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	92	88	4.4	92	93	1.1	70 - 130	20	
1,2-Dibromoethane	ND	1.0	107	105	1.9	106	107	0.9	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	113	3.6	109	111	1.8	70 - 130	20	
1,2-Dichloroethane	ND	1.0	124	108	13.8	122	124	1.6	70 - 130	20	
1,2-Dichloropropane	ND	1.0	101	104	2.9	101	104	2.9	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	114	116	1.7	111	114	2.7	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	108	109	0.9	105	107	1.9	70 - 130	20	
1,3-Dichloropropane	ND	1.0	113	110	2.7	111	113	1.8	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	110	112	1.8	107	110	2.8	70 - 130	20	
1,4-dioxane	ND	100	110	110	0.0	109	114	4.5	40 - 160	20	
2,2-Dichloropropane	ND	1.0	110	114	3.6	84	84	0.0	70 - 130	20	
2-Chlorotoluene	ND	1.0	110	112	1.8	107	112	4.6	70 - 130	20	
2-Hexanone	ND	5.0	103	98	5.0	100	100	0.0	40 - 160	20	
4-Chlorotoluene	ND	1.0	110	113	2.7	107	111	3.7	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	101	98	3.0	101	102	1.0	40 - 160	20	
Acetone	ND	5.0	111	118	6.1	115	117	1.7	40 - 160	20	
Benzene	ND	0.70	129	115	11.5	128	134	4.6	70 - 130	20	m
Bromobenzene	ND	1.0	108	107	0.9	105	107	1.9	70 - 130	20	
Bromochloromethane	ND	1.0	101	109	7.6	102	106	3.8	70 - 130	20	
Bromodichloromethane	ND	0.50	100	100	0.0	98	101	3.0	70 - 130	20	
Bromoform	ND	1.0	91	88	3.4	87	90	3.4	70 - 130	20	
Bromomethane	ND	1.0	114	124	8.4	121	119	1.7	40 - 160	20	
Carbon Disulfide	ND	1.0	108	117	8.0	109	106	2.8	70 - 130	20	
Carbon tetrachloride	ND	1.0	113	116	2.6	118	116	1.7	70 - 130	20	
Chlorobenzene	ND	1.0	110	111	0.9	101	103	2.0	70 - 130	20	
Chloroethane	ND	1.0	120	126	4.9	128	121	5.6	70 - 130	20	
Chloroform	ND	1.0	113	121	6.8	115	117	1.7	70 - 130	20	
Chloromethane	ND	1.0	118	120	1.7	123	119	3.3	40 - 160	20	
cis-1,3-Dichloropropene	ND	0.40	94	95	1.1	87	89	2.3	70 - 130	20	
Dibromochloromethane	ND	0.50	99	96	3.1	94	97	3.1	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Dibromomethane	ND	1.0	107	108	0.9	106	106	0.0	70 - 130	20	
Dichlorodifluoromethane	ND	1.0	147	146	0.7	148	141	4.8	40 - 160	20	
Di-isopropyl ether	ND	1.0	98	106	7.8	100	101	1.0	70 - 130	20	
Ethyl ether	ND	1.0	100	106	5.8	101	101	0.0	70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	98	104	5.9	101	102	1.0	70 - 130	20	
Ethylbenzene	ND	1.0	114	114	0.0	112	114	1.8	70 - 130	20	
Hexachlorobutadiene	ND	0.40	113	113	0.0	104	106	1.9	70 - 130	20	
Isopropylbenzene	ND	1.0	112	113	0.9	111	112	0.9	70 - 130	20	
m&p-Xylene	ND	1.0	114	115	0.9	113	114	0.9	70 - 130	20	
Methyl ethyl ketone	ND	5.0	148	111	28.6	120	111	7.8	40 - 160	20	r
Methyl t-butyl ether (MTBE)	ND	1.0	104	111	6.5	105	106	0.9	70 - 130	20	
Methylene chloride	ND	1.0	105	117	10.8	107	108	0.9	70 - 130	20	
Naphthalene	ND	1.0	109	108	0.9	108	109	0.9	70 - 130	20	
n-Butylbenzene	ND	1.0	124	126	1.6	120	120	0.0	70 - 130	20	
n-Propylbenzene	ND	1.0	115	115	0.0	111	114	2.7	70 - 130	20	
o-Xylene	ND	1.0	106	106	0.0	104	105	1.0	70 - 130	20	
p-Isopropyltoluene	ND	1.0	116	117	0.9	113	113	0.0	70 - 130	20	
sec-Butylbenzene	ND	1.0	120	121	0.8	119	119	0.0	70 - 130	20	
Styrene	ND	1.0	112	110	1.8	107	112	4.6	70 - 130	20	
tert-amyl methyl ether	ND	1.0	108	97	10.7	106	109	2.8	70 - 130	20	
tert-Butylbenzene	ND	1.0	114	115	0.9	112	114	1.8	70 - 130	20	
Tetrachloroethene	ND	1.0	108	109	0.9	105	105	0.0	70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	114	111	2.7	110	111	0.9	70 - 130	20	
Toluene	ND	1.0	107	110	2.8	102	104	1.9	70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	113	124	9.3	114	116	1.7	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	93	93	0.0	87	88	1.1	70 - 130	20	
Trichloroethene	ND	1.0	109	109	0.0	109	109	0.0	70 - 130	20	
Trichlorofluoromethane	ND	1.0	146	152	4.0	150	145	3.4	70 - 130	20	l,m
Trichlorotrifluoroethane	ND	1.0	125	132	5.4	128	121	5.6	70 - 130	20	l
Vinyl chloride	ND	1.0	135	134	0.7	137	134	2.2	70 - 130	20	l,m
% 1,2-dichlorobenzene-d4	100	%	98	100	2.0	101	100	1.0	70 - 130	20	
% Bromofluorobenzene	95	%	98	96	2.1	98	97	1.0	70 - 130	20	
% Dibromofluoromethane	95	%	98	102	4.0	97	97	0.0	70 - 130	20	
% Toluene-d8	98	%	96	97	1.0	96	97	1.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647460 (ug/L), QC Sample No: CM52224 (CM61540)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	5.0	109	110	0.9	104	108	3.8	70 - 130	20	
1,1,1-Trichloroethane	ND	5.0	116	116	0.0	115	115	0.0	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	5.0	98	97	1.0	100	101	1.0	70 - 130	20	
1,1,2-Trichloroethane	ND	5.0	103	104	1.0	105	107	1.9	70 - 130	20	
1,1-Dichloroethane	ND	5.0	111	111	0.0	109	111	1.8	70 - 130	20	
1,1-Dichloroethene	ND	5.0	120	122	1.7	120	120	0.0	70 - 130	20	
1,1-Dichloropropene	ND	5.0	119	119	0.0	117	117	0.0	70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	107	108	0.9	102	110	7.5	70 - 130	20	
1,2,3-Trichloropropane	ND	5.0	97	97	0.0	96	98	2.1	70 - 130	20	
1,2,4-Trichlorobenzene	ND	5.0	116	118	1.7	110	112	1.8	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	107	108	0.9	107	109	1.9	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	5.0	91	95	4.3	85	97	13.2	70 - 130	20	

QA/QC Data

SDG I.D.: GCM61538

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,2-Dibromoethane	ND	5.0	103	102	1.0	103	104	1.0	70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	106	107	0.9	104	108	3.8	70 - 130	20	
1,2-Dichloroethane	ND	0.60	105	107	1.9	105	106	0.9	70 - 130	20	
1,2-Dichloropropane	ND	5.0	108	109	0.9	108	108	0.0	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	110	111	0.9	109	110	0.9	70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	105	107	1.9	104	107	2.8	70 - 130	20	
1,3-Dichloropropane	ND	5.0	107	106	0.9	104	107	2.8	70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	107	107	0.0	104	105	1.0	70 - 130	20	
1,4-dioxane	ND	100	102	102	0.0	102	101	1.0	40 - 160	20	
2,2-Dichloropropane	ND	5.0	118	115	2.6	98	103	5.0	70 - 130	20	
2-Chlorotoluene	ND	5.0	109	111	1.8	107	109	1.9	70 - 130	20	
2-Hexanone	ND	5.0	80	87	8.4	86	88	2.3	40 - 160	20	
4-Chlorotoluene	ND	5.0	110	111	0.9	107	108	0.9	70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	85	89	4.6	90	94	4.3	40 - 160	20	
Acetone	ND	10	87	91	4.5	96	97	1.0	40 - 160	20	
Benzene	ND	0.70	110	110	0.0	108	111	2.7	70 - 130	20	
Bromobenzene	ND	5.0	109	110	0.9	109	108	0.9	70 - 130	20	
Bromochloromethane	ND	5.0	112	110	1.8	110	109	0.9	70 - 130	20	
Bromodichloromethane	ND	5.0	109	108	0.9	106	108	1.9	70 - 130	20	
Bromoform	ND	5.0	114	114	0.0	106	112	5.5	70 - 130	20	
Bromomethane	ND	5.0	106	109	2.8	82	95	14.7	40 - 160	20	
Carbon Disulfide	ND	5.0	118	116	1.7	116	117	0.9	70 - 130	20	
Carbon tetrachloride	ND	5.0	125	108	14.6	109	116	6.2	70 - 130	20	
Chlorobenzene	ND	1.0	109	111	1.8	107	107	0.0	70 - 130	20	
Chloroethane	ND	5.0	117	113	3.5	116	115	0.9	70 - 130	20	
Chloroform	ND	5.0	111	111	0.0	110	110	0.0	70 - 130	20	
Chloromethane	ND	5.0	102	102	0.0	100	100	0.0	40 - 160	20	
cis-1,3-Dichloropropene	ND	5.0	107	107	0.0	102	104	1.9	70 - 130	20	
Dibromochloromethane	ND	5.0	109	108	0.9	102	107	4.8	70 - 130	20	
Dibromomethane	ND	5.0	104	105	1.0	105	105	0.0	70 - 130	20	
Dichlorodifluoromethane	ND	5.0	124	124	0.0	119	121	1.7	40 - 160	20	
Ethyl ether	ND	5.0	101	103	2.0	105	107	1.9	70 - 130	20	
Ethylbenzene	ND	1.0	112	111	0.9	108	112	3.6	70 - 130	20	
Hexachlorobutadiene	ND	5.0	125	123	1.6	111	119	7.0	70 - 130	20	
Isopropylbenzene	ND	1.0	116	114	1.7	115	114	0.9	70 - 130	20	
m&p-Xylene	ND	1.0	110	112	1.8	109	112	2.7	70 - 130	20	
Methyl ethyl ketone	ND	5.0	86	90	4.5	92	97	5.3	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	98	100	2.0	99	101	2.0	70 - 130	20	
Methylene chloride	ND	5.0	105	105	0.0	104	106	1.9	70 - 130	20	
Naphthalene	ND	1.0	97	98	1.0	94	103	9.1	70 - 130	20	
n-Butylbenzene	ND	1.0	119	120	0.8	113	115	1.8	70 - 130	20	
n-Propylbenzene	ND	1.0	113	115	1.8	109	112	2.7	70 - 130	20	
o-Xylene	ND	1.0	108	110	1.8	105	106	0.9	70 - 130	20	
p-Isopropyltoluene	ND	1.0	117	117	0.0	112	115	2.6	70 - 130	20	
sec-Butylbenzene	ND	1.0	117	118	0.9	116	117	0.9	70 - 130	20	
Styrene	ND	1.0	110	113	2.7	110	113	2.7	70 - 130	20	
tert-Butylbenzene	ND	1.0	115	115	0.0	112	113	0.9	70 - 130	20	
Tetrahydrofuran (THF)	ND	5.0	88	90	2.2	95	95	0.0	70 - 130	20	
Toluene	ND	1.0	110	110	0.0	110	110	0.0	70 - 130	20	
trans-1,2-Dichloroethene	ND	5.0	110	112	1.8	109	111	1.8	70 - 130	20	
trans-1,3-Dichloropropene	ND	5.0	105	106	0.9	102	102	0.0	70 - 130	20	
Trichlorofluoromethane	ND	5.0	137	136	0.7	133	132	0.8	70 - 130	20	l,m
Trichlorotrifluoroethane	ND	5.0	125	124	0.8	123	125	1.6	70 - 130	20	

QA/QC Data

SDG I.D.: GCM61538

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Vinyl chloride	ND	5.0	122	121	0.8	121	122	0.8	70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	99	98	1.0	99	100	1.0	70 - 130	20	
% Bromofluorobenzene	95	%	100	99	1.0	98	98	0.0	70 - 130	20	
% Dibromofluoromethane	101	%	101	102	1.0	100	101	1.0	70 - 130	20	
% Toluene-d8	100	%	100	100	0.0	100	100	0.0	70 - 130	20	

Comment:

A blank MS/MSD was analyzed with this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647499 (ug/L), QC Sample No: CM52361 (CM61538 (40X) , CM61540 (40X) , CM61541 (40X))

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	98	103	5.0				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	117	118	0.9				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	106	111	4.6				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	100	104	3.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	115	116	0.9				70 - 130	20	
1,1-Dichloroethene	ND	1.0	127	126	0.8				70 - 130	20	
1,1-Dichloropropene	ND	1.0	121	126	4.0				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	107	112	4.6				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	105	109	3.7				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	106	114	7.3				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	108	114	5.4				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	87	91	4.5				70 - 130	20	
1,2-Dibromoethane	ND	1.0	103	108	4.7				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	109	113	3.6				70 - 130	20	
1,2-Dichloroethane	ND	1.0	118	126	6.6				70 - 130	20	
1,2-Dichloropropane	ND	1.0	99	104	4.9				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	111	117	5.3				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	105	110	4.7				70 - 130	20	
1,3-Dichloropropane	ND	1.0	108	113	4.5				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	108	114	5.4				70 - 130	20	
1,4-dioxane	ND	100	107	113	5.5				40 - 160	20	
2,2-Dichloropropane	ND	1.0	107	108	0.9				70 - 130	20	
2-Chlorotoluene	ND	1.0	107	114	6.3				70 - 130	20	
2-Hexanone	ND	5.0	94	97	3.1				40 - 160	20	
4-Chlorotoluene	ND	1.0	108	114	5.4				70 - 130	20	
4-Methyl-2-pentanone	ND	5.0	93	98	5.2				40 - 160	20	
Acetone	ND	5.0	109	103	5.7				40 - 160	20	
Benzene	ND	0.70	111	134	18.8				70 - 130	20	I
Bromobenzene	ND	1.0	105	111	5.6				70 - 130	20	
Bromochloromethane	ND	1.0	105	105	0.0				70 - 130	20	
Bromodichloromethane	ND	0.50	98	103	5.0				70 - 130	20	
Bromoform	ND	1.0	86	91	5.6				70 - 130	20	
Bromomethane	ND	1.0	118	119	0.8				40 - 160	20	
Carbon Disulfide	ND	1.0	112	110	1.8				70 - 130	20	
Carbon tetrachloride	ND	1.0	130	131	0.8				70 - 130	20	I
Chlorobenzene	ND	1.0	107	113	5.5				70 - 130	20	
Chloroethane	ND	1.0	133	130	2.3				70 - 130	20	I
Chloroform	ND	1.0	115	114	0.9				70 - 130	20	
Chloromethane	ND	1.0	118	120	1.7				40 - 160	20	
cis-1,2-Dichloroethene	ND	1.0	115	118	2.6				70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
cis-1,3-Dichloropropene	ND	0.40	92	98	6.3				70 - 130	20	
Dibromochloromethane	ND	0.50	94	99	5.2				70 - 130	20	
Dibromomethane	ND	1.0	104	108	3.8				70 - 130	20	
Dichlorodifluoromethane	ND	1.0	144	145	0.7				40 - 160	20	
Di-isopropyl ether	ND	1.0	105	104	1.0				70 - 130	20	
Ethyl ether	ND	1.0	105	101	3.9				70 - 130	20	
Ethyl tert-butyl ether	ND	1.0	102	105	2.9				70 - 130	20	
Ethylbenzene	ND	1.0	109	116	6.2				70 - 130	20	
Hexachlorobutadiene	ND	0.40	109	113	3.6				70 - 130	20	
Isopropylbenzene	ND	1.0	109	114	4.5				70 - 130	20	
m&p-Xylene	ND	1.0	110	115	4.4				70 - 130	20	
Methyl ethyl ketone	ND	5.0	108	103	4.7				40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	107	105	1.9				70 - 130	20	
Methylene chloride	ND	1.0	112	108	3.6				70 - 130	20	
Naphthalene	ND	1.0	103	108	4.7				70 - 130	20	
n-Butylbenzene	ND	1.0	120	125	4.1				70 - 130	20	
n-Propylbenzene	ND	1.0	110	117	6.2				70 - 130	20	
o-Xylene	ND	1.0	103	109	5.7				70 - 130	20	
p-Isopropyltoluene	ND	1.0	112	117	4.4				70 - 130	20	
sec-Butylbenzene	ND	1.0	116	121	4.2				70 - 130	20	
Styrene	ND	1.0	106	114	7.3				70 - 130	20	
tert-amyl methyl ether	ND	1.0	97	113	15.2				70 - 130	20	
tert-Butylbenzene	ND	1.0	110	117	6.2				70 - 130	20	
Tetrachloroethene	ND	1.0	104	108	3.8				70 - 130	20	
Tetrahydrofuran (THF)	ND	2.5	105	106	0.9				70 - 130	20	
Toluene	ND	1.0	104	109	4.7				70 - 130	20	
trans-1,2-Dichloroethene	ND	1.0	117	115	1.7				70 - 130	20	
trans-1,3-Dichloropropene	ND	0.40	92	96	4.3				70 - 130	20	
Trichloroethene	ND	1.0	105	110	4.7				70 - 130	20	
Trichlorofluoromethane	ND	1.0	142	142	0.0				70 - 130	20	I
Trichlorotrifluoroethane	ND	1.0	125	122	2.4				70 - 130	20	
Vinyl chloride	ND	1.0	131	132	0.8				70 - 130	20	I
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	20	
% Bromofluorobenzene	95	%	98	97	1.0				70 - 130	20	
% Dibromofluoromethane	101	%	99	98	1.0				70 - 130	20	
% Toluene-d8	96	%	97	96	1.0				70 - 130	20	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 647791 (ug/L), QC Sample No: CM60991 (CM61539 (20X))

Volatiles - Ground Water

Trichloroethene	ND	1.0	99	94	5.2				70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0				70 - 130	20	
% Bromofluorobenzene	97	%	103	99	4.0				70 - 130	20	
% Dibromofluoromethane	103	%	101	103	2.0				70 - 130	20	
% Toluene-d8	100	%	100	99	1.0				70 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Data

SDG I.D.: GCM61538

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 648319 (ug/L), QC Sample No: CM63148 (CM61539 (10X))										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	5.0	112	111	0.9				70 - 130	20
1,1,1-Trichloroethane	ND	5.0	105	108	2.8				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	5.0	104	106	1.9				70 - 130	20
1,1,2-Trichloroethane	ND	5.0	103	104	1.0				70 - 130	20
1,1-Dichloroethane	ND	5.0	107	110	2.8				70 - 130	20
1,1-Dichloroethene	ND	5.0	107	108	0.9				70 - 130	20
1,1-Dichloropropene	ND	5.0	101	106	4.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	109	112	2.7				70 - 130	20
1,2,3-Trichloropropane	ND	5.0	105	106	0.9				70 - 130	20
1,2,4-Trichlorobenzene	ND	5.0	108	111	2.7				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	110	111	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	5.0	106	115	8.1				70 - 130	20
1,2-Dibromoethane	ND	5.0	110	109	0.9				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	103	105	1.9				70 - 130	20
1,2-Dichloroethane	ND	0.60	98	98	0.0				70 - 130	20
1,2-Dichloropropane	ND	5.0	103	102	1.0				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	110	112	1.8				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	106	107	0.9				70 - 130	20
1,3-Dichloropropane	ND	5.0	108	108	0.0				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	103	105	1.9				70 - 130	20
1,4-dioxane	ND	100	105	104	1.0				40 - 160	20
2,2-Dichloropropane	ND	5.0	109	113	3.6				70 - 130	20
2-Chlorotoluene	ND	5.0	108	110	1.8				70 - 130	20
2-Hexanone	ND	5.0	95	97	2.1				40 - 160	20
4-Chlorotoluene	ND	5.0	108	112	3.6				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	96	98	2.1				40 - 160	20
Acetone	ND	10	103	103	0.0				40 - 160	20
Benzene	ND	0.70	101	104	2.9				70 - 130	20
Bromobenzene	ND	5.0	104	106	1.9				70 - 130	20
Bromochloromethane	ND	5.0	108	111	2.7				70 - 130	20
Bromodichloromethane	ND	5.0	105	105	0.0				70 - 130	20
Bromoform	ND	5.0	110	112	1.8				70 - 130	20
Bromomethane	ND	5.0	92	93	1.1				40 - 160	20
Carbon Disulfide	ND	5.0	98	98	0.0				70 - 130	20
Carbon tetrachloride	ND	5.0	107	108	0.9				70 - 130	20
Chlorobenzene	ND	1.0	106	105	0.9				70 - 130	20
Chloroethane	ND	5.0	122	120	1.7				70 - 130	20
Chloroform	ND	5.0	107	109	1.9				70 - 130	20
Chloromethane	ND	5.0	93	92	1.1				40 - 160	20
cis-1,2-Dichloroethene	ND	5.0	107	111	3.7				70 - 130	20
cis-1,3-Dichloropropene	ND	5.0	106	107	0.9				70 - 130	20
Dibromochloromethane	ND	5.0	111	111	0.0				70 - 130	20
Dibromomethane	ND	5.0	106	105	0.9				70 - 130	20
Dichlorodifluoromethane	ND	5.0	80	84	4.9				40 - 160	20
Ethyl ether	ND	5.0	96	96	0.0				70 - 130	20
Ethylbenzene	ND	1.0	110	111	0.9				70 - 130	20
Hexachlorobutadiene	ND	5.0	106	107	0.9				70 - 130	20
Isopropylbenzene	ND	1.0	111	113	1.8				70 - 130	20
m&p-Xylene	ND	1.0	111	112	0.9				70 - 130	20
Methyl ethyl ketone	ND	5.0	94	101	7.2				40 - 160	20

QA/QC Data

SDG I.D.: GCM61538

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Methyl t-butyl ether (MTBE)	ND	1.0	109	106	2.8				70 - 130	20
Methylene chloride	ND	5.0	105	101	3.9				70 - 130	20
Naphthalene	ND	1.0	113	116	2.6				70 - 130	20
n-Butylbenzene	ND	1.0	113	115	1.8				70 - 130	20
n-Propylbenzene	ND	1.0	108	111	2.7				70 - 130	20
o-Xylene	ND	1.0	109	111	1.8				70 - 130	20
p-Isopropyltoluene	ND	1.0	112	114	1.8				70 - 130	20
sec-Butylbenzene	ND	1.0	111	114	2.7				70 - 130	20
Styrene	ND	1.0	116	115	0.9				70 - 130	20
tert-Butylbenzene	ND	1.0	110	113	2.7				70 - 130	20
Tetrachloroethene	ND	1.0	100	103	3.0				70 - 130	20
Tetrahydrofuran (THF)	ND	5.0	101	102	1.0				70 - 130	20
Toluene	ND	1.0	103	105	1.9				70 - 130	20
trans-1,2-Dichloroethene	ND	5.0	108	105	2.8				70 - 130	20
trans-1,3-Dichloropropene	ND	5.0	107	108	0.9				70 - 130	20
Trichlorofluoromethane	ND	5.0	103	107	3.8				70 - 130	20
Trichlorotrifluoroethane	ND	5.0	96	97	1.0				70 - 130	20
Vinyl chloride	ND	5.0	99	104	4.9				70 - 130	20
% 1,2-dichlorobenzene-d4	101	%	99	99	0.0				70 - 130	20
% Bromofluorobenzene	98	%	101	101	0.0				70 - 130	20
% Dibromofluoromethane	100	%	102	101	1.0				70 - 130	20
% Toluene-d8	99	%	98	99	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 23, 2022

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61538	$8260GWR-WI	Methyl ethyl ketone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CM61538	$8260GWR-WI	Bromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Bromodichloromethane	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61538	$8260GWR-WI	Bromoform	MA / CAM Protocol / VOA AQ RL	ND	4.0		2	ug/L
CM61538	$8260GWR-WI	Bromomethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	25		2	ug/L
CM61538	$8260GWR-WI	Chlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Chloroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Chloroform	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Chloromethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Dibromomethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Dichlorodifluoromethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Bromobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Isopropylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	sec-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Methylene chloride	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	n-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	n-Propylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	o-Xylene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	p-Isopropyltoluene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Styrene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	13		2	ug/L
CM61538	$8260GWR-WI	Trichlorofluoromethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Trichlorotrifluoroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Ethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	3.0		2	ug/L
CM61538	$8260GWR-WI	1,1,2-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61538	$8260GWR-WI	1,1-Dichloroethene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Benzene	MA / CAM Protocol / VOA AQ RL	ND	3.5		2	ug/L
CM61538	$8260GWR-WI	tert-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,1-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,2-Dichloroethane	MA / CAM Protocol / VOA AQ RL	ND	3.0		2	ug/L
CM61538	$8260GWR-WI	1,1,1-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,3-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	130		10	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61538	$8260GWR-WI	4-Methyl-2-pentanone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CM61538	$8260GWR-WI	4-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	2-Hexanone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CM61538	$8260GWR-WI	2-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	2,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61538	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	1.3	0.6	0.6	ug/L
CM61538	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	590	40	5	5	ug/L
CM61538	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	190	5.0	5	5	ug/L
CM61538	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	1.3	0.47	0.47	ug/L
CM61538	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	1.3	0.0075	0.0075	ug/L
CM61538	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	0.00033	0.00033	ug/L
CM61538	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	580	40	20	20	ug/L
CM61538	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	1.3	0.47	0.47	ug/L
CM61538	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	1.3	0.00075	0.00075	ug/L
CM61538	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	32	5.0	2	2	ug/L
CM61538	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.6	0.6	ug/L
CM61538	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM61538	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	590	40	5	5	ug/L
CM61538	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	190	5.0	5	5	ug/L
CM61538	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.02	0.02	ug/L
CM61538	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	32	5.0	2	2	ug/L
CM61538	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	1.3	0.5	0.5	ug/L
CM61538	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	580	40	20	20	ug/L
CM61538	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	190	5.0	50	50	ug/L
CM61538	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	590	40	5	5	ug/L
CM61538	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	580	40	20	20	ug/L
CM61538	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	32	5.0	2	2	ug/L
CM61538	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	32	5.0	2	2	ug/L
CM61538	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	190	5.0	5	5	ug/L
CM61538	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	590	40	5	5	ug/L
CM61538	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.02	0.02	ug/L
CM61538	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	1.3	0.6	0.6	ug/L
CM61538	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	580	40	70	70	ug/L
CM61538	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	32	5.0	2	2	ug/L
CM61538	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	190	5.0	50	50	ug/L
CM61538	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	590	40	5	5	ug/L
CM61538	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	580	40	20	20	ug/L
CM61538	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	250	0.3	0.3	ug/L
CM61538	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	250	0.3	0.3	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61538	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	250	0.3	0.3	ug/L
CM61539	$8260GWR-WI	Chloroform	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Bromodichloromethane	MA / CAM Protocol / VOA AQ RL	ND	3.0		2	ug/L
CM61539	$8260GWR-WI	Dibromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	Dibromomethane	MA / CAM Protocol / VOA AQ RL	ND	8.3		2	ug/L
CM61539	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	Dichlorodifluoromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Chloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Chloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Chlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Carbon tetrachloride	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	50		2	ug/L
CM61539	$8260GWR-WI	Ethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Bromoform	MA / CAM Protocol / VOA AQ RL	ND	4.0		2	ug/L
CM61539	$8260GWR-WI	o-Xylene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Bromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Bromobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Bromomethane	MA / CAM Protocol / VOA AQ RL	ND	7.0		2	ug/L
CM61539	$8260GWR-WI	Styrene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Benzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61539	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	7.0		2	ug/L
CM61539	$8260GWR-WI	Trichlorotrifluoroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Trichlorofluoromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	n-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	tert-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Hexachlorobutadiene	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	sec-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	p-Isopropyltoluene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	n-Propylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Methylene chloride	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Methyl ethyl ketone	MA / CAM Protocol / VOA AQ RL	ND	38		10	ug/L
CM61539	$8260GWR-WI	Isopropylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	25		2	ug/L
CM61539	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	1,2,3-Trichloropropane	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	1,1-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	1,1-Dichloroethene	MA / CAM Protocol / VOA AQ RL	ND	7.0		2	ug/L
CM61539	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61539	$8260GWR-WI	1,1,2-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61539	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61539	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	250		10	ug/L
CM61539	$8260GWR-WI	1,2-Dibromoethane	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	1,2-Dichloroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61539	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61539	$8260GWR-WI	1,1,1-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61539	$8260GWR-WI	1,3-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61539	$8260GWR-WI	2,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	2-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	2-Hexanone	MA / CAM Protocol / VOA AQ RL	ND	38		10	ug/L
CM61539	$8260GWR-WI	4-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61539	$8260GWR-WI	4-Methyl-2-pentanone	MA / CAM Protocol / VOA AQ RL	ND	50		10	ug/L
CM61539	$8260GWR-WI	1,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	3.0		2	ug/L
CM61539	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	5.0	0.00033	0.00033	ug/L
CM61539	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	0.00075	0.00075	ug/L
CM61539	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	5	5	ug/L
CM61539	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	670	10	5	5	ug/L
CM61539	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	1200	20	5	5	ug/L
CM61539	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	22	10	2	2	ug/L
CM61539	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	0.47	0.47	ug/L
CM61539	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	0.0075	0.0075	ug/L
CM61539	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	310	10	20	20	ug/L
CM61539	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	0.47	0.47	ug/L
CM61539	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2.5	0.6	0.6	ug/L
CM61539	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM61539	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CM61539	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.5	0.5	ug/L
CM61539	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	1200	20	5	5	ug/L
CM61539	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	310	10	20	20	ug/L
CM61539	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	22	10	2	2	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61539	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.02	0.02	ug/L
CM61539	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2.5	0.6	0.6	ug/L
CM61539	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	670	10	5	5	ug/L
CM61539	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	310	10	20	20	ug/L
CM61539	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	22	10	2	2	ug/L
CM61539	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	1200	20	5	5	ug/L
CM61539	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	670	10	50	50	ug/L
CM61539	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	1200	20	5	5	ug/L
CM61539	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.6	0.6	ug/L
CM61539	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	310	10	70	70	ug/L
CM61539	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	0.02	0.02	ug/L
CM61539	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	22	10	2	2	ug/L
CM61539	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	670	10	5	5	ug/L
CM61539	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61539	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	22	10	2	2	ug/L
CM61539	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	2.5	2	2	ug/L
CM61539	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	310	10	20	20	ug/L
CM61539	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	670	10	50	50	ug/L
CM61539	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	1200	20	5	5	ug/L
CM61539	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	500	0.3	0.3	ug/L
CM61539	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	500	0.3	0.3	ug/L
CM61539	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	500	0.3	0.3	ug/L
CM61540	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CM61540	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CM61540	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CM61540	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	0.25	0.0075	0.0075	ug/L
CM61540	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	0.50	0.00033	0.00033	ug/L
CM61540	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	9.2	1.0	2	2	ug/L
CM61540	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	370	40	5	5	ug/L
CM61540	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	0.25	0.00075	0.00075	ug/L
CM61540	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	230	40	5	5	ug/L
CM61540	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	110	40	20	20	ug/L
CM61540	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	0.25	0.02	0.02	ug/L
CM61540	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	110	40	20	20	ug/L
CM61540	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	370	40	5	5	ug/L
CM61540	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	9.2	1.0	2	2	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61540	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	230	40	5	5	ug/L
CM61540	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	230	40	50	50	ug/L
CM61540	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	370	40	5	5	ug/L
CM61540	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	110	40	20	20	ug/L
CM61540	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	9.2	1.0	2	2	ug/L
CM61540	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	370	40	5	5	ug/L
CM61540	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	9.2	1.0	2	2	ug/L
CM61540	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	230	40	5	5	ug/L
CM61540	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	0.25	0.02	0.02	ug/L
CM61540	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	110	40	70	70	ug/L
CM61540	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	370	40	5	5	ug/L
CM61540	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	110	40	20	20	ug/L
CM61540	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	9.2	1.0	2	2	ug/L
CM61540	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	230	40	50	50	ug/L
CM61540	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	50	0.3	0.3	ug/L
CM61540	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	50	0.3	0.3	ug/L
CM61540	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	50	0.3	0.3	ug/L
CM61541	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CM61541	$8260GWR-WI	Naphthalene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CM61541	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CM61541	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / SVOA AQ RL	ND	40		10	ug/L
CM61541	$8260GWR-WI	Chlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Bromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Bromodichloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	Bromoform	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	Bromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	Carbon tetrachloride	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	Chloroethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	200		2	ug/L
CM61541	$8260GWR-WI	Bromobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Benzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	4-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	2-Hexanone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CM61541	$8260GWR-WI	2-Chlorotoluene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	2,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,4-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,3-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,3-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Chloroform	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	tert-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	4-Methyl-2-pentanone	MA / CAM Protocol / VOA AQ RL	ND	200		10	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61541	$8260GWR-WI	Methylene chloride	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Trichlorotrifluoroethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Trichlorofluoromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	trans-1,2-Dichloroethene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	100		2	ug/L
CM61541	$8260GWR-WI	Acetone	MA / CAM Protocol / VOA AQ RL	ND	1000		10	ug/L
CM61541	$8260GWR-WI	Styrene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	p-Isopropyltoluene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	o-Xylene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	sec-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	n-Butylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Chloromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Methyl t-butyl ether (MTBE)	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Methyl ethyl ketone	MA / CAM Protocol / VOA AQ RL	ND	100		10	ug/L
CM61541	$8260GWR-WI	Isopropylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Hexachlorobutadiene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	Ethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Dichlorodifluoromethane	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	Dibromomethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	Dibromochloromethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	n-Propylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,2-Dibromoethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / CAM Protocol / VOA AQ RL	ND	20		2	ug/L
CM61541	$8260GWR-WI	1,2,4-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,3,5-Trimethylbenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,2-Dichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,2-Dichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,2,3-Trichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,2,4-Trichlorobenzene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,1-Dichloropropene	MA / CAM Protocol / VOA AQ RL	ND	40		2	ug/L
CM61541	$8260GWR-WI	1,2-Dichloropropane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	1,1,2-Trichloroethane	MA / CAM Protocol / VOA AQ RL	ND	10		2	ug/L
CM61541	$8260GWR-WI	Dibromomethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	8.3	8.3	ug/L
CM61541	$8260GWR-WI	1,2-Dibromoethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	0.0075	0.0075	ug/L
CM61541	$8260GWR-WI	Vinyl chloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	30	10	2	2	ug/L
CM61541	$8260GWR-WI	1,2-Dibromo-3-chloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	20	0.00033	0.00033	ug/L
CM61541	$8260GWR-WI	cis-1,2-Dichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	230	40	20	20	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61541	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	cis-1,3-Dichloropropene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	0.47	0.47	ug/L
CM61541	$8260GWR-WI	Trichloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	8600	200	5	5	ug/L
CM61541	$8260GWR-WI	Dibromochloromethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	1,2,3-Trichlorobenzene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	7	7	ug/L
CM61541	$8260GWR-WI	1,2,3-Trichloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	0.00075	0.00075	ug/L
CM61541	$8260GWR-WI	trans-1,3-Dichloropropene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	0.47	0.47	ug/L
CM61541	$8260GWR-WI	Carbon tetrachloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Tetrachloroethene	MA / Client Specified Criteria / LMC WILMINGTON 6068	2100	40	5	5	ug/L
CM61541	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Hexachlorobutadiene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	0.6	0.6	ug/L
CM61541	$8260GWR-WI	Methyl ethyl ketone	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	100	38	38	ug/L
CM61541	$8260GWR-WI	Methylene chloride	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	40	5	5	ug/L
CM61541	$8260GWR-WI	1,1,2-Trichloroethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Benzene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Bromomethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	7	7	ug/L
CM61541	$8260GWR-WI	1,2-Dichloropropane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	3	3	ug/L
CM61541	$8260GWR-WI	2-Hexanone	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	100	38	38	ug/L
CM61541	$8260GWR-WI	Bromoform	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	4	4	ug/L
CM61541	$8260GWR-WI	Bromodichloromethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	3	3	ug/L
CM61541	$8260GWR-WI	1,2-Dichloroethane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	1,4-Dichlorobenzene	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Methylene chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	40	5	5	ug/L
CM61541	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CM61541	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CM61541	$8260GWR-WI	Benzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Hexachlorobutadiene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.6	0.6	ug/L
CM61541	$8260GWR-WI	Dibromochloromethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	1,4-Dichlorobenzene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	1,1-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	19	10	7	7	ug/L
CM61541	$8260GWR-WI	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	2100	40	5	5	ug/L
CM61541	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	3	3	ug/L
CM61541	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.5	0.5	ug/L
CM61541	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	0.02	0.02	ug/L
CM61541	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	230	40	20	20	ug/L
CM61541	$8260GWR-WI	Bromoform	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	4	4	ug/L
CM61541	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-1 (mg/l)	30	10	2	2	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61541	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	10	7	7	ug/L
CM61541	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-1 (mg/l)	8600	200	5	5	ug/L
CM61541	$8260GWR-WI	1,2-Dichloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	9	9	ug/L
CM61541	$8260GWR-WI	1,2-Dibromoethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Bromomethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	7	7	ug/L
CM61541	$8260GWR-WI	Carbon tetrachloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Tetrachloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	2100	40	50	50	ug/L
CM61541	$8260GWR-WI	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Vinyl chloride	MA / CMR 310.40.1600 / GW-2 (mg/l)	30	10	2	2	ug/L
CM61541	$8260GWR-WI	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	230	40	20	20	ug/L
CM61541	$8260GWR-WI	1,2-Dichloropropane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	3	3	ug/L
CM61541	$8260GWR-WI	Trichloroethene	MA / CMR 310.40.1600 / GW-2 (mg/l)	8600	200	5	5	ug/L
CM61541	$8260GWR-WI	Bromodichloromethane	MA / CMR 310.40.1600 / GW-2 (mg/l)	ND	10	6	6	ug/L
CM61541	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-1	30	10	2	2	ug/L
CM61541	$8260GWR-WI	1,4-Dichlorobenzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-1	2100	40	5	5	ug/L
CM61541	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-1	8600	200	5	5	ug/L
CM61541	$8260GWR-WI	1,1,1,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	1,1-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	19	10	7	7	ug/L
CM61541	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Bromoform	MA / GROUNDWATER STANDARDS / GW-1	ND	10	4	4	ug/L
CM61541	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	3	3	ug/L
CM61541	$8260GWR-WI	Dibromochloromethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Benzene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-1	230	40	70	70	ug/L
CM61541	$8260GWR-WI	Hexachlorobutadiene	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.6	0.6	ug/L
CM61541	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	0.02	0.02	ug/L
CM61541	$8260GWR-WI	1,1,2-Trichloroethane	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Methylene chloride	MA / GROUNDWATER STANDARDS / GW-1	ND	40	5	5	ug/L
CM61541	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-1	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	Bromodichloromethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	6	6	ug/L
CM61541	$8260GWR-WI	Carbon tetrachloride	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Vinyl chloride	MA / GROUNDWATER STANDARDS / GW-2	30	10	2	2	ug/L
CM61541	$8260GWR-WI	1,2-Dichloropropane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	3	3	ug/L
CM61541	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-2	8600	200	5	5	ug/L
CM61541	$8260GWR-WI	1,2-Dibromoethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	2	2	ug/L
CM61541	$8260GWR-WI	Bromomethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	7	7	ug/L
CM61541	$8260GWR-WI	Tetrachloroethene	MA / GROUNDWATER STANDARDS / GW-2	2100	40	50	50	ug/L

Sunday, October 23, 2022

Criteria: MA: CAM, GW1, GW2, GW3

State: MA

Sample Criteria Exceedances Report

GCM61538 - AECOM-WILMINGTN

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CM61541	$8260GWR-WI	1,2-Dichloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	5	5	ug/L
CM61541	$8260GWR-WI	1,1,2,2-Tetrachloroethane	MA / GROUNDWATER STANDARDS / GW-2	ND	10	9	9	ug/L
CM61541	$8260GWR-WI	cis-1,2-Dichloroethene	MA / GROUNDWATER STANDARDS / GW-2	230	40	20	20	ug/L
CM61541	$8260GWR-WI	Trichloroethene	MA / GROUNDWATER STANDARDS / GW-3	8600	200	5000	5000	ug/L
CM61541	$MCPADD-WM	1,4-dioxane	MA / Client Specified Criteria / LMC WILMINGTON 6068	ND	2000	0.3	0.3	ug/L
CM61541	$MCPADD-WM	1,4-dioxane	MA / CMR 310.40.1600 / GW-1 (mg/l)	ND	2000	0.3	0.3	ug/L
CM61541	$MCPADD-WM	1,4-dioxane	MA / GROUNDWATER STANDARDS / GW-1	ND	2000	0.3	0.3	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: LMC WILMINGTON 60688023 **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CM61538, CM61539, CM61540, CM61541

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☐	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: VOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: Ethan Lee

Date: Sunday, October 23, 2022

Printed Name: Ethan Lee

Position: Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 23, 2022

SDG I.D.: GCM61538

SDG Comments

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Sample(s) required a dilution for Volatiles due to the presence of target and/or non-target compounds. This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 647460 (Samples: CM61540): -----

The QC recovery for one or more analytes is above the upper range but were not reported in the sample(s), therefore no significant bias is suspected. (Trichlorofluoromethane)

QC Batch 647499 (Samples: CM61538, CM61540, CM61541): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (Benzene, Carbon tetrachloride, Chloroethane, Trichlorofluoromethane)

The LCS and/or the LCSD recovery is above the upper range, therefore a slight high bias is possible. (Vinyl chloride)

QC Batch 647576 (Samples: CM61538, CM61541): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,1-Dichloropropene, Trichlorotrifluoroethane)

The LCS and/or the LCSD recovery is above the upper range, therefore a slight high bias is possible. (1,1-Dichloroethene)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Methyl ethyl ketone)

The QC recovery for one or more analytes is above the upper range but were not reported in the sample(s), therefore no significant bias is suspected. (Trichlorofluoromethane)

The QC recovery for one or more analytes is above the upper range, therefore a slight high bias is possible. (Vinyl chloride)

Instrument:

CHEM16 10/17/22-1 Harry Mullin, Chemist 10/17/22

CM61540 (1X)

Chem16 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments.
EPA method 8260D Table 4 supports this approach.

Initial Calibration Evaluation (CHEM16/624_101422):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: Bromoform 35% (20%), Bromomethane 21% (20%), Chloroethane 23% (20%)

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 23, 2022

SDG I.D.: GCM61538

VOA Narration

The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM16/1017H02-624_101422) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Carbon Disulfide 24%H (20%), Dichlorodifluoromethane 34%H (20%), Trichlorofluoromethane 35%H (20%), Trichlorotrifluoroethane 38%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/15/22-2 Harry Mullin, Chemist 10/15/22

CM61538 (40X), CM61540 (40X), CM61541 (40X)

Initial Calibration Evaluation (CHEM23/VOA23_101222):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%), Dichlorodifluoromethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.057 (0.1), Methyl ethyl ketone 0.095 (0.1), Tetrachloroethene 0.176 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1015_31-VOA23_101222) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Chloroethane 21%H (20%), Dichlorodifluoromethane 39%H (20%), Trichlorofluoromethane 29%H (20%), Trichlorotrifluoroethane 23%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.057 (0.1), Methyl ethyl ketone 0.097 (0.1), Tetrachloroethene 0.176 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/16/22-1 Michael Hahn, Chemist 10/16/22

CM61538 (5X), CM61541 (200X)

Initial Calibration Evaluation (CHEM23/VOA23_101222):
98% of target compounds met criteria.
The following compounds had %RSDs >20%: Chloroethane 22% (20%), Dichlorodifluoromethane 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.057 (0.1), Methyl ethyl ketone 0.095 (0.1), Tetrachloroethene 0.176 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1015_83-VOA23_101222) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
94% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2-Dibromo-3-chloropropane 21%L (20%), 2,2-Dichloropropane 37%L (20%), Dichlorodifluoromethane 31%H (20%), Trichlorofluoromethane 22%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.066 (0.1), Methyl ethyl ketone 0.099 (0.1), Tetrachloroethene 0.162 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 23, 2022

SDG I.D.: GCM61538

VOA Narration

CHEM23 10/18/22-1 Michael Hahn, Chemist 10/18/22

CM61539 (20X)

Initial Calibration Evaluation (CHEM23/VOA23_101722):
95% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1018_03-VOA23_101722) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.
The following compounds did not meet the minimum MCP response factor of 0.05: None.

CHEM23 10/20/22-1 Michael Hahn, Chemist 10/20/22

CM61539 (10X)

Initial Calibration Evaluation (CHEM23/VOA23_101922):
90% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 26% (20%), Bromoform 29% (20%), Bromomethane 31% (20%), Chloroethane 22% (20%), Dibromochloromethane 22% (20%), Naphthalene 25% (20%), trans-1,3-Dichloropropene 24% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.064 (0.1), Tetrachloroethene 0.173 (0.2)
The following compounds did not meet the minimum response factor of 0.05: None.

Continuing Calibration Verification (CHEM23/1020_03-VOA23_101922) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
98% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Chloroethane 35%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: Acetone 0.067 (0.1), Tetrachloroethene 0.195 (0.2)
The following compounds did not meet the minimum MCP response factor of 0.05: None.

QC (Batch Specific):

Batch 647460 (CM52224) CHEM16 10/17/2022-1

CM61540(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(137%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Trichlorofluoromethane(136%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647499 (CM52361) CHEM23 10/15/2022-2

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

October 23, 2022

SDG I.D.: GCM61538

VOA Narration

CM61538(40X), CM61540(40X), CM61541(40X)

All LCS recoveries were within 70 - 130 with the following exceptions: Chloroethane(133%), Trichlorofluoromethane(142%), Vinyl chloride(131%)
All LCSD recoveries were within 70 - 130 with the following exceptions: Benzene(134%), Carbon tetrachloride(131%), Trichlorofluoromethane(142%), Vinyl chloride(132%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647576 (CM51242) CHEM23 10/16/2022-1

CM61538(5X), CM61541(200X)

All LCS recoveries were within 70 - 130 with the following exceptions: 1,1-Dichloropropene(153%), Trichlorofluoromethane(146%), Vinyl chloride(135%)
All LCSD recoveries were within 70 - 130 with the following exceptions: 1,1-Dichloroethene(136%), Trichlorofluoromethane(152%), Trichlorotrifluoroethane(132%), Vinyl chloride(134%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: Methyl ethyl ketone(28.6%)
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 647791 (CM60991) CHEM23 10/18/2022-1

CM61539(20X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 648319 (CM63148) CHEM23 10/20/2022-1

CM61539(10X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]

CHAIN OF CUSTODY RECORD

Temp 2.10 °C Pg of

PHOENIX Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email Makrina Nolan: makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Data Delivery/Contact Options:
[ ] Fax:
[ ] Phone:
[ ] Email:

Customer: AECOM
Address: 250 Apollo Drive
Chelmsford, MA 01824
978-905-2100

Project: LMC Wilmington 60688023 Project P.O: 148194
Report to: lori.harbaruch@aecom.com/tessa.murphy@aecom.com
Invoice to: Accounts Payable, AECOM
QUOTE # March 2022 (2022-2027)

This section MUST be completed with Bottle Quantities.

Sampler's Signature: Date: 10/11/22

Client Sample - Information - Identification

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid **X** = _____(Other)

Analysis Request: VOCs 8260 + Freon 113; MS/MSD*; GL Amber 8 oz [ ] H3PO4 [ ] NAHSO4; Soil VOA Vials [ ] methanol [ ] H2O; GL Soil container [ ] oz; GL Soil container [ ] oz; 40 ml VOA Vial [ ] As is [X] HCL; GL Amber 1000ml [ ] As is [ ] H2SO4; PL As is [ ] 250ml [ ] 500ml [ ] 1000ml; PL H2SO4 [ ] 250ml [ ] 500ml; PL HNO3 250ml; PL NaOH 250ml; Bacteria Bottle w/thio; Bacteria Bottle as is

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOCs 8260 + Freon 113	MS/MSD*	GL Amber 8 oz	Soil VOA Vials	GL Soil container	GL Soil container	40 ml VOA Vial	GL Amber 1000ml	PL As is	PL H2SO4	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
61538	22A-IDW01-101122-1	GW	10/11/22	1620	X						3							
61539	22A-IDW02-101122-1	GW	10/11/22	1625	X						3							
61540	22A-IDW03-101122-1	GW	10/11/22	1630	X						3							
61541	22A-IDW04-101122-1	GW	10/11/22	1635	X						3							

Relinquished by:	Accepted by:	Date:	Time:
		10/13/22	10:10
		10/13/22	1555

Comments, Special Requirements or Regulations:

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

Turnaround Time:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[ ] Standard
[X] Other 10-day
* SURCHARGE APPLIES

RI
[ ] (Residential) Direct Exposure
[ ] (Comm/Industrial) Direct Exposure
[ ] GA Leachability
[ ] GB Leachability
[ ] GA-GW Objectives
[ ] GB-GW Objectives

CT
[ ] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[ ] GB Mobility
[ ] Residential DEC
[ ] I/C DEC
[ ] Other

MA
[X] MCP Certification
[X] GW-1 [ ] MWRA eSMART
[X] GW-2 [ ] S-1 10% CALC
[X] GW-3
[ ] S-1 GW-1 [ ] S-1 GW-2 [ ] S-1 GW-3
[ ] S-2 GW-1 [ ] S-2 GW-2 [ ] S-2 GW-3
[ ] S-3 GW-1 [ ] S-3 GW-2 [ ] S-3 GW-3
[ ] SW Protection

State where samples were collected: _____

Data Format
[ ] Excel
[X] PDF
[ ] GIS/Key
[X] EQuIS
[ ] Other

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[ ] Phoenix Std Report
[ ] Other

* SURCHARGE APPLIES

PEL-126 REV. 03/22

LELAP Certificate Number: 01955
A2LA Accredited (DoD ELAP-QSM 5.4) Certificate Number: 6429.01

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 10/12/2022

Report # 222100138

Project LMC Wilmington

Samples Collected 9/28/22 - 9/29/22

Deliver To	***Additional Recipients***
Scott Olson	Lori Herberich, AECOM
AECOM	Nicole Callahan, AECOM
250 Apollo Drive	Tessa Murphy, AECOM
Chelmsford, MA 01824	
978.846.5238	

A2LA ACCREDITED
CERT # 6429.01

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

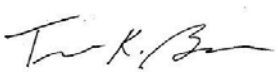
J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 222100138

Certifications

Certification	Certification Number
A2LA Accredited (DoD ELAP-QSM 5.4)	6429.01
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 222100138

Pace Analytical Gulf Coast received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES GAS CHROMATOGRAPHY

In the AM20GAX analysis for analytical batch 751239, the LCS/LCSD exhibited RPD failures.

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22210013801	22A-AE106R3-092922-1	Water	9/29/22 13:00	9/30/22 10:05
22210013802	22A-AE104R5-092822-1	Water	9/29/22 15:15	9/30/22 10:05
22210013803	22A-AE106R3-092922-1	Bubble Strip	9/29/22 15:25	9/30/22 10:05
22210013804	22A-AE105R2-092822-1	Bubble Strip	9/28/22 14:35	9/30/22 10:05
22210013805	22A-AE105R2-092822-1	Water	9/28/22 14:55	9/30/22 10:05
22210013806	22A-AE103R5-092822-1	Bubble Strip	9/28/22 16:15	9/30/22 10:05
22210013807	22A-AE103R5-092822-1	Water	9/28/22 14:10	9/30/22 10:05
22210013808	22A-AE102RR1-092822-1	Bubble Strip	9/28/22 17:52	9/30/22 10:05
22210013809	22A-AE102RR1-092822-1	Water	9/28/22 13:05	9/30/22 10:05
22210013810	22A-AE102RR6-0928822-1	Water	9/28/22 13:30	9/30/22 10:05
22210013811	22A-AE108R1-092822-1	Water	9/28/22 13:30	9/30/22 10:05
22210013812	22A-AE106M-092922-1	Water	9/29/22 10:50	9/30/22 10:05
22210013813	22A-AE103R2-092822-1	Water	9/28/22 13:55	9/30/22 10:05
22210013814	22A-AE105D-092922-1	Water	9/29/22 11:30	9/30/22 10:05
22210013815	22A-TRC301R4-092922-1	Bubble Strip	9/29/22 12:47	9/30/22 10:05
22210013816	22A-AE106M-092922-2	Water	9/29/22 10:55	9/30/22 10:05
22210013817	22A-TRC301R4-092922-1	Water	9/29/22 12:00	9/30/22 10:05

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22210013801	22A-AE106R3-092922-1	Ethene	ug/L	1.2	1	NA
22210013801	22A-AE106R3-092922-1	Methane	ug/L	470	1	NA
22210013802	22A-AE104R5-092822-1	Ethane	ug/L	0.73J	1	NA
22210013802	22A-AE104R5-092822-1	Ethene	ug/L	77	1	NA
22210013802	22A-AE104R5-092822-1	Methane	ug/L	180	1	NA
22210013803	22A-AE106R3-092922-1	Hydrogen	nM	0.91J	1	NA
22210013805	22A-AE105R2-092822-1	Ethane	ug/L	0.33J	1	NA
22210013805	22A-AE105R2-092822-1	Ethene	ug/L	1.5	1	NA
22210013805	22A-AE105R2-092822-1	Methane	ug/L	180	1	NA
22210013806	22A-AE103R5-092822-1	Hydrogen	nM	0.52J	1	NA
22210013807	22A-AE103R5-092822-1	Ethane	ug/L	0.64J	1	NA
22210013807	22A-AE103R5-092822-1	Ethene	ug/L	50	1	NA
22210013807	22A-AE103R5-092822-1	Methane	ug/L	71	1	NA
22210013808	22A-AE102RR1-092822-1	Hydrogen	nM	0.77J	1	NA
22210013809	22A-AE102RR1-092822-1	Ethane	ug/L	0.55J	1	NA
22210013809	22A-AE102RR1-092822-1	Ethene	ug/L	30	1	NA
22210013809	22A-AE102RR1-092822-1	Methane	ug/L	110	1	NA
22210013810	22A-AE102RR6-0928822-1	Ethane	ug/L	0.62J	1	NA
22210013810	22A-AE102RR6-0928822-1	Ethene	ug/L	6.0	1	NA
22210013810	22A-AE102RR6-0928822-1	Methane	ug/L	36	1	NA
22210013811	22A-AE108R1-092822-1	Ethane	ug/L	0.45J	1	NA
22210013811	22A-AE108R1-092822-1	Ethene	ug/L	0.32J	1	NA
22210013811	22A-AE108R1-092822-1	Methane	ug/L	2900	1	NA
22210013812	22A-AE106M-092922-1	Ethane	ug/L	0.32J	1	NA
22210013812	22A-AE106M-092922-1	Methane	ug/L	12	1	NA
22210013813	22A-AE103R2-092822-1	Ethane	ug/L	0.19J	1	NA
22210013813	22A-AE103R2-092822-1	Ethene	ug/L	2.1	1	NA
22210013813	22A-AE103R2-092822-1	Methane	ug/L	18	1	NA
22210013814	22A-AE105D-092922-1	Ethene	ug/L	0.78J	1	NA
22210013814	22A-AE105D-092922-1	Methane	ug/L	87	1	NA
22210013815	22A-TRC301R4-092922-1	Hydrogen	nM	4.2	1	NA
22210013816	22A-AE106M-092922-2	Ethane	ug/L	0.34J	1	NA
22210013816	22A-AE106M-092922-2	Methane	ug/L	8.7	1	NA
22210013817	22A-TRC301R4-092922-1	Ethane	ug/L	1.3	1	NA
22210013817	22A-TRC301R4-092922-1	Ethene	ug/L	1.0	1	NA
22210013817	22A-TRC301R4-092922-1	Methane	ug/L	320	1	NA
22210013817	22A-TRC301R4-092922-1	Propane	ug/L	1.2	1	NA

Sample Results

22A-AE106R3-092922-1

Collect Date	09/29/2022 13:00	Lab ID	22210013801
Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 12:30	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**1.2**	0.24	1.0	ug/L
74-82-8	**Methane**	**470**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE104R5-092822-1

Collect Date	09/29/2022 15:15	Lab ID	22210013802
Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 12:42	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.73J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**77**	0.24	1.0	ug/L
74-82-8	**Methane**	**180**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE106R3-092922-1

Collect Date	09/29/2022 15:25	Lab ID	22210013803
Receive Date	09/30/2022 10:05	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 11:44	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**0.91J**	0.49	1.9	nM

Sample Results

22A-AE105R2-092822-1				
	Collect Date	09/28/2022 14:35	Lab ID	22210013804
	Receive Date	09/30/2022 10:05	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 12:13	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	0.49U	0.49	1.9	nM

22A-AE105R2-092822-1				
	Collect Date	09/28/2022 14:55	Lab ID	22210013805
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 12:54	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.33J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**1.5**	0.24	1.0	ug/L
74-82-8	**Methane**	**180**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE103R5-092822-1				
	Collect Date	09/28/2022 16:15	Lab ID	22210013806
	Receive Date	09/30/2022 10:05	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 12:25	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**0.52J**	0.49	1.9	nM

22A-AE103R5-092822-1				
	Collect Date	09/28/2022 14:10	Lab ID	22210013807
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 13:06	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.64J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**50**	0.24	1.0	ug/L
74-82-8	**Methane**	**71**	2.0	5.0	ug/L

Sample Results

22A-AE103R5-092822-1

Collect Date	09/28/2022 14:10	Lab ID	22210013807
Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 13:06	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE102RR1-092822-1

Collect Date	09/28/2022 17:52	Lab ID	22210013808
Receive Date	09/30/2022 10:05	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 12:37	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**0.77J**	0.49	1.9	nM

22A-AE102RR1-092822-1

Collect Date	09/28/2022 13:05	Lab ID	22210013809
Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:08	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.55J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**30**	0.24	1.0	ug/L
74-82-8	**Methane**	**110**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE102RR6-0928822-1

Collect Date	09/28/2022 13:30	Lab ID	22210013810
Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:20	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.62J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**6.0**	0.24	1.0	ug/L
74-82-8	**Methane**	**36**	2.0	5.0	ug/L

Sample Results

22A-AE102RR6-0928822-1				
	Collect Date	09/28/2022 13:30	Lab ID	22210013810
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:20	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE108R1-092822-1				
	Collect Date	09/28/2022 13:30	Lab ID	22210013811
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:32	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.45J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.32J**	0.24	1.0	ug/L
74-82-8	**Methane**	**2900**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE106M-092922-1				
	Collect Date	09/29/2022 10:50	Lab ID	22210013812
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:45	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.32J**	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**12**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE103R2-092822-1

Collect Date	09/28/2022 13:55	Lab ID	22210013813
Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:57	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.19J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**2.1**	0.24	1.0	ug/L
74-82-8	**Methane**	**18**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE105D-092922-1

Collect Date	09/29/2022 11:30	Lab ID	22210013814
Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 08:10	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.78J**	0.24	1.0	ug/L
74-82-8	**Methane**	**87**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-TRC301R4-092922-1

Collect Date	09/29/2022 12:47	Lab ID	22210013815
Receive Date	09/30/2022 10:05	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 12:49	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**4.2**	0.49	1.9	nM

Sample Results

22A-AE106M-092922-2

Collect Date	09/29/2022 10:55	**Lab ID**	22210013816
Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 08:22	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.34J**	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**8.7**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-TRC301R4-092922-1

Collect Date	09/29/2022 12:00	**Lab ID**	22210013817
Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 08:34	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.3**	0.17	1.0	ug/L
74-85-1	**Ethene**	**1.0**	0.24	1.0	ug/L
74-82-8	**Methane**	**320**	2.0	5.0	ug/L
74-98-6	**Propane**	**1.2**	0.29	1.0	ug/L

General Chromatography QC Summary

Analytical Batch 751013	Client ID	MB751013		LCS751013				LCSD751013				
	Lab ID	2402864		2402865				2402866				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/03/22 11:07		10/03/22 10:43				10/03/22 10:55				
	Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX		Units Result	nM DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	0.49U	0.49	12	11	95	70 - 130	12	12	101	5	20

Analytical Batch 751208	Client ID	MB751208		LCS751208				LCSD751208				
	Lab ID	2403921		2403922				2403923				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/05/22 12:17		10/05/22 11:44				10/05/22 12:00				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	33	101	70 - 130	33	27	83	20	20
Ethane	74-84-0	0.17U	0.17	38	40	106	70 - 130	38	39	102	4	20
Ethene	74-85-1	0.24U	0.24	35	38	107	70 - 130	35	36	104	4	20
Methane	74-82-8	2.0U	2.0	750	650	87	70 - 130	750	660	88	1	20
Propane	74-98-6	0.29U	0.29	56	57	102	70 - 130	56	54	97	5	20

Analytical Batch 751239	Client ID	MB751239		LCS751239				LCSD751239				
	Lab ID	2404394		2404395				2404396				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/06/22 06:55		10/06/22 06:30				10/06/22 06:43				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	26	78	70 - 130	33	34	104	**29***	20
Ethane	74-84-0	0.17U	0.17	38	42	111	70 - 130	38	42	110	1	20
Ethene	74-85-1	0.24U	0.24	35	40	112	70 - 130	35	39	110	1	20
Methane	74-82-8	2.0U	2.0	750	670	90	70 - 130	750	680	91	1	20
Propane	74-98-6	0.29U	0.29	56	59	107	70 - 130	56	58	104	3	20

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Work

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 222100138

PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr Chelmsford MA 01824	
Report To: Scott Olson	Email To: lori.herberich@aecom.com
Copy To: Lori Herberich / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd.
Customer Project Name/Number: LMC Wilmington 60688023	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0084 Email:	Site/Facility ID #: LMC-Wilmington
Collected By (print): Ryan Potter	Purchase Order #: 148293 Quote #:
Collected By (signature):	Turnaround Date Required: Std. / 15 day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Ty: U | D

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (5) hydrochloric acid, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BNX

Analyses: Dissolved Hydrogen | Dissolved Gases (Methane, Ethane, Ethene) | ALK, Prop

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Hydrogen	Dissolved Gases (Methane, Ethane, Ethene)	ALK, Prop	Lab Sample # / Comments
22A-AE106R3-092922-1	GW	G	9/29/22	1300	—	—		2		X		1
22A-AE104RS-092822-1	GW	G	9/29/22	1515	—	—		2		X		2
22A-AE106R3-092922-1	GW	Comp	9/29/22	1510	9/29/22	1525		1	X			3
22A-AE105R2-092822-1	GW	Comp	9/28/22	1420	9/28/22	1435		1	X			4
22A-AE105R2-092822-1	GW	G	9/28/22	1455	—	—		2		X		5
22A-AE103RS-092822-1	GW	Comp	9/28/22	1600	9/28/22	1615		1	X			6
22A-AE103RS-092822-1	GW	G	9/28/22	1410	9/28/22	—		2		X		7
22A-AE102RR1-092822-1	GW	Comp	9/28/22	1737	9/28/22	1752		1	X			8
22A-AE102RR1-092822-1	GW	G	9/28/22	1305	9/28/22	—		2		X		9
22A-AE102RR6-092822-1	GW	G	9/28/22	1330	—	—		2		X		10

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 2785 7762 7710

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2847386

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#:

Cooler 1 Temp Upon Receipt: ____oC

Cooler 1 Therm Corr. Factor: ____oC

Cooler 1 Corrected Temp: ____oC

Comments: EW2 L.7

Relinquished by/Company: (Signature) AECOM	Date/Time: 9/29/22 1900	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 9/30/22 1005	Received by/Company: (Signature)	Date/Time: 9/30/22 1005
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 2

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Work

Client ID: AECOM - Chelm - AECOM - Chelmsford, MA
SDG: 222100138
PM: RWe

ALL SHA

Container Preservative

** Preservative Types: (1) nitric acid, (2) su... (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAC

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr Chelmsford MA 01824	
Report To: Scott Olson	Email To: lori.herbeck@aecom.com
Copy To: lori Herbeck / Nicole Callahan	Site Collection Info/Address: 40 Fordham Rd.
Customer Project Name/Number: CMC Wilmington 60688023	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0089 Email:	Site/Facility ID #: CMC-Wilmington
Collected By (print): Dylan Potter	Purchase Order #: Quote #: 148243
Collected By (signature):	Turnaround Date Required: Std. / 15day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses: Dissolved Gases (Methane, Ethane, Ethene) | Ace, Prop | Dissolved Hydrogen

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Dissolved Gases	Ace, Prop	Dissolved Hydrogen	Lab Sample # / Comments:
22A-AE108R1-092822-1	GW	G	9/28	1330	-	-		2	X			11
22A-AE106M-092922-1	GW	G	9/29	1050	-	-		2	X			12
22A-AE103R2-092822-1	GW	G	9/28	1355	-	-		2	X			13
22A-AE105D-092922-1	GW	G	9/29	1130	-	-		2	X			14
22A-TRC301R4-092922-1	GW	Comp	9/29	1232	9/29	1247		1		X		15
22A-AE106M-092922-2	GW	G	9/29	1055	-	-		2	X			16

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 2285 7762 7710

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2847390

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: _____oC
Cooler 1 Therm Corr. Factor: _____oC
Cooler 1 Corrected Temp: _____oC
Comments: E42 1.7

Relinquished by/Company: (Signature) AECOM	Date/Time: 9/29/22 1900	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEx	Date/Time: 9/30/22 1005	Received by/Company: (Signature) Brennan Rubin	Date/Time: 9/30/22 1005
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 2 of: 3

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA
SDG: 222100138
PM: RWe

Company: AECOM	Billing Information: Accts Payable AECOM
Address: 250 Apollo Dr Chelmsford	
Report To: Scott Olson	Email To: (or). herberich@aecom.com
Copy To: (or) herberich / Nicole Callahan	Site Collection Info/Address: 48 Forshaw Rd
Customer Project Name/Number: LMC Wilmington 60688023	State: MA County/City: Wilmington Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 978-302-0089 Email:	Site/Facility ID #: LMC Wilmington
Collected By (print): Dylan Potter	Purchase Order #: Quote #: 148293
Collected By (signature):	Turnaround Date Required: Std 15 day
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

** Preservative Types: (1) nitric acid, (2) s... (5) methanol, (7) sodium bisulfate, (8) soc... (C) ammonium hydroxide, (D) TSP, (U) Un... ...sulfate,

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: Dissolved Gases (Methane, Ethane, Ethene, Ace, Prop)	Lab Profile/Line
22A-TRC301R4-043922-1	GW	G	9/29	1200	-	-		2	X	17

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 2785 7762 7710

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2847389

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments: Fed Ex 1.7

Relinquished by/Company: (Signature) Fed Ex	Date/Time: 9/30/22 1005	Received by/Company: (Signature)	Date/Time: 9/30/22 1005
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 3 of: 3

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 222100138	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** Perkins, Brennan
Line Item(s) 1 - MEE, Propane, Acetylene 2 - Hydrogen	**Receive Date(s)** 09/30/22

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E42	Temp °C
278577627710		1.7

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

LELAP Certificate Number: 01955
A2LA Accredited (DoD ELAP-QSM 5.4) Certificate Number: 6429.01

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 11/14/2022

Report # 222100826

Project LMC Wilmington

Samples Collected 10/3/22 - 10/6/22

Deliver To	***Additional Recipients***
Scott Olson	Lori Herberich, AECOM
AECOM	Nicole Callahan, AECOM
250 Apollo Drive	Tessa Murphy, AECOM
Chelmsford, MA 01824	
978.846.5238	

A2LA ACCREDITED
CERT # 6429.01

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

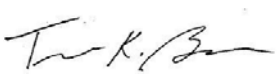
J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
Pace Gulf Coast Report 222100826

Certifications

Certification	Certification Number
A2LA Accredited (DoD ELAP-QSM 5.4)	6429.01
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: AECOM - Chelmsford, MA **Report:** 222100826

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

This report is being revised and reissued on 11/14/22 to correct the ID for sample 22210082622 to read 22A-AE112R5-100622-1 instead of 22A-AE112R5-100622-2 as originally reported.

This report supersedes and replaces any prior reports issued under this workorder

PROJECT MANAGER COMMENTS

Project Manager Comments - According to the client, the incorrect project is referenced on the COC. The project should be the LMC Wilmington site. (Ruth Welsh(Do Not 10/08/2022 13:53)

VOLATILES GAS CHROMATOGRAPHY

In the AM20GAX analysis for analytical batch 751654, the MS/MSD exhibited sporadic recovery failures. The LCS recoveries were acceptable.

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22210082601	22A-GZA-102S-100322-1	Water	10/03/22 10:15	10/07/22 09:26
22210082602	22A-GZA-102S-100322-2	Water	10/03/22 10:15	10/07/22 09:26
22210082603	22A-AE103D-100322-1	Water	10/03/22 10:50	10/07/22 09:26
22210082604	22A-AE102M-100322-1	Water	10/03/22 09:15	10/07/22 09:26
22210082605	22A-AE101R4-100322-1	Water	10/03/22 10:00	10/07/22 09:26
22210082606	22A-AE101R6-100322-1	Water	10/03/22 11:00	10/07/22 09:26
22210082607	22A-GZA12-100422-1	Water	10/04/22 09:30	10/07/22 09:26
22210082608	22A-GZA12-100422-1-MS	Water	10/04/22 09:30	10/07/22 09:26
22210082609	22A-GZA12-100422-1-MSD	Water	10/04/22 09:30	10/07/22 09:26
22210082610	22A-AE109R6-100422-1	Water	10/04/22 13:45	10/07/22 09:26
22210082611	22A-AE109R6-100422-1-MS	Water	10/04/22 13:45	10/07/22 09:26
22210082612	22A-AE109R6-100422-1-MSD	Water	10/04/22 13:45	10/07/22 09:26
22210082613	22A-AE100R5-100422-1	Bubble Strip	10/04/22 13:12	10/07/22 09:26
22210082614	22A-AE100R5-100422-1	Water	10/04/22 11:40	10/07/22 09:26
22210082615	22A-AE29R6-100422-1	Water	10/04/22 11:08	10/07/22 09:26
22210082616	22A-AE29R6-100422-1	Bubble Strip	10/04/22 12:22	10/07/22 09:26
22210082617	22A-AE28R2-100522-1	Water	10/05/22 10:45	10/07/22 09:26
22210082618	22A-AE28R2-100522-1	Bubble Strip	10/05/22 11:52	10/07/22 09:26
22210082619	22A-AE27R-100522-1	Water	10/05/22 10:45	10/07/22 09:26
22210082620	22A-AE26R1-100522-1	Water	10/05/22 10:10	10/07/22 09:26
22210082621	22A-AE112R5-100622-1	Water	10/06/22 11:50	10/07/22 09:26
22210082622	22A-AE112R5-100622-1	Bubble Strip	10/06/22 14:25	10/07/22 09:26
22210082623	22A-STM8R1-100622-1	Water	10/06/22 11:00	10/07/22 09:26
22210082624	22A-STM8R1-100622-1	Bubble Strip	10/06/22 11:15	10/07/22 09:26
22210082625	22A-STM8R-100622-1	Water	10/06/22 09:50	10/07/22 09:26
22210082626	22A-EB01-100622-1	Water	10/06/22 15:00	10/07/22 09:26

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22210082601	22A-GZA-102S-100322-1	Methane	ug/L	61	1	NA
22210082602	22A-GZA-102S-100322-2	Methane	ug/L	70	1	NA
22210082603	22A-AE103D-100322-1	Methane	ug/L	7.2	1	NA
22210082604	22A-AE102M-100322-1	Ethane	ug/L	6.5	1	NA
22210082604	22A-AE102M-100322-1	Ethene	ug/L	0.52J	1	NA
22210082604	22A-AE102M-100322-1	Methane	ug/L	36	1	NA
22210082605	22A-AE101R4-100322-1	Ethane	ug/L	0.36J	1	NA
22210082605	22A-AE101R4-100322-1	Ethene	ug/L	4.5	1	NA
22210082605	22A-AE101R4-100322-1	Methane	ug/L	56	1	NA
22210082606	22A-AE101R6-100322-1	Ethane	ug/L	2.1	1	NA
22210082606	22A-AE101R6-100322-1	Ethene	ug/L	38	1	NA
22210082606	22A-AE101R6-100322-1	Methane	ug/L	56	1	NA
22210082606	22A-AE101R6-100322-1	Propane	ug/L	0.90J	1	NA
22210082610	22A-AE109R6-100422-1	Ethane	ug/L	0.72J	1	NA
22210082610	22A-AE109R6-100422-1	Ethene	ug/L	10	1	NA
22210082610	22A-AE109R6-100422-1	Methane	ug/L	810	1	NA
22210082613	22A-AE100R5-100422-1	Hydrogen	nM	1.3J	1	NA
22210082614	22A-AE100R5-100422-1	Ethane	ug/L	1.7	1	NA
22210082614	22A-AE100R5-100422-1	Ethene	ug/L	5.9	1	NA
22210082614	22A-AE100R5-100422-1	Methane	ug/L	110	1	NA
22210082615	22A-AE29R6-100422-1	Ethane	ug/L	0.65J	1	NA
22210082615	22A-AE29R6-100422-1	Ethene	ug/L	1.5	1	NA
22210082615	22A-AE29R6-100422-1	Methane	ug/L	610	1	NA
22210082616	22A-AE29R6-100422-1	Hydrogen	nM	9.2	1	NA
22210082617	22A-AE28R2-100522-1	Acetylene	ug/L	0.46J	1	NA
22210082617	22A-AE28R2-100522-1	Ethane	ug/L	5.1	1	NA
22210082617	22A-AE28R2-100522-1	Ethene	ug/L	10	1	NA
22210082617	22A-AE28R2-100522-1	Methane	ug/L	120	1	NA
22210082617	22A-AE28R2-100522-1	Propane	ug/L	0.48J	1	NA
22210082618	22A-AE28R2-100522-1	Hydrogen	nM	16	1	NA
22210082619	22A-AE27R-100522-1	Ethane	ug/L	1.7	1	NA
22210082619	22A-AE27R-100522-1	Ethene	ug/L	10	1	NA
22210082619	22A-AE27R-100522-1	Methane	ug/L	150	1	NA
22210082619	22A-AE27R-100522-1	Propane	ug/L	0.31J	1	NA
22210082620	22A-AE26R1-100522-1	Ethane	ug/L	0.88J	1	NA
22210082620	22A-AE26R1-100522-1	Ethene	ug/L	12	1	NA
22210082620	22A-AE26R1-100522-1	Methane	ug/L	170	1	NA
22210082621	22A-AE112R5-100622-1	Methane	ug/L	160	2	NA
22210082622	22A-AE112R5-100622-1	Hydrogen	nM	1.6J	1	NA

Detect Summary (Continued)

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22210082623	22A-STM8R1-100622-1	Ethene	ug/L	0.42J	1	NA
22210082624	22A-STM8R1-100622-1	Hydrogen	nM	1.4J	1	NA
22210082625	22A-STM8R-100622-1	Ethane	ug/L	0.57J	1	NA
22210082625	22A-STM8R-100622-1	Methane	ug/L	61	1	NA

Sample Results

22A-GZA-102S-100322-1

Collect Date: 10/03/2022 10:15 | Lab ID: 22210082601
Receive Date: 10/07/2022 09:26 | Matrix: Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/11/22 12:03	751599	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**61**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-GZA-102S-100322-2

Collect Date: 10/03/2022 10:15 | Lab ID: 22210082602
Receive Date: 10/07/2022 09:26 | Matrix: Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/11/22 12:15	751599	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**70**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE103D-100322-1

Collect Date: 10/03/2022 10:50 | Lab ID: 22210082603
Receive Date: 10/07/2022 09:26 | Matrix: Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/11/22 12:27	751599	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**7.2**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE102M-100322-1

Collect Date	10/03/2022 09:15	Lab ID	22210082604
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 07:40	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**6.5**	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.52J**	0.24	1.0	ug/L
74-82-8	**Methane**	**36**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE101R4-100322-1

Collect Date	10/03/2022 10:00	Lab ID	22210082605
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 07:52	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.36J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**4.5**	0.24	1.0	ug/L
74-82-8	**Methane**	**56**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE101R6-100322-1

Collect Date	10/03/2022 11:00	Lab ID	22210082606
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:05	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**2.1**	0.17	1.0	ug/L
74-85-1	**Ethene**	**38**	0.24	1.0	ug/L
74-82-8	**Methane**	**56**	2.0	5.0	ug/L
74-98-6	**Propane**	**0.90J**	0.29	1.0	ug/L

Sample Results

22A-GZA12-100422-1

Collect Date	10/04/2022 09:30	Lab ID	22210082607
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:20	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-GZA12-100422-1-MS

Collect Date	10/04/2022 09:30	Lab ID	22210082608
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:32	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**33**	0.13	0.50	ug/L
74-84-0	**Ethane**	**48**	0.17	1.0	ug/L
74-85-1	**Ethene**	**46**	0.24	1.0	ug/L
74-82-8	**Methane**	**580**	2.0	5.0	ug/L
74-98-6	**Propane**	**68**	0.29	1.0	ug/L

22A-GZA12-100422-1-MSD

Collect Date	10/04/2022 09:30	Lab ID	22210082609
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:47	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**40**	0.13	0.50	ug/L
74-84-0	**Ethane**	**45**	0.17	1.0	ug/L
74-85-1	**Ethene**	**43**	0.24	1.0	ug/L
74-82-8	**Methane**	**510**	2.0	5.0	ug/L
74-98-6	**Propane**	**64**	0.29	1.0	ug/L

Sample Results

22A-AE109R6-100422-1

Collect Date	10/04/2022 13:45	Lab ID	22210082610
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 09:46	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.72J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**10**	0.24	1.0	ug/L
74-82-8	**Methane**	**810**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE109R6-100422-1-MS

Collect Date	10/04/2022 13:45	Lab ID	22210082611
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:00	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**28**	0.13	0.50	ug/L
74-84-0	**Ethane**	**41**	0.17	1.0	ug/L
74-85-1	**Ethene**	**42**	0.24	1.0	ug/L
74-82-8	**Methane**	**650**	2.0	5.0	ug/L
74-98-6	**Propane**	**58**	0.29	1.0	ug/L

22A-AE109R6-100422-1-MSD

Collect Date	10/04/2022 13:45	Lab ID	22210082612
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:13	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**28**	0.13	0.50	ug/L
74-84-0	**Ethane**	**41**	0.17	1.0	ug/L
74-85-1	**Ethene**	**43**	0.24	1.0	ug/L
74-82-8	**Methane**	**690**	2.0	5.0	ug/L
74-98-6	**Propane**	**57**	0.29	1.0	ug/L

Sample Results

22A-AE100R5-100422-1

Collect Date	10/04/2022 13:12	Lab ID	22210082613
Receive Date	10/07/2022 09:26	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 07:59	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**1.3J**	0.49	1.9	nM

22A-AE100R5-100422-1

Collect Date	10/04/2022 11:40	Lab ID	22210082614
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:25	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.7**	0.17	1.0	ug/L
74-85-1	**Ethene**	**5.9**	0.24	1.0	ug/L
74-82-8	**Methane**	**110**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE29R6-100422-1

Collect Date	10/04/2022 11:08	Lab ID	22210082615
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:41	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.65J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**1.5**	0.24	1.0	ug/L
74-82-8	**Methane**	**610**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE29R6-100422-1

Collect Date	10/04/2022 12:22	Lab ID	22210082616
Receive Date	10/07/2022 09:26	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:11	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**9.2**	0.49	1.9	nM

22A-AE28R2-100522-1

Collect Date	10/05/2022 10:45	Lab ID	22210082617
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:53	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**0.46J**	0.13	0.50	ug/L
74-84-0	**Ethane**	**5.1**	0.17	1.0	ug/L
74-85-1	**Ethene**	**10**	0.24	1.0	ug/L
74-82-8	**Methane**	**120**	2.0	5.0	ug/L
74-98-6	**Propane**	**0.48J**	0.29	1.0	ug/L

22A-AE28R2-100522-1

Collect Date	10/05/2022 11:52	Lab ID	22210082618
Receive Date	10/07/2022 09:26	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:23	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**16**	0.49	1.9	nM

22A-AE27R-100522-1

Collect Date	10/05/2022 10:45	Lab ID	22210082619
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:06	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.7**	0.17	1.0	ug/L
74-85-1	**Ethene**	**10**	0.24	1.0	ug/L
74-82-8	**Methane**	**150**	2.0	5.0	ug/L

Sample Results

22A-AE27R-100522-1

Collect Date	10/05/2022 10:45	Lab ID	22210082619
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:06	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	**Propane**	**0.31J**	0.29	1.0	ug/L

22A-AE26R1-100522-1

Collect Date	10/05/2022 10:10	Lab ID	22210082620
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:18	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.88J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**12**	0.24	1.0	ug/L
74-82-8	**Methane**	**170**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE112R5-100622-1

Collect Date	10/06/2022 11:50	Lab ID	22210082621
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

*Results and limits are adjusted for dilution.

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	2	10/12/22 11:31	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.26U	0.26	1.0	ug/L
74-84-0	Ethane	0.34U	0.34	2.0	ug/L
74-85-1	Ethene	0.48U	0.48	2.0	ug/L
74-82-8	**Methane**	**160**	4.0	10	ug/L
74-98-6	Propane	0.58U	0.58	2.0	ug/L

Sample Results

22A-AE112R5-100622-1

Collect Date	10/06/2022 14:25	Lab ID	22210082622
Receive Date	10/07/2022 09:26	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:35	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**1.6J**	0.49	1.9	nM

22A-STM8R1-100622-1

Collect Date	10/06/2022 11:00	Lab ID	22210082623
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:43	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.42J**	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-STM8R1-100622-1

Collect Date	10/06/2022 11:15	Lab ID	22210082624
Receive Date	10/07/2022 09:26	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:47	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**1.4J**	0.49	1.9	nM

22A-STM8R-100622-1

Collect Date	10/06/2022 09:50	Lab ID	22210082625
Receive Date	10/07/2022 09:26	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:55	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.57J**	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**61**	2.0	5.0	ug/L

Sample Results

22A-STM8R-100622-1

Collect Date 10/06/2022 09:50 **Lab ID** 22210082625
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:55	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-EB01-100622-1

Collect Date 10/06/2022 15:00 **Lab ID** 22210082626
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 12:08	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

General Chromatography QC Summary

Analytical Batch 751459	Client ID	MB751459		LCS751459				LCSD751459				
	Lab ID	2406003		2406004				2406005				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/10/22 07:09		10/10/22 06:44				10/10/22 06:56				
	Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX		Units Result	nM DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0	0.49U	0.49	12	11	90	70 - 130	12	12	98	9	20

Analytical Batch 751599	Client ID	MB751599		LCS751599				LCSD751599				
	Lab ID	2406529		2406530				2406531				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/11/22 07:19		10/11/22 06:54				10/11/22 07:06				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	36	110	70 - 130	33	38	117	6	20
Ethane	74-84-0	0.17U	0.17	38	46	121	70 - 130	38	46	121	1	20
Ethene	74-85-1	0.24U	0.24	35	43	123	70 - 130	35	43	122	0	20
Methane	74-82-8	2.0U	2.0	750	570	76	70 - 130	750	580	77	2	20
Propane	74-98-6	0.29U	0.29	56	66	118	70 - 130	56	65	117	1	20

Analytical Batch 751654	Client ID	MB751654		LCS751654				LCSD751654				
	Lab ID	2406998		2406999				2407000				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/12/22 07:27		10/12/22 06:58				10/12/22 07:10				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.13U	0.13	33	30	91	70 - 130	33	25	76	18	20
Ethane	74-84-0	0.17U	0.17	38	48	128	70 - 130	38	49	130	2	20
Ethene	74-85-1	0.24U	0.24	35	46	130	70 - 130	35	46	130	1	20
Methane	74-82-8	2.0U	2.0	750	530	71	70 - 130	750	630	85	17	20
Propane	74-98-6	0.29U	0.29	56	69	124	70 - 130	56	70	126	2	20

Analytical Batch 751654	Client ID	22A-GZA12-100422-1		22A-GZA12-100422-1-MS				22A-GZA12-100422-1-MSD				
	Lab ID	22210082607		22210082608				22210082609				
	Sample Type	SAMPLE		MS				MSD				
	Prep Date	NA		NA				NA				
	Analysis Date	10/12/2022 08:20		10/12/22 08:32				10/12/22 08:47				
	Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.0	0.13	30	33	109	70 - 130	30	40	130	18	20
Ethane	74-84-0	0.0	0.17	97	48	**50***	70 - 130	97	45	**46***	7	20
Ethene	74-85-1	0.0	0.24	120	46	**39***	70 - 130	120	43	**36***	7	20
Methane	74-82-8	0.23	2.0	380	580	**152***	70 - 130	380	510	**132***	14	20
Propane	74-98-6	0.0	0.29	20	68	**341***	70 - 130	20	64	**316***	8	20

General Chromatography QC Summary

Analytical Batch		Client ID	22A-AE109R6-100422-1		22A-AE109R6-100422-1-MS				22A-AE109R6-100422-1-MS..				
751654		Lab ID	22210082610		22210082611				22210082612				
		Sample Type	SAMPLE		MS				MSD				
		Prep Date	NA		NA				NA				
		Analysis Date	10/12/2022 09:46		10/12/22 10:00				10/12/22 10:13				
		Matrix	Water		Water				Water				
AM20GAX		Units Result	ug/L DL	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Acetylene	74-86-2	0.0	0.13	30	28	91	70 - 130	30	28	93	2	20
Ethane	74-84-0	0.72	0.17	97	41	**42***	70 - 130	97	41	**41***	1	20
Ethene	74-85-1	10	0.24	120	42	**27***	70 - 130	120	43	**27***	0	20
Methane	74-82-8	810	2.0	380	650	**-42***	70 - 130	380	690	**-31***	6	20
Propane	74-98-6	0.13	0.29	20	58	**287***	70 - 130	20	57	**285***	1	20

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 222100826

PM: RWe

ALL BOLD

Company: **AECOM**	Billing Information: Accounts Payable AECOM
Address: **250 Apollo Dr, Chelmsford, MA 01824**	
Report To: **Scott Olson**	Email To: **lori.herberich@aecom.com**
Copy To: **Lori Herberich (lori.herberich@aecom.com)** **Tessa Murphy (tessa.murphy@aecom.com)**	Site Collection Info/Address: **40 Fordham Road**
Customer Project Name/Number: **New Boston AFS / 60613420**	State: **MA** County/City: **/ Wilmington** Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: **978-302-0089** Email: **lori.herberich@aecom.com**	Site/Facility ID #:
Collected By (print): **Dylan Potter**	Purchase Order # : **148293** Quote #:
Collected By (signature):	Turnaround Date Required: **Standard**
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [X] Yes [ ] No

Analysis: _Dissolved Lead_____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preser: U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other PAK

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Dissolved Hydrogen	Dissolved Gases (Methane, Ethane, Ethene, Acetylene, Propane)	Lab Profile/Line:
22A-GZA-102S-100322-1	GW	Grab	10/3/2022	1015	—	—		2	G		X	1
22A-GZA-102S-100322-2	GW	Grab	10/3/2022	1015	—	—		2	G		X	2
22A-AE103D-100322-1	GW	Grab	10/3/2022	1050	—	—		2	G		X	3
22A-AE102M-100322-1	GW	Grab	10/3/2022	0915	—	—		2	G		X	4
22A-AE101R4-100322-1	GW	Grab	10/3/2022	1000	—	—		2	G		X	5
22A-AE101R6-100322-1	GW	Grab	10/3/2022	1100	—	—		2	G		X	6
22A-GZA12-100422-1	GW	Grab	10/4/2022	0930	—	—		6	G		X	MS/MSD 7,8,9
22A-AE109R6-100422-1	GW	Grab	10/4/2022	1345	10/4/22	—		6	G		X	MS/MSD 10,11,12
22A-AE100R5-100422-1	GW	Comp	10/4/2022	1257	########	1312		1	G	X		13
22A-AE100R5-100422-1	GW	Grab	10/4/2022	1140	—	—		2	G		X	14

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used: 2788 4390 0837

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: _____oC
Comments:
2.0 MR

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECOM	10/6/22 1630		
Fed Ex	10/7/22 9.26		10/7/22 9.26

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or

ALL BOLD

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 222100826

PM: RWe

Company: **AECOM**	Billing Information: **Accounts Payable AECOM**
Address: **250 Apollo Dr, Chelmsford, MA 01824**	
Report To: **Scott Olson**	Email To: **lori.herberich@aecom.com**
Copy To: **Lori Herberich (lori.herberich@aecom.com) Tessa Murphy (tessa.murphy@aecom.com)**	Site Collection Info/Address: **40 Fordham Road**
Customer Project Name/Number: **New Boston AFS / 60613420**	State: **MA** County/City: **/ Wilmington** Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: **978-302-0089** Email: **lori.herberich@aecom.com**	Site/Facility ID #:
Collected By (print): **Dylan Potter**	Purchase Order # : **148293** Quote #:
Collected By (signature):	Turnaround Date Required: **Standard**
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [X] Yes [ ] No

Analysis: _Dissolved Lead_____

Container Preser: U, O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other BAK

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Dissolved Hydrogen	Dissolved Gases (Methane, Ethane, Ethene, Acetylene, Propane)	Lab Sample # / Comments
22A-AE29R6-100422-1	GW	Grab	10/4/2022	1108	10/4/22	—		2	G		X	15
22A-AE29R6-100422-1	GW	Comp	10/4/2022	1152	########	1222		1	G	X		16
22A-AE28R2-100522-1	GW	Grab	10/5/2022	1045	10/5/22			2	G		X	17
22A-AE28R2-100522-1	GW	Comp	10/5/2022	1127	########	1152		1	G	X		18
22A-AE27R-100522-1	GW	Grab	10/5/2022	1045	—	—		2	G		X	19
22A-AE26R1-100522-1	GW	Grab	10/5/2022	1010	—	—		2	G		X	20
22A-AE112R5-100622-1	GW	Grab	10/6/2022	1150	10/6/22	—		2	G		X	21
22A-AE112R5-100622-1	GW	Comp	10/6/2022	1400	########	1425		1	G	X		22
22A-STM8R1-100622-1	GW	Grab	10/6/2022	1100	10/6/22	—		3	G		X	Preserved with TSP 23
22A-STM8R1-100622-1	GW	Comp	10/6/2022	1100	########	1115		1	G	X		24

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: _____oC
Comments:

Relinquished by/Company: (Signature) AECOM	Date/Time: 10/6/22 1630	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEx	Date/Time: 10/7/22 9.26	Received by/Company: (Signature)	Date/Time: 10/7/22 9.26
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affi

ALL BOLD

Client ID: AECOM -Chelm - AECOM - Chelmsford, MA

SDG: 222100826

PM: RWe

Company: **AECOM**	Billing Information: **Accounts Payable AECOM**
Address: **250 Apollo Dr, Chelmsford, MA 01824**	
Report To: **Scott Olson**	Email To: **lori.herberich@aecom.com**
Copy To: **Lori Herberich (lori.herberich@aecom.com) Tessa Murphy (tessa.murphy@aecom.com)**	Site Collection Info/Address: **40 Fordham Road**
Customer Project Name/Number: **New Boston AFS / 60613420**	State: **MA** County/City: **/ Wilmington** Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: **978-302-0089** Email: **lori.herberich@aecom.com**	Site/Facility ID #:
Collected By (print): **Dylan Potter**	Purchase Order # : **148293** Quote #:
Collected By (signature):	Turnaround Date Required: **Standard**
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [X] Yes [ ] No

Analysis: _Dissolved Lead_____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preser

U O

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other TSP

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Dissolved Hydrogen	Dissolved Gases (Methane, Ethane, Ethene, Acetylene, Propane)								
ZZA-STM8R-100622-1	GW	Grab	10/6/22	0950	—	—		3	G		X								25
ZZA-EB01-100622-1	GW	Grab	10/6/22	1500	—	—		3	G		X								26

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips: _____	
Sample pH Acceptable	Y N NA
pH Strips: _____	
Sulfide Present	Y N NA
Lead Acetate Strips: _____	

LAB USE ONLY:

Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#: _____

Cooler 1 Temp Upon Receipt: __oC

Cooler 1 Therm Corr. Factor: __oC

Cooler 1 Corrected Temp: _____oC

Comments:

Relinquished by/Company: (Signature) AECOM	Date/Time: 10/6/22 1630	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature) FedEx	Date/Time: 10/7/22 9:26	Received by/Company: (Signature)	Date/Time: 10/7/22 9:26
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY

Table #:

Acctnum:

Template:

Prelogin:

PM:

PB:

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 222100826	
Client **PM** RWe AECOM-Chelm - AECOM-Chelmsford, MA	**Transport Method** FEDEX
Profile Number 284674	**Received By** McCune, Dodie N.
Line Item(s) 1 - MEE, Propane, Acetylene 2 - Hydrogen	**Receive Date(s)** 10/07/22

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: E42	Temp °C
278843900837		2.0

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

SITE LOGIC Report

QuantArray®-Chlor Study

Contact: Lori Herberich
Phone: 978-302-0089

Address: AECOM
250 Apollo Drive
Chelmsford, MA 1824

Email: lori.herberich@aecom.com

MI Identifier: 131TI

Report Date: 10/20/2022

Project: LMC Wilmington, 60688023
Comments:

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

The QuantArray®-Chlor Approach

Quantification of *Dehalococcoides*, the only known bacterial group capable of complete reductive dechlorination of PCE and TCE to ethene, has become an indispensable component of assessment, remedy selection, and performance monitoring at sites impacted by chlorinated solvents. While undeniably a key group of halorespiring bacteria, *Dehalococcoides* are not the only bacteria of interest in the subsurface because reductive dechlorination is not the only potential biodegradation pathway operative at contaminated sites, and chlorinated ethenes are not always the primary contaminants of concern. The QuantArray®-Chlor not only includes a variety of halorespiring bacteria (*Dehalococcoides*, *Dehalobacter*, *Dehalogenimonas*, etc.) to assess the potential for reductive dechlorination of chloroethenes, chloroethanes, chlorobenzenes, chlorophenols, and chloroform, but also provides quantification of functional genes involved in aerobic (co)metabolic pathways for biodegradation of chlorinated solvents and even competing biological processes. Thus, the QuantArray®-Chlor will give site managers the ability to simultaneously yet economically evaluate the potential for biodegradation of a spectrum of common chlorinated contaminants through a multitude of anaerobic and aerobic (co) metabolic pathways to give a much more clear and comprehensive view of contaminant biodegradation.

The QuantArray®-Chlor is used to quantify specific microorganisms and functional genes to evaluate the following:

Anaerobic Reductive Dechlorination	Quantification of important halorespiring bacteria (e.g. *Dehalococcoides*, *Dehalobacter*, *Dehalogenimonas*, *Desulfitobacterium* spp.) and key functional genes (e.g. vinyl chloride reductases, TCE reductase, chloroform reductase) responsible for reductive dechlorination of a broad spectrum of chlorinated solvents.
Aerobic Cometabolism	Several different types of bacteria including methanotrophs and some toluene/phenol utilizing bacteria can co-oxidize TCE, DCE, and vinyl chloride. The QuantArray®-Chlor quantifies functional genes like soluble methane monooxygenase encoding enzymes capable of co-oxidation of chlorinated ethenes.
Aerobic (Co)metabolism of Vinyl Chloride	Ethene oxidizing bacteria are capable of cometabolism of vinyl chloride. In some cases, ethenotrophs can also utilize vinyl chloride as a growth supporting substrate. The QuantArray®-Chlor targets key functional genes in ethene metabolism.

How do QuantArrays® work?

The QuantArray®-Chlor in many respects is a hybrid technology combining the highly parallel detection of microarrays with the accurate and precise quantification provided by qPCR into a single platform. The key to highly parallel qPCR reactions is the nanoliter fluidics platform for low volume, solution phase qPCR reactions.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

How are QuantArray® results reported?

One of the primary advantages of the QuantArray®-Chlor is the simultaneous quantification of a broad spectrum of different microorganisms and key functional genes involved in a variety of pathways for chlorinated hydrocarbon biodegradation. However, highly parallel quantification combined with the various metabolic and cometabolic capabilities of different target organisms can complicate data presentation. Therefore, in addition to Summary Tables, QuantArray® results will be presented as Microbial Population Summary and Comparison Figures to aid in data interpretation and subsequent evaluation of site management activities.

Types of Tables and Figures:

Microbial Population Summary	Figure presenting the concentrations of QuantArray®-Chlor target populations (e.g. *Dehalococcoides*) and functional genes (e.g. vinyl chloride reductase) relative to typically observed values.
Summary Tables	Tables of target population concentrations grouped by biodegradation pathway and contaminant type.
Comparison Figures	Depending on the project, sample results can be presented to compare changes over time or examine differences in microbial populations along a transect of the dissolved plume.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Results

Table 1: Summary of the QuantArray®-Chlor results obtained for samples 22A-AE106R3-092922-1, 22A-AE105R2-092922-1, 22A-AE102RR1-092822-1, 22A-AE103R5-092822-1, and 22A-TRC301R4-092922-1.

Sample Name Sample Date	22A-AE106R3-092922-1 09/29/2022	22A-AE105R2-092922-1 09/29/2022	22A-AE102RR1-092822-1 09/28/2022	22A-AE103R5-092822-1 09/28/2022	22A-TRC301R4-092922-1 09/29/2022
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**9.21E+01**	**8.65E+02**	**1.18E+04**	**5.07E+02**	**7.98E+01**
tceA Reductase (TCE)	**4.00E-01 (J)**	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	**3.00E-01 (J)**	**1.44E+02**	**1.02E+03**	**2.00E-01 (J)**	**1.20E+00**
Vinyl Chloride Reductase (VCR)	**1.30E+01**	**4.10E+00**	**1.32E+02**	**4.53E+01**	**4.30E+00**
Dehalobacter spp. (DHBt)	**1.68E+03**	**1.92E+03**	**1.88E+03**	**2.08E+02**	**1.89E+03**
Dehalobacter DCM (DCM)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**5.21E+02**	**4.82E+03**	**3.16E+04**	**1.33E+04**	**1.14E+03**
cerA Reductase (CER)	<5.00E+00	**1.00E-01 (J)**	<5.00E+00	<5.00E+00	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00	**2.68E+03**	<5.00E+00	<5.00E+00	<5.00E+00
Desulfitobacterium spp. (DSB)	**4.74E+03**	**1.63E+03**	**1.20E+03**	**1.87E+04**	**4.22E+02**
Dehalobium chlorocoercia (DECO)	**1.85E+01**	**4.61E+02**	**1.49E+03**	**1.40E+02**	**7.02E+02**
Desulfuromonas spp. (DSM)	**2.46E+02**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	<5.00E+00	<5.00E+00	**1.25E+02**	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00	**4.26E+01**	<5.00E+00	<5.00E+00	<5.00E+00
Chloroform Reductase (CFR)	**4.60E+00 (J)**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Aerobic (Co)Metabolic					
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	**5.87E+01**	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Dioxygenase (TOD)	<5.00E+00	<5.00E+00	**2.10E+00 (J)**	**1.80E+00 (J)**	<5.00E+00
Phenol Hydroxylase (PHE)	<5.00E+00	<5.00E+00	<5.00E+00	**3.28E+01**	<5.00E+00
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	**8.29E+01**	**2.03E+01**	**3.70E+02**	<5.00E+00
Toluene Monooxygenase (RMO)	<5.00E+00	<5.00E+00	**5.35E+01**	**1.18E+01**	<5.00E+00
Ethene Monooxygenase (EtnC)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**2.92E+01**
Other					
Total Eubacteria (EBAC)	**3.43E+05**	**2.55E+05**	**2.74E+05**	**4.38E+05**	**5.55E+04**
Sulfate Reducing Bacteria (APS)	**2.42E+04**	**1.82E+04**	**5.40E+04**	**1.53E+04**	**9.72E+03**
Methanogens (MGN)	**1.49E+01**	**2.88E+01**	**7.90E+01**	**3.50E+00 (J)**	**1.20E+00 (J)**

Legend:

NA = Not Analyzed
NS = Not Sampled
J = Estimated Gene Copies Below PQL but Above LQL
I = Inhibited
< = Result Not Detected

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 2: Summary of the QuantArray®-Chlor results obtained for samples 22A-AE28R2-100522-1, 22A-AE29R6-100422-1, 22A-AE100R5-100422-1, and 22A-AE112R5-100622-1.

Sample Name	22A-AE28R2-100522-1	22A-AE29R6-100422-1	22A-AE100R5-100422-1	22A-AE112R5-100622-1
Sample Date	10/05/2022	10/04/2022	10/04/2022	10/06/2022
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**5.20E+04**	**1.64E+03**	**4.22E+02**	**1.97E+01**
tceA Reductase (TCE)	**1.12E+03**	**2.94E+02**	**1.20E+00**	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01	<5.00E-01	**1.00E+00**	<5.00E-01
Vinyl Chloride Reductase (VCR)	<5.00E-01	<5.00E-01	**7.35E+01**	<5.00E-01
Dehalobacter spp. (DHBt)	**4.87E+03**	**1.35E+03**	<5.00E+00	**3.29E+02**
Dehalobacter DCM (DCM)	<5.00E+00	**1.00E+01**	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**9.36E+04**	**7.02E+04**	**1.38E+03**	**1.35E+03**
cerA Reductase (CER)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Desulfitobacterium spp. (DSB)	**5.76E+03**	**2.99E+03**	**2.75E+04**	**2.56E+02**
Dehalobium chlorocoercia (DECO)	**2.59E+03**	**1.70E+03**	**1.22E+03**	**8.70E+01**
Desulfuromonas spp. (DSM)	**4.14E+03**	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Aerobic (Co)Metabolic				
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Dioxygenase (TOD)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Phenol Hydroxylase (PHE)	**6.20E+00**	<5.00E+00	**1.18E+03**	<5.00E+00
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	<5.00E+00	**2.79E+02**	<5.00E+00
Toluene Monooxygenase (RMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Ethene Monooxygenase (EtnC)	**9.60E+01**	<5.00E+00	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	**4.09E+02**	<5.00E+00	<5.00E+00	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Other				
Total Eubacteria (EBAC)	**1.31E+06**	**6.38E+05**	**5.36E+05**	**1.34E+05**
Sulfate Reducing Bacteria (APS)	**2.79E+05**	**7.56E+04**	**4.62E+04**	**2.56E+04**
Methanogens (MGN)	<5.00E+00	<5.00E+00	<5.00E+00	**3.73E+01**

Legend:

NA = Not Analyzed
NS = Not Sampled
J = Estimated Gene Copies Below PQL but Above LQL
I = Inhibited
< = Result Not Detected

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

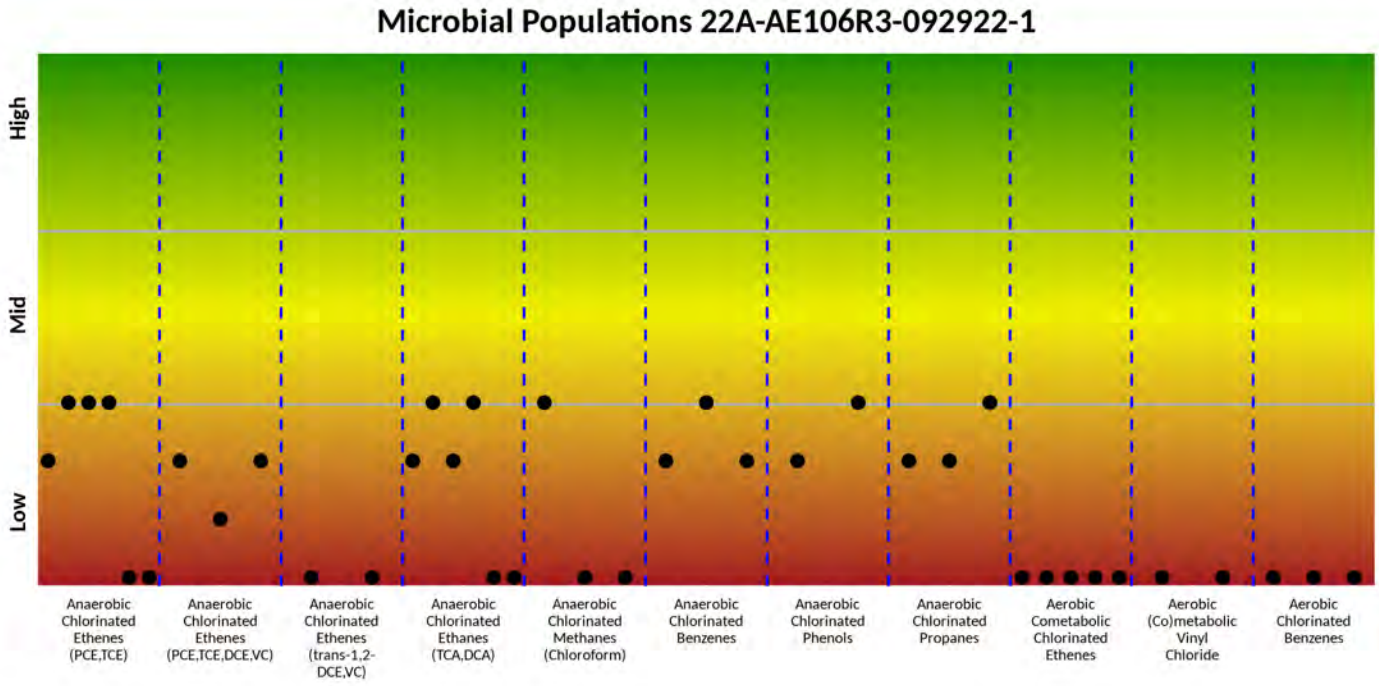


Figure 1: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

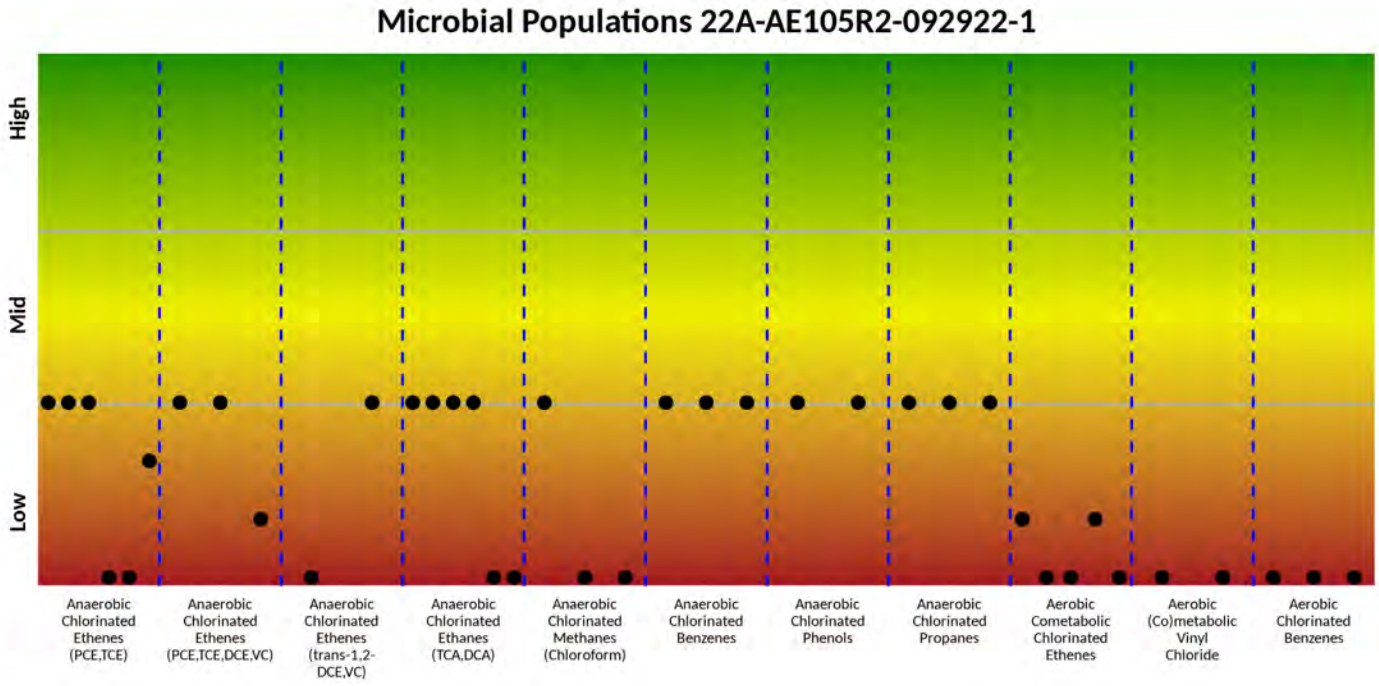


Figure 2: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

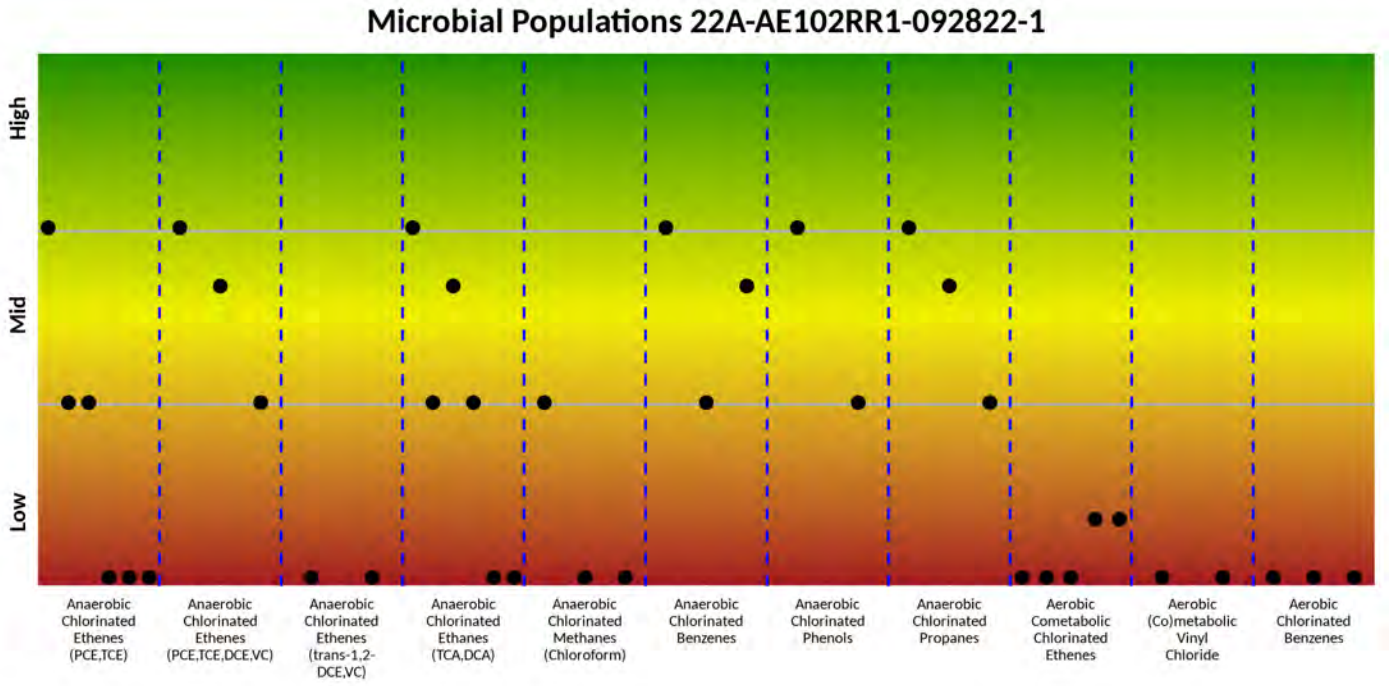


Figure 3: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

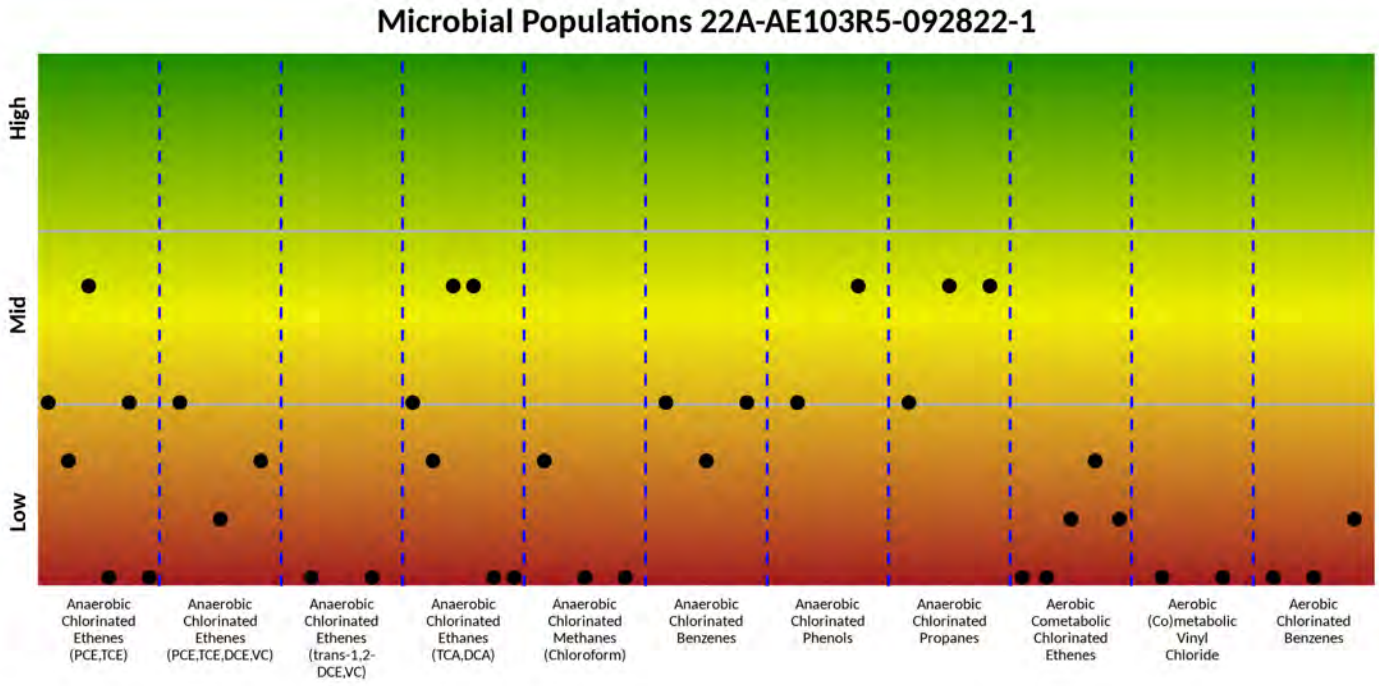


Figure 4: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

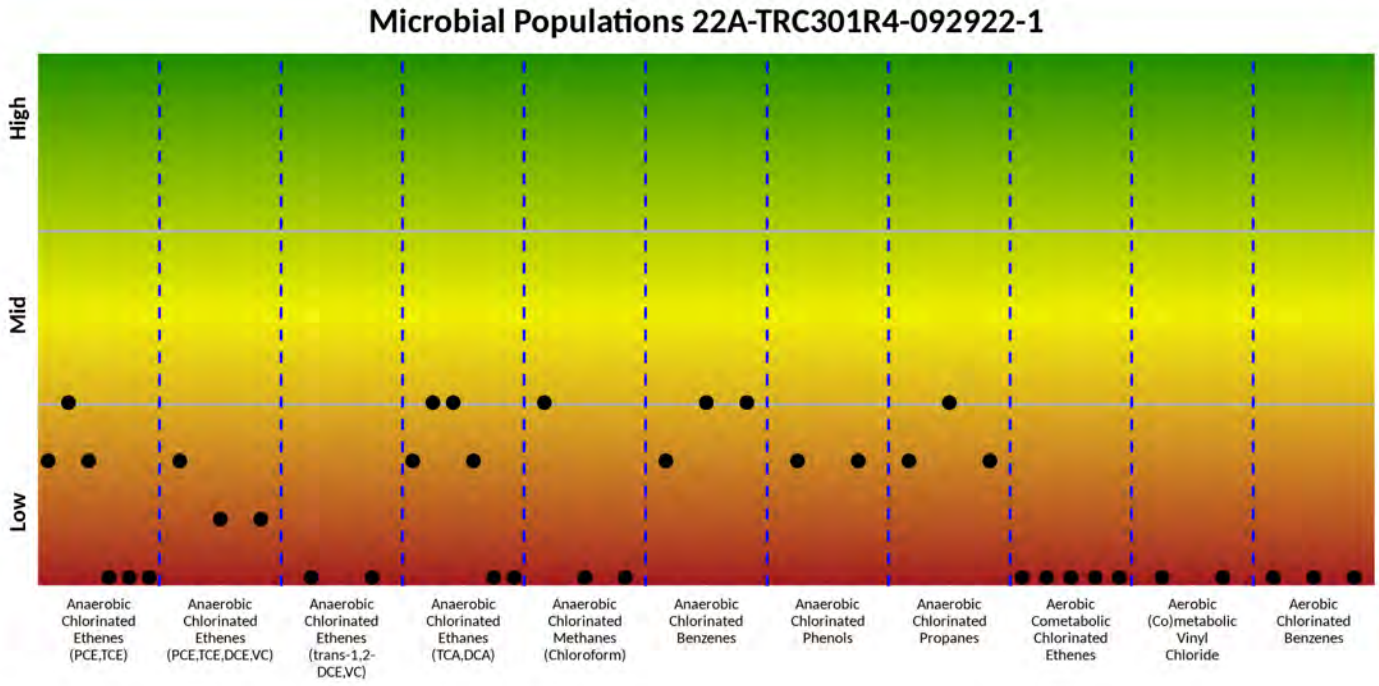


Figure 5: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

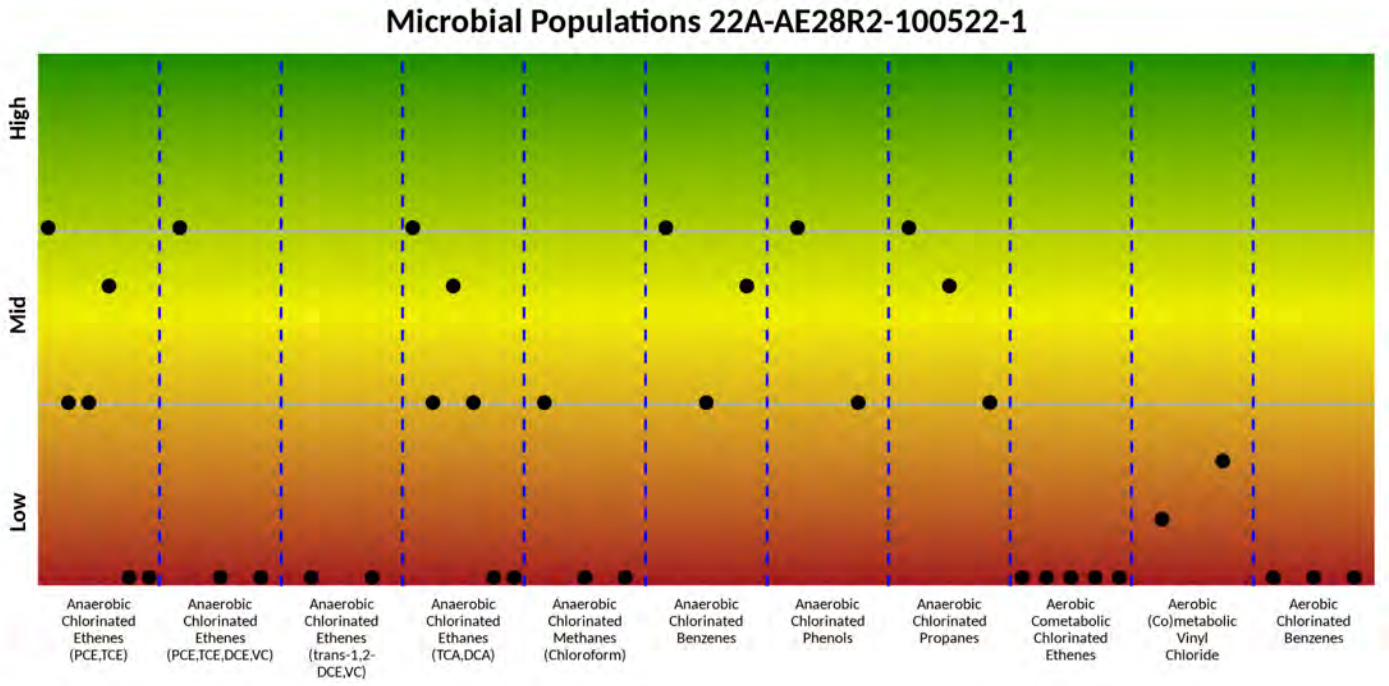


Figure 6: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

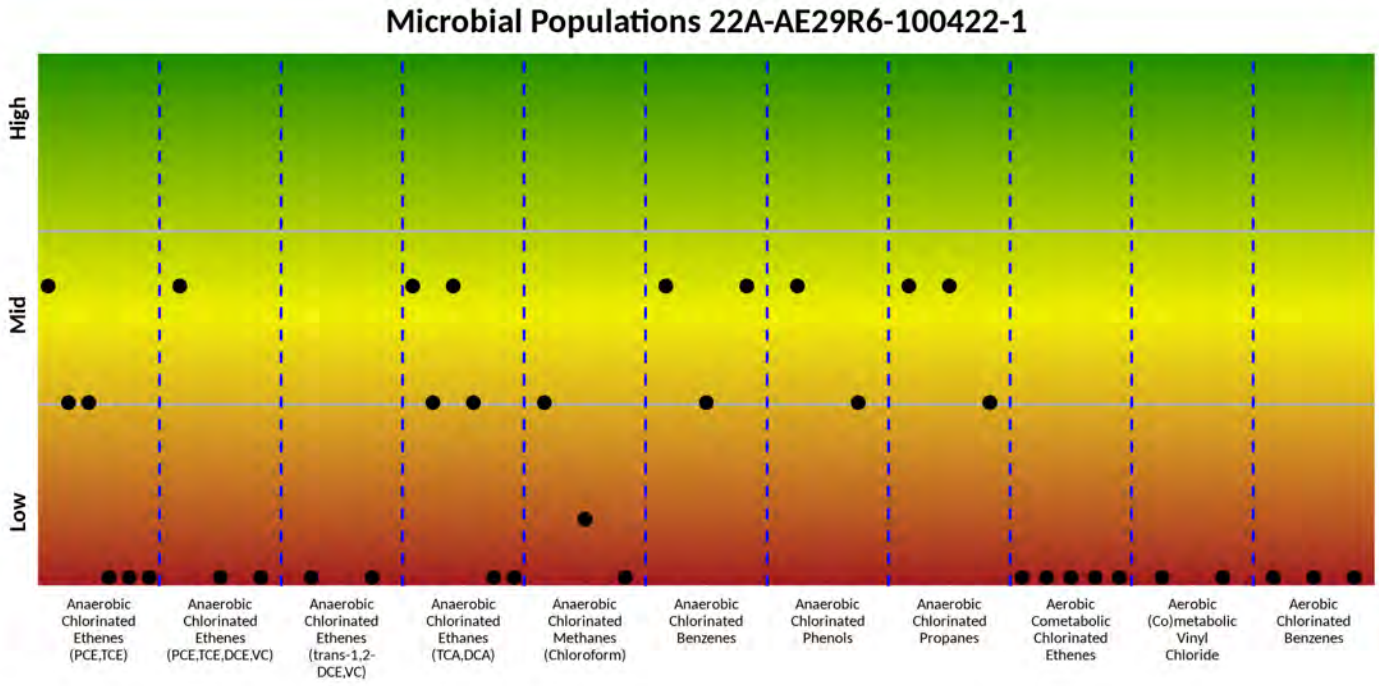


Figure 7: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

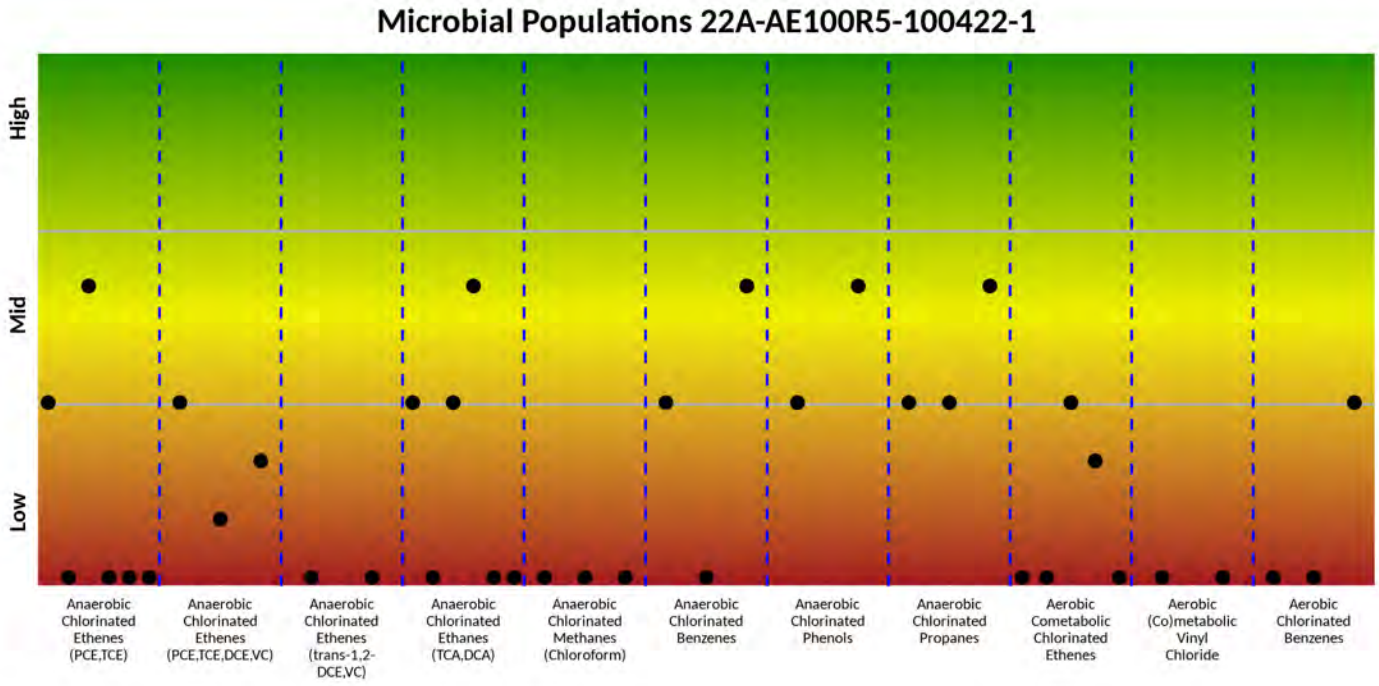


Figure 8: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

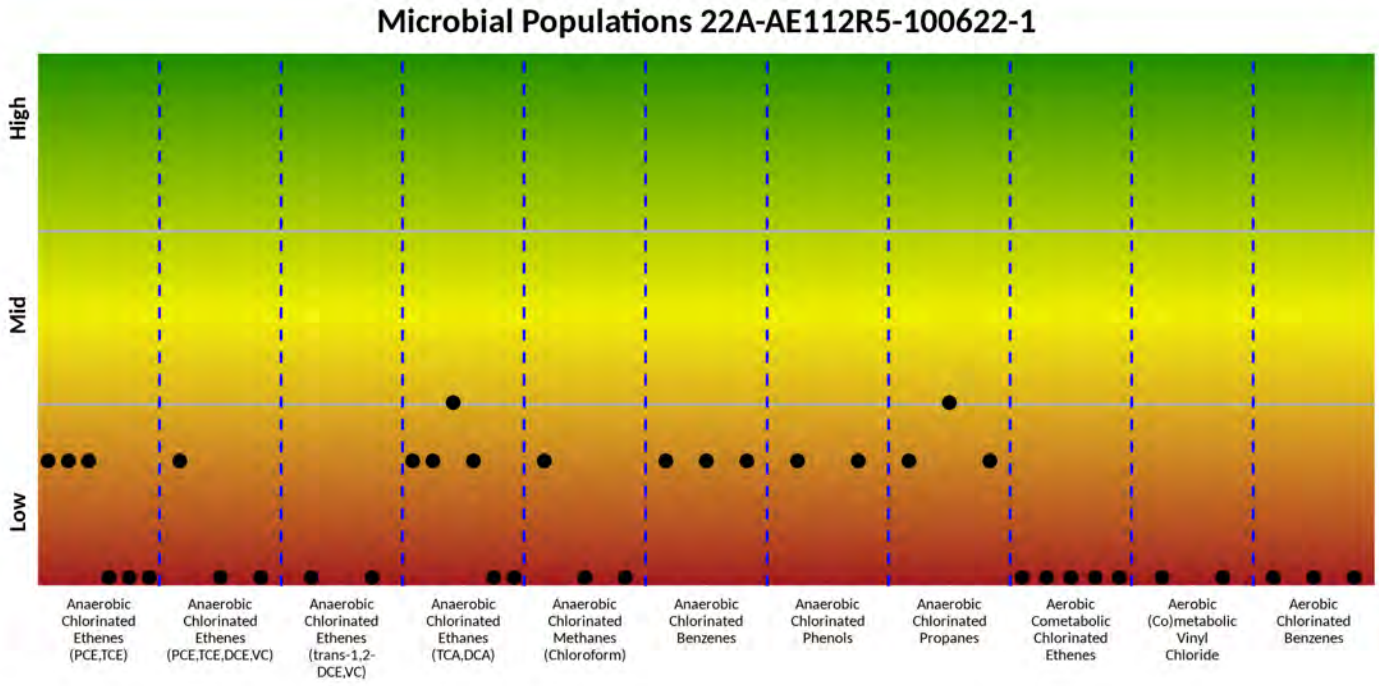


Figure 9: Microbial population summary to aid in evaluating potential pathways and biodegradation of specific contaminants.

Anaerobic - Reductive Dechlorination or Dichloroelimination		Aerobic - (Co)metabolism	
Chlorinated Ethenes (PCE, TCE)	DHC, DHBt, DSB, DSM, PCE-1, PCE-2	Chlorinated Ethenes (TCE,DCE,VC)	sMMO, TOD, PHE, RDEG, RMO
Chlorinated Ethenes (PCE, TCE, DCE, VC)	DHC, BVC, VCR	(Co)metabolic Vinyl Chloride	etnC, etnE
Chlorinated Ethenes (trans-1,2-DCE, VC)	TDR, CER	Chlorinated Benzenes	TOD, TCBO, PHE
Chlorinated Ethanes (TCA and 1,2-DCA)	DHC, DHBt, DHG, DSB[1], DCA, DCAR		
Chlorinated Methanes (Chloroform)	DHBt, DCM, CFR		
Chlorinated Benzenes	DHC, DHBt[2], DECO		
Chlorinated Phenols	DHC, DSB		
Chlorinated Propanes	DHC, DHG, DSB[1]		

[1] *Desulfitobacterium dichloroeliminans* DCA1. [2] Implicated in reductive dechlorination of dichlorobenzene and potentially chlorobenzene.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 3: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 22A-AE106R3-092922-1, 22A-AE105R2-092922-1, 22A-AE102RR1-092822-1, 22A-AE103R5-092822-1, and 22A-TRC301R4-092922-1.

Sample Name Sample Date	22A-AE106R3-092922-1 09/29/2022	22A-AE105R2-092922-1 09/29/2022	22A-AE102RR1-092822-1 09/28/2022	22A-AE103R5-092822-1 09/28/2022	22A-TRC301R4-092922-1 09/29/2022
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**9.21E+01**	**8.65E+02**	**1.18E+04**	**5.07E+02**	**7.98E+01**
tceA Reductase (TCE)	**4.00E-01 (J)**	<5.00E-01	<5.00E-01	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	**3.00E-01 (J)**	**1.44E+02**	**1.02E+03**	**2.00E-01 (J)**	**1.20E+00**
Vinyl Chloride Reductase (VCR)	**1.30E+01**	**4.10E+00**	**1.32E+02**	**4.53E+01**	**4.30E+00**
Dehalobacter spp. (DHBt)	**1.68E+03**	**1.92E+03**	**1.88E+03**	**2.08E+02**	**1.89E+03**
Dehalobacter DCM (DCM)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**5.21E+02**	**4.82E+03**	**3.16E+04**	**1.33E+04**	**1.14E+03**
Desulfitobacterium spp. (DSB)	**4.74E+03**	**1.63E+03**	**1.20E+03**	**1.87E+04**	**4.22E+02**
Dehalobium chlorocoercia (DECO)	**1.85E+01**	**4.61E+02**	**1.49E+03**	**1.40E+02**	**7.02E+02**
Desulfuromonas spp. (DSM)	**2.46E+02**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00

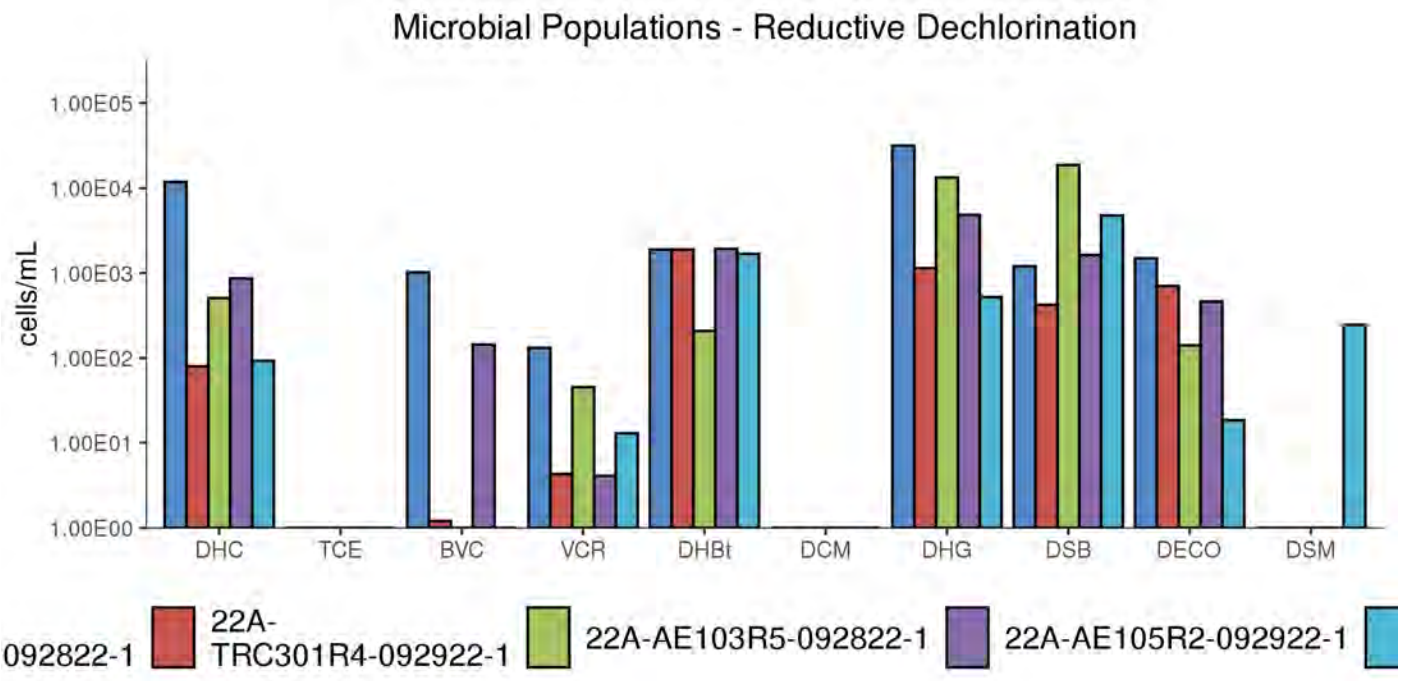


Figure 10: Comparison - microbial populations involved in reductive dechlorination.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 4: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 22A-AE106R3-092922-1, 22A-AE105R2-092922-1, 22A-AE102RR1-092822-1, 22A-AE103R5-092822-1, and 22A-TRC301R4-092922-1.

Sample Name Sample Date	22A-AE106R3-092922-1 09/29/2022	22A-AE105R2-092922-1 09/29/2022	22A-AE102RR1-092822-1 09/28/2022	22A-AE103R5-092822-1 09/28/2022	22A-TRC301R4-092922-1 09/29/2022
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Chloroform Reductase (CFR)	**4.60E+00 (J)**	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	<5.00E+00	<5.00E+00	**1.25E+02**	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00	**4.26E+01**	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas trans-1,2-DCE Reductase (TDR)	<5.00E+00	**2.68E+03**	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas cerA Reductase (CER)	<5.00E+00	**1.00E-01 (J)**	<5.00E+00	<5.00E+00	<5.00E+00

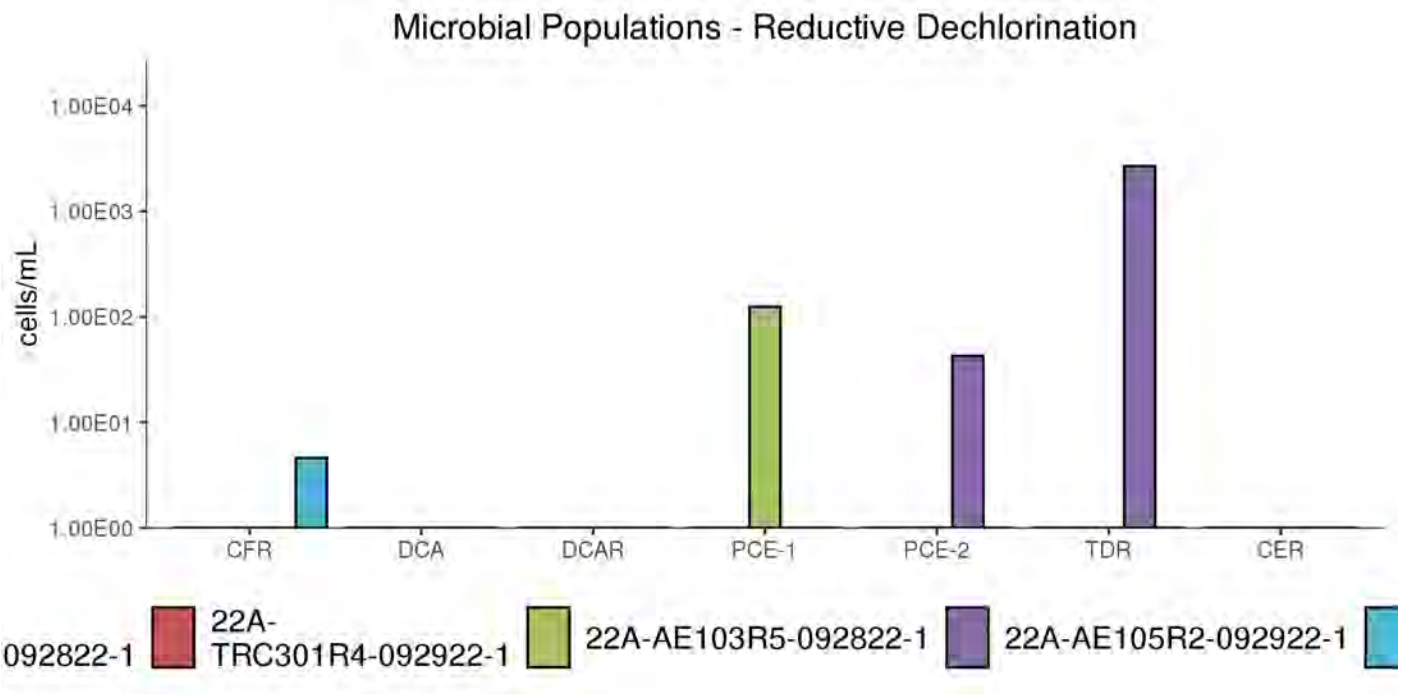


Figure 11: Comparison - microbial populations involved in reductive dechlorination.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 5: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 22A-AE28R2-100522-1, 22A-AE29R6-100422-1, 22A-AE100R5-100422-1, and 22A-AE112R5-100622-1.

Sample Name Sample Date	22A-AE28R2-100522-1 10/05/2022	22A-AE29R6-100422-1 10/04/2022	22A-AE100R5-100422-1 10/04/2022	22A-AE112R5-100622-1 10/06/2022
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**5.20E+04**	**1.64E+03**	**4.22E+02**	**1.97E+01**
tceA Reductase (TCE)	**1.12E+03**	**2.94E+02**	**1.20E+00**	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01	<5.00E-01	**1.00E+00**	<5.00E-01
Vinyl Chloride Reductase (VCR)	<5.00E-01	<5.00E-01	**7.35E+01**	<5.00E-01
Dehalobacter spp. (DHBt)	**4.87E+03**	**1.35E+03**	<5.00E+00	**3.29E+02**
Dehalobacter DCM (DCM)	<5.00E+00	**1.00E+01**	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**9.36E+04**	**7.02E+04**	**1.38E+03**	**1.35E+03**
Desulfitobacterium spp. (DSB)	**5.76E+03**	**2.99E+03**	**2.75E+04**	**2.56E+02**
Dehalobium chlorocoercia (DECO)	**2.59E+03**	**1.70E+03**	**1.22E+03**	**8.70E+01**
Desulfuromonas spp. (DSM)	**4.14E+03**	<5.00E+00	<5.00E+00	<5.00E+00

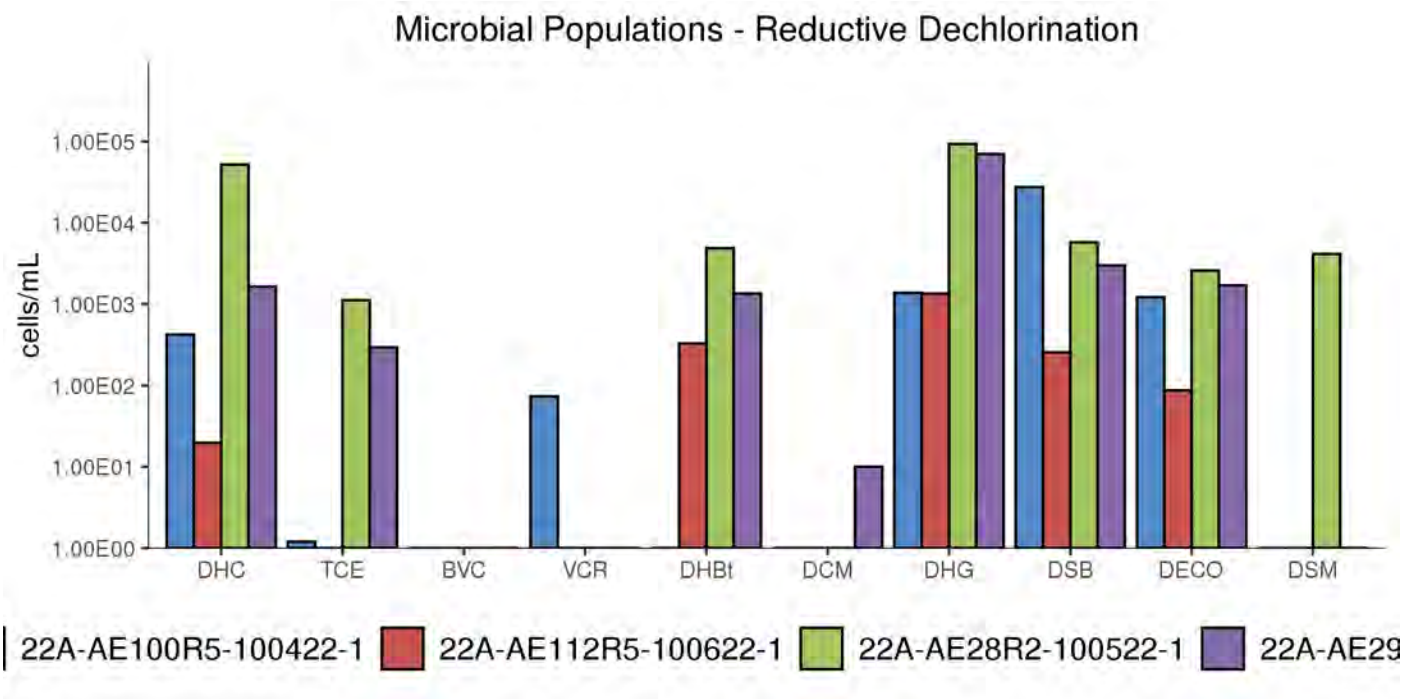


Figure 12: Comparison - microbial populations involved in reductive dechlorination.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 6: Summary of the QuantArray®-Chlor results for microorganisms responsible for reductive dechlorination for samples 22A-AE28R2-100522-1, 22A-AE29R6-100422-1, 22A-AE100R5-100422-1, and 22A-AE112R5-100622-1.

Sample Name Sample Date	22A-AE28R2-100522-1 10/05/2022	22A-AE29R6-100422-1 10/04/2022	22A-AE100R5-100422-1 10/04/2022	22A-AE112R5-100622-1 10/06/2022
Reductive Dechlorination	cells/mL	cells/mL	cells/mL	cells/mL
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dehalogenimonas cerA Reductase (CER)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00

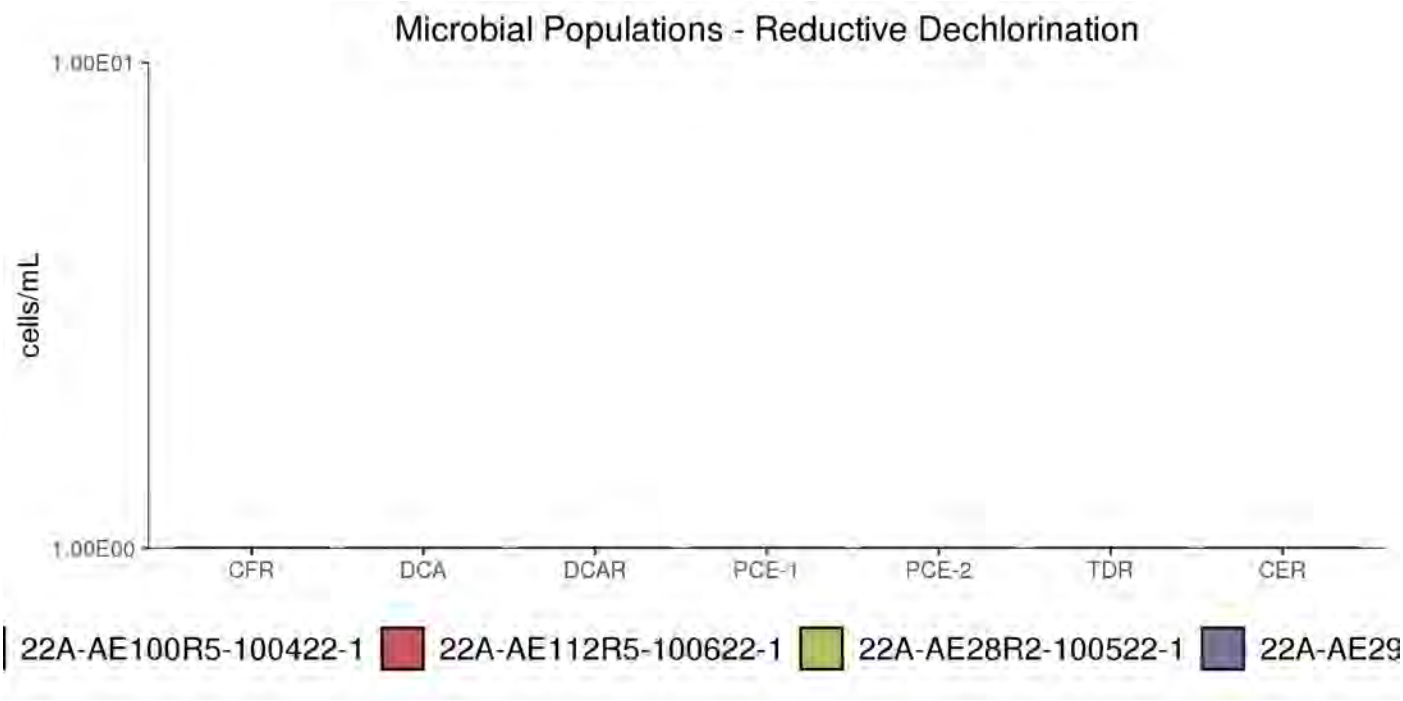


Figure 13: Comparison - microbial populations involved in reductive dechlorination.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 7: Summary of the QuantArray®-Chlor results for microorganisms responsible for aerobic (co)metabolism for samples 22A-AE106R3-092922-1, 22A-AE105R2-092922-1, 22A-AE102RR1-092822-1, 22A-AE103R5-092822-1, and 22A-TRC301R4-092922-1.

Sample Name Sample Date	22A-AE106R3-092922-1 09/29/2022	22A-AE105R2-092922-1 09/29/2022	22A-AE102RR1-092822-1 09/28/2022	22A-AE103R5-092822-1 09/28/2022	22A-TRC301R4-092922-1 09/29/2022
Aerobic (Co)Metabolic	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	**5.87E+01**	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Dioxygenase (TOD)	<5.00E+00	<5.00E+00	**2.10E+00 (J)**	**1.80E+00 (J)**	<5.00E+00
Phenol Hydroxylase (PHE)	<5.00E+00	<5.00E+00	<5.00E+00	**3.28E+01**	<5.00E+00
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	**8.29E+01**	**2.03E+01**	**3.70E+02**	<5.00E+00
Toluene Monooxygenase (RMO)	<5.00E+00	<5.00E+00	**5.35E+01**	**1.18E+01**	<5.00E+00
Ethene Monooxygenase (EtnC)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00	**2.92E+01**

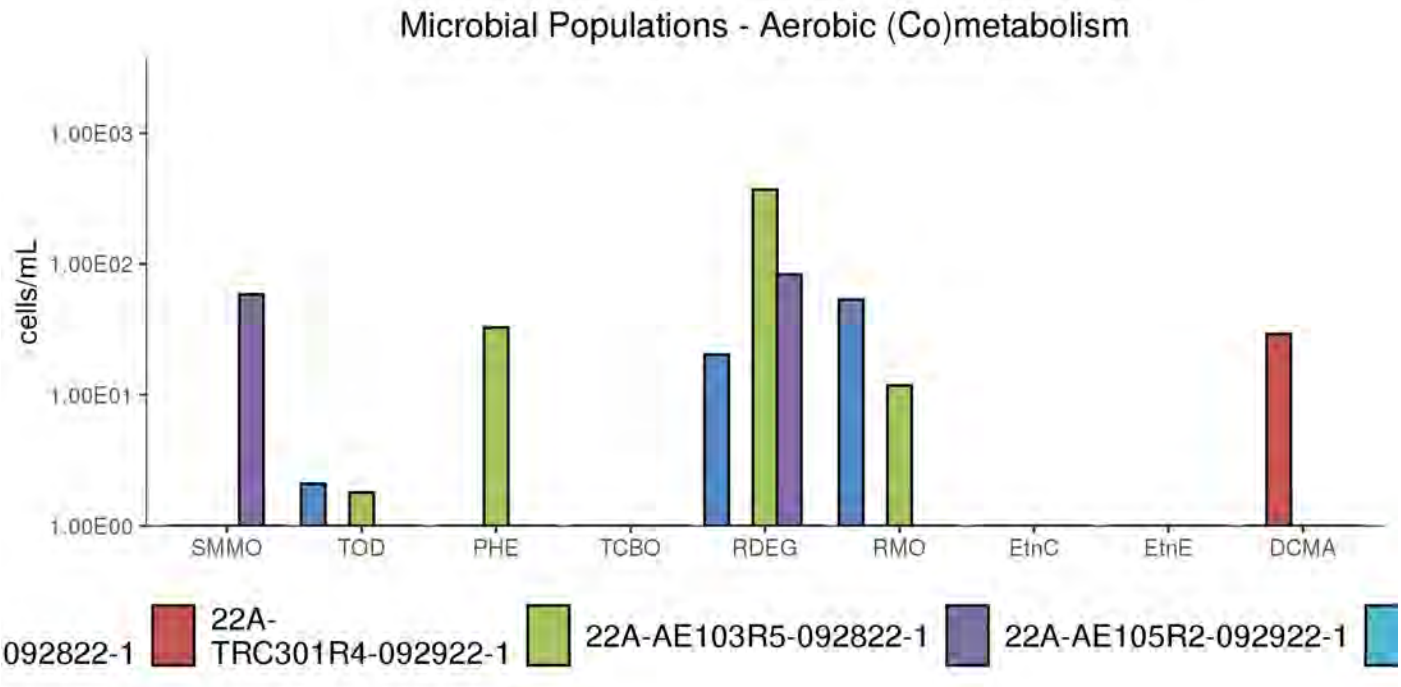


Figure 14: Comparison - microbial populations involved in aerobic (co)metabolism.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 8: Summary of the QuantArray®-Chlor results for microorganisms responsible for aerobic (co)metabolism for samples 22A-AE28R2-100522-1, 22A-AE29R6-100422-1, 22A-AE100R5-100422-1, and 22A-AE112R5-100622-1.

Sample Name Sample Date	22A-AE28R2-100522-1 10/05/2022	22A-AE29R6-100422-1 10/04/2022	22A-AE100R5-100422-1 10/04/2022	22A-AE112R5-100622-1 10/06/2022
Aerobic (Co)Metabolic	cells/mL	cells/mL	cells/mL	cells/mL
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Dioxygenase (TOD)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Phenol Hydroxylase (PHE)	**6.20E+00**	<5.00E+00	**1.18E+03**	<5.00E+00
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	<5.00E+00	**2.79E+02**	<5.00E+00
Toluene Monooxygenase (RMO)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00
Ethene Monooxygenase (EtnC)	**9.60E+01**	<5.00E+00	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	**4.09E+02**	<5.00E+00	<5.00E+00	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00	<5.00E+00

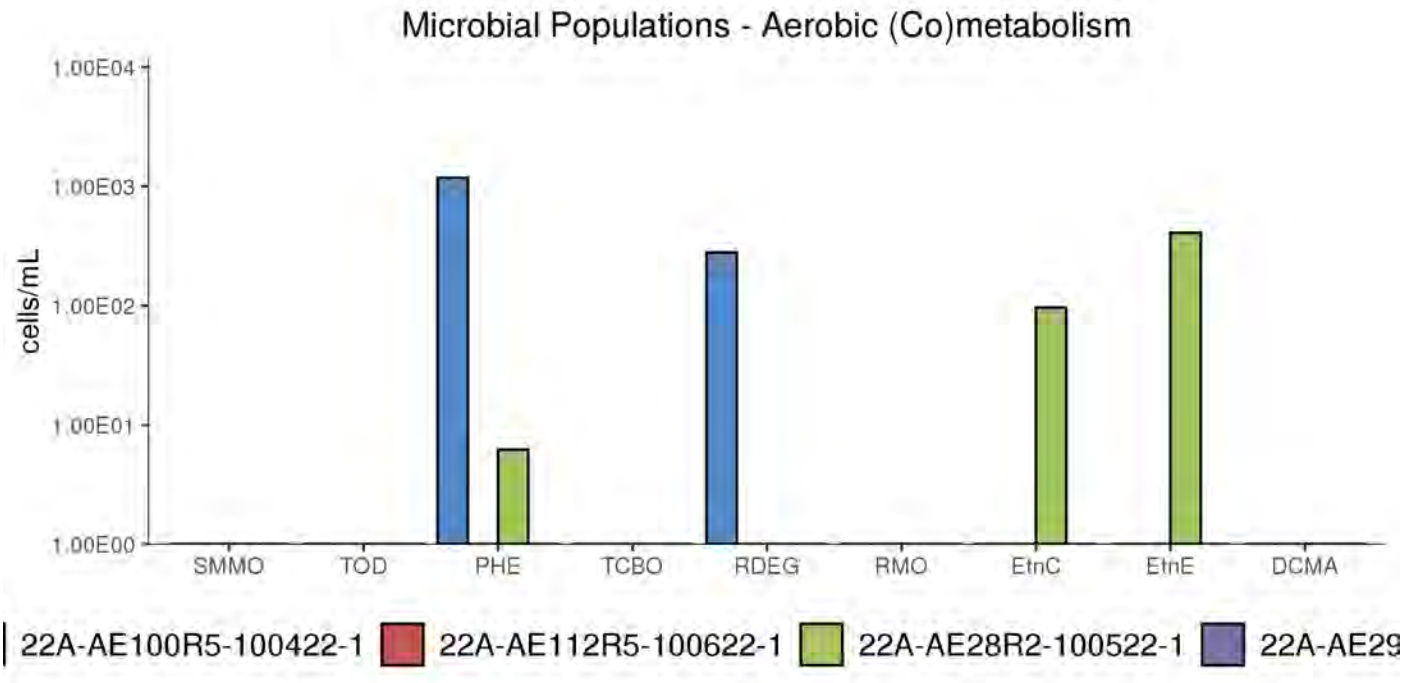


Figure 15: Comparison - microbial populations involved in aerobic (co)metabolism.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 9: Summary of the QuantArray® results for total bacteria and other populations for samples 22A-AE106R3-092922-1, 22A-AE105R2-092922-1, 22A-AE102RR1-092822-1, 22A-AE103R5-092822-1, and 22A-TRC301R4-092922-1.

Sample Name	22A-AE106R3-092922-1	22A-AE105R2-092922-1	22A-AE102RR1-092822-1	22A-AE103R5-092822-1	22A-TRC301R4-092922-1
Sample Date	09/29/2022	09/29/2022	09/28/2022	09/28/2022	09/29/2022
Other	cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Total Eubacteria (EBAC)	**3.43E+05**	**2.55E+05**	**2.74E+05**	**4.38E+05**	**5.55E+04**
Sulfate Reducing Bacteria (APS)	**2.42E+04**	**1.82E+04**	**5.40E+04**	**1.53E+04**	**9.72E+03**
Methanogens (MGN)	**1.49E+01**	**2.88E+01**	**7.90E+01**	**3.50E+00 (J)**	**1.20E+00 (J)**

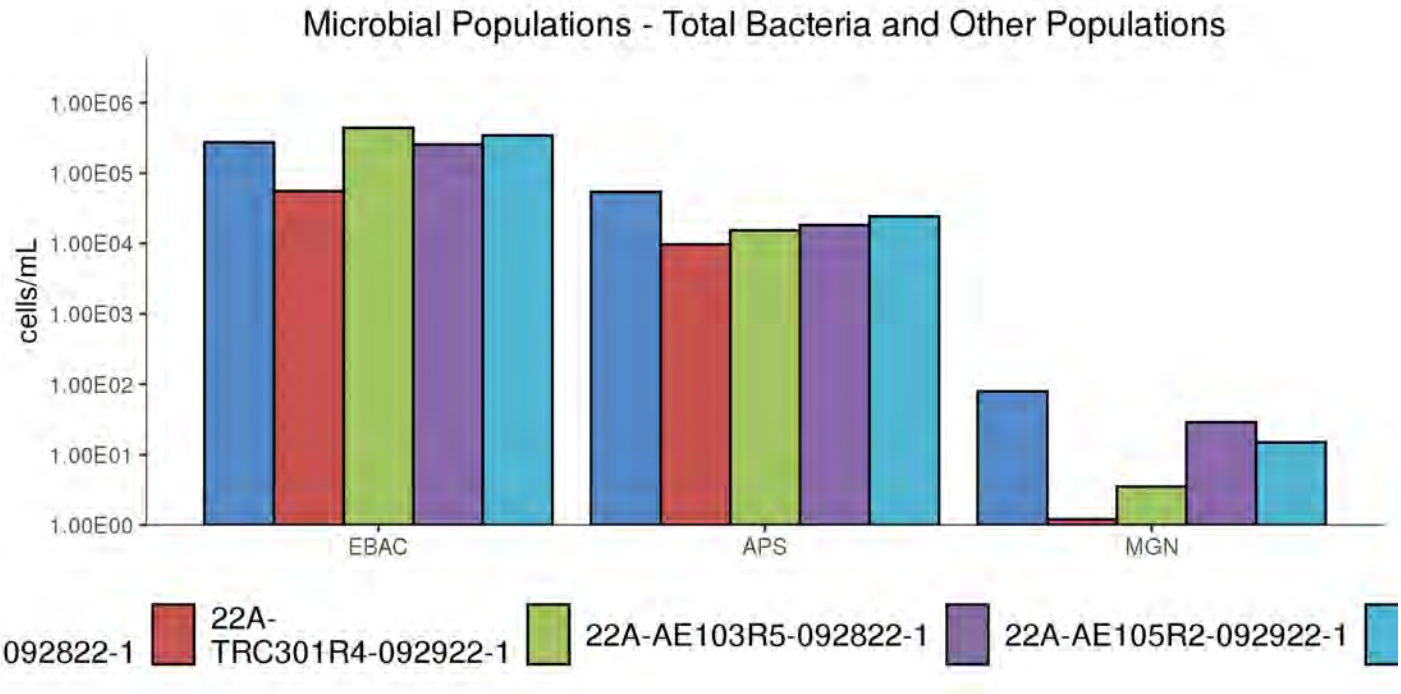


Figure 16: Comparison - microbial populations.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 10: Summary of the QuantArray® results for total bacteria and other populations for samples 22A-AE28R2-100522-1, 22A-AE29R6-100422-1, 22A-AE100R5-100422-1, and 22A-AE112R5-100622-1.

Sample Name Sample Date	22A-AE28R2-100522-1 10/05/2022	22A-AE29R6-100422-1 10/04/2022	22A-AE100R5-100422-1 10/04/2022	22A-AE112R5-100622-1 10/06/2022
Other	cells/mL	cells/mL	cells/mL	cells/mL
Total Eubacteria (EBAC)	**1.31E+06**	**6.38E+05**	**5.36E+05**	**1.34E+05**
Sulfate Reducing Bacteria (APS)	**2.79E+05**	**7.56E+04**	**4.62E+04**	**2.56E+04**
Methanogens (MGN)	<5.00E+00	<5.00E+00	<5.00E+00	**3.73E+01**

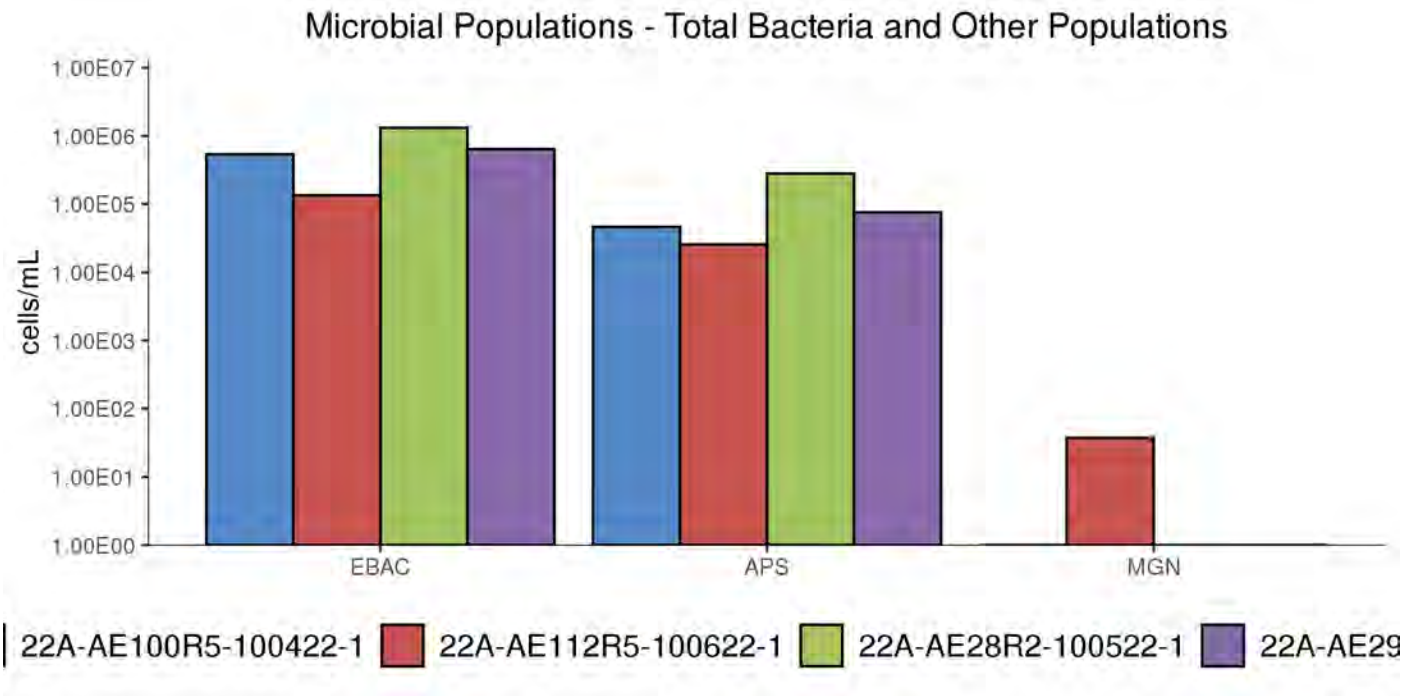


Figure 17: Comparison - microbial populations.

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Interpretation

The overall purpose of the QuantArray®-Chlor is to give site managers the ability to simultaneously yet economically evaluate the potential for biodegradation of a spectrum of common chlorinated contaminants through a multitude of anaerobic and aerobic (co)metabolic pathways in order to provide a clearer and more comprehensive view of contaminant biodegradation. The following discussion describes the interpretation of results in general terms and is meant to serve as a guide.

Reductive Dechlorination - Chlorinated Ethenes: While a number of bacterial cultures including *Dehalococcoides*, *Dehalobacter*, *Desulfitobacterium*, and *Desulfuromonas* spp. capable of utilizing PCE and TCE as growth-supporting electron acceptors have been isolated [1–5], *Dehalococcoides* may be the most important because they are the only bacterial group that has been isolated to date which is capable of complete reductive dechlorination of PCE to ethene [6]. In fact, the presence of *Dehalococcoides* has been associated with complete reductive dechlorination to ethene at sites across North America and Europe [7], and Lu et al. [8] have proposed using a *Dehalococcoides* concentration of 1 x 10^4 cells/mL as a screening criterion to identify sites where biological reductive dechlorination is predicted to proceed at "generally useful" rates.

At chlorinated ethene sites, any "stall" leading to the accumulation of daughter products, especially vinyl chloride, would be a substantial concern. While *Dehalococcoides* concentrations greater than 1 x 10^4 cells/mL correspond to ethene production and useful rates of dechlorination, the range of chlorinated ethenes degraded varies by strain within the *Dehalococcoides* genus [6, 9], and the presence of co-contaminants and competitors can have complex impacts on the halorespiring microbial community [10–15]. Therefore, QuantArray®-Chlor also provides quantification of a suite of reductive dehalogenase genes (PCE, TCE, BVC, VCR, CER, and TDR) to more definitively confirm the potential for reductive dechlorination of all chlorinated ethene compounds including vinyl chloride.

Perhaps most importantly, QuantArray®-Chlor quantifies TCE reductase (TCE) and both known vinyl chloride reductase genes (BVC, VCR) from *Dehalococcoides* to conclusively evaluate the potential for complete reductive dechlorination of chlorinated ethenes to nontoxic ethene [16–18]. In addition, the analysis also includes quantification of reductive dehalogenase genes from *Dehalogenimonas* spp. capable of reductive dechlorination of chlorinated ethenes. More specifically, these are the trans-1,2-DCE dehalogenase gene (TDR) from strain WBC-2 [19] and the vinyl chloride reductase gene (CER) from GP, the only known organisms other than *Dehalococcoides* capable of vinyl chloride reduction [20]. Finally, PCE reductase genes responsible for sequential reductive dechlorination of PCE to *cis*-DCE by *Sulfurospirillum* and *Geobacter* spp. are also quantified. In mixed cultures, evidence increasingly suggests that partial dechlorinators like *Sulfurospirillum* and *Geobacter* may be responsible for the majority of reductive dechlorination of PCE to TCE and *cis*-DCE while *Dehalococcoides* functions more as *cis*-DCE and vinyl chloride reducing specialists [10, 21].

Reductive Dechlorination - Chlorinated Ethanes: Under anaerobic conditions, chlorinated ethanes are susceptible to reductive dechlorination by several groups of halorespiring bacteria including *Dehalobacter*, *Dehalogenimonas*, and *Dehalococcoides*. While the reported range of chlorinated ethanes utilized varies by genus, species, and sometimes at the strain level, several general observations can be made regarding biodegradation pathways and daughter product formation. *Dehalobacter* spp. have been isolated that are capable of sequential reductive dechlorination of 1,1,1-TCA through 1,1-DCA to chloroethane [13]. Biodegradation of 1,1,2-TCA by several halorespiring bacteria including *Dehalobacter* and *Dehalogenimonas* spp. proceeds via dichloroelimination producing vinyl chloride [22–24]. Similarly, 1,2-DCA biodegradation by *Dehalobacter*, *Dehalogenimonas*, and *Dehalococcoides* occurs via dichloroelimination producing ethene. While not utilized by many *Desulfitobacterium* isolates, at least one strain, *Desulfitobacterium dichloroeliminans* strain DCA1, is also capable of dichloroelimination of 1,2-DCA [25]. The 1,2-dichloroethane reductive dehalogenase gene (DCAR) from members of *Desulfitobacterium* and *Dehalobacter* is known to dechlorinate 1,2-DCA to ethene, while the 1,1-dichloroethane reductive dehalogenase (DCA) targets the gene responsible for 1,1-DCA dechlorination in some strains of *Dehalobacter*. In addition to chloroform,chloroform reductase (CFR) has also been shown to be responsible for reductivedechlorination of 1,1,1-TCA [26].

Reductive Dechlorination - Chlorinated Methanes: Chloroform is a common co-contaminant at chlorinated solvent sites and can inhibit reductive dechlorination of chlorinated ethenes. Grostern et al. demonstrated that a *Dehalobacter* population was capable of reductive dechlorination of chloroform to produce dichloromethane [27]. The *cfrA* gene encodes the reductase which catalyzes this initial step in chloroform biodegradation [26]. Justicia-Leon et al. have since shown that dichloromethane can support growth of a distinct group of *Dehalobacter* strains via fermentation [28]. The *Dehalobacter* DCM assay targets the 16S rRNA gene of these strains.

Reductive Dechlorination - Chlorinated Benzenes: Chlorinated benzenes are an important class of industrial solvents and chemical intermediates in the production of drugs, dyes, herbicides, and insecticides. The physical-chemical properties of chlorinated benzenes as well as susceptibility to biodegradation are functions of their degree of chlorination and the positions of chlorine substituents. Under anaerobic conditions, reductive dechlorination of higher chlorinated benzenes including hexachlorobenzene (HCB),

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

pentachlorobenzene (PeCB), tetrachlorobenzene (TeCB) isomers, and trichlorobenzene (TCB) isomers has been well documented [29], although biodegradation of individual compounds and isomers varies between isolates. For example, *Dehalococcoides* strain CBDB1 reductively dechlorinats HCB, PeCB, all three TeCB isomers, 1,2,3-TCB, and 1,2,4-TCB [9, 30]. *Dehalobium chlorocoercia* DF-1 has been shown to be capable of reductive dechlorination of HCB, PeCB, and 1,2,3,5-TeCB [31]. The dichlorobenzene (DCB) isomers and chlorobenzene (CB) were considered relatively recalcitrant under anaerobic conditions. However, new evidence has demonstrated reductive dechlorination of DCBs to CB and CB to benzene [32] with corresponding increases in concentrations of *Dehalobacter* spp. [33].

Reductive Dechlorination - Chlorinated Phenols: Pentachlorophenol (PCP) was one of the most widely used biocides in the U.S. and despite residential use restrictions, is still extensively used industrially as a wood preservative. Along with PCP, the tetrachlorophenol and trichlorophenol isomers were also used as fungicides in wood preserving formulations. 2,4-Dichlorophenol and 2,4,5-TCP were used as chemical intermediates in herbicide production (e.g. 2,4-D) and chlorophenols are known byproducts of chlorine bleaching in the pulp and paper industry. While the range of compounds utilized varies by strain, some *Dehalococcoides* isolates are capable of reductive dechlorination of PCP and other chlorinated phenols. For example, *Dehalococcoides* strain CBDB1 is capable of utilizing PCP, all three tetrachlorophenol (TeCP) congeners, all six trichlorophenol (TCP) congeners, and 2,3-dichlorophenol (2,3-DCP). PCP dechlorination by strain CBDB1 produces a mixture of 3,5-DCP, 3,4-DCP, 2,4-DCP, 3-CP, and 4-CP [34]. In the same study, however, *Dehalococcoides* strain 195 dechlorinated a more narrow spectrum of chlorophenols which included 2,3-DCP, 2,3,4-TCP, and 2,3,6-TCP, but no other TCPs or PCP. Similar to *Dehalococcoides*, some species and strains of *Desulfitobacterium* are capable of utilizing PCP and other chlorinated phenols. *Desulfitobacterium hafniense* PCP-1 is capable of reductive dechlorination of PCP to 3-CP [35]. However, the ability to biodegrade PCP is not universal among *Desulfitobacterium* isolates. *Desulfitobacterium* sp. strain PCE1 and *D. chlororespirans* strain Co23, for example, can utilize some TCP and DCP isomers, but not PCP for growth [2, 36].

Reductive Dechlorination - Chlorinated Propanes: *Dehalogenimonas* is a recently described bacterial genus of the phylum Chloroflexi which also includes the well-known chloroethene-respiring *Dehalococcoides* [23]. The *Dehalogenimonas* isolates characterized to date are also halorespiring bacteria, but utilize a rather unique range of chlorinated compounds as electron acceptors including chlorinated propanes (1,2,3-TCP and 1,2-DCP) and a variety of other vicinally chlorinated alkanes including 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, and 1,2-dichloroethane [23].

Aerobic - Chlorinated Ethene Cometabolism: Under aerobic conditions, several different types of bacteria including methane-oxidizing bacteria (methanotrophs), and many benzene, toluene, ethylbenzene, xylene, and (BTEX)-utilizing bacteria can cometabolize or co-oxidize TCE, DCE, and vinyl chloride [37]. In general, cometabolism of chlorinated ethenes is mediated by monooxygenase enzymes with "relaxed' specificity that oxidize a primary (growth supporting) substrate (*e.g.* methane) and co-oxidize the chlorinated compound (*e.g.*TCE). QuantArray®-Chlor provides quantification of a suite of genes encoding oxygenase enzymes capable of co-oxidation of chlorinated ethenes including soluble methane monooxygenase (sMMO). Soluble methane monooxygenases co-oxidize a broad range of chlorinated compounds [38–41] including TCE, *cis*-DCE, and vinyl chloride. Furthermore, soluble methane monooxygenases are generally believed to support greater rates of aerobic cometabolism [40]. QuantArray®-Chlor also quantifies aromatic oxygenase genes encoding ring hydroxylating toluene monooxygenase genes (RMO, RDEG), toluene dioxygenase (TOD) and phenol hydroxylases (PHE) capable of TCE co-oxidation [42–46]. TCE or a degradation product has been shown to induce expression of toluene monooxygenases in some laboratory studies [43, 47] raising the possibility of TCE cometabolism with an alternative (non-aromatic) growth substrate. Moreover, while a number of additional factors must be considered, recent research under ESTCP Project 201584 has shown positive correlations between concentrations of monooxygenase genes (soluble methane monooxygenase, ring hydroxylating monooxygenases, and phenol hydroxylase) and the rate of TCE degradation [48].

Aerobic - Chlorinated Ethane Cometabolism: While less widely studied than cometabolism of chlorinated ethenes, some chlorinated ethanes are also susceptible to co-oxidation. As mentioned previously, soluble methane monooxygenases (sMMO) exhibit very relaxed specificity. In laboratory studies, sMMO has been shown to co-oxidize a number of chlorinated ethanes including 1,1,1-TCA and 1,2-DCA [38, 40].

Aerobic - Vinyl Chloride Cometabolism: Beginning in the early 1990s, numerous microcosm studies demonstrated aerobic oxidation of vinyl chloride under MNA conditions without the addition of exogenous primary substrates. Since then, strains of

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Mycobacterium, *Nocardioides*, *Pseudomonas*, *Ochrobactrum*, and *Ralstonia* species have been isolated which are capable of aerobic growth on both ethene and vinyl chloride (see Mattes et al. [49] for a review). The initial steps in the pathway are the monooxygenase (*etn*ABCD) catalyzed conversion of ethene and vinyl chloride to their respective epoxyalkanes (epoxyethane and chlorooxirane), followed by epoxyalkane:CoM transferase (*etn*E) mediated conjugation and breaking of the epoxide [50].

Aerobic - Chlorinated Benzenes: In general, chlorobenzenes with four or less chlorine groups are susceptible to aerobic biodegradation and can serve as growth-supporting substrates. Toluene dioxygenase (TOD) has a relatively relaxed substrate specificity and mediates the incorporation of both atoms of oxygen into the aromatic ring of benzene and substituted benzenes (toluene and chlorobenzene). Comparison of TOD levels in background and source zone samples from a CB-impacted site suggested that CBs promoted growth of TOD-containing bacteria [51]. In addition, aerobic biodegradation of some trichlorobenzene and even tetrachlorobenzene isomers is initiated by a group of related trichlorobenzene dioxygenase genes (TCBO). Finally, phenol hydroxylases catalyze the continued oxidation and in some cases, the initial oxidation of a variety of monoaromatic compounds. In an independent study, significant increases in numbers of bacteria containing PHE genes corresponded to increases in biodegradation of DCB isomers [51].

Aerobic - Chlorinated Methanes: Many aerobic methylotrophic bacteria, belonging to diverse genera (*Hyphomicrobium*, *Methylobacterium*, *Methylophilus*, *Pseudomonas*, *Paracoccus*, and *Alibacter*) have been isolated which are capable of utilizing dichloromethane (DCM) as a growth substrate. The DCM metabolic pathway in methylotrophic bacteria is initiated by a dichloromethane dehalogenase (DCMA) gene. DCMA is responsible for aerobic biodegradation of dichloromethane by methylotrophs by first producing formaldehyde which is then further oxidized [52]. As discussed in previous sections, soluble methane monooxygenase (sMMO) exhibits relaxed specificity and co-oxidizes a broad spectrum of chlorinated hydrocarbons. In addition to chlorinated ethenes, sMMO has been shown to co-oxidize chloroform in laboratory studies [38, 41].

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

References

1. Gerritse, J. *et al.* Influence of different electron donors and acceptors on dehalorespiration of tetrachloroethene by *Desulfitobacterium frappieri* TCE1. *Applied and Environmental Microbiology* **65,** 5212–5221 (1999).
2. Gerritse, J. *et al. Desulfitobacterium* sp. strain PCE1, an anaerobic bacterium that can grow by reductive dechlorination of tetrachloroethene or ortho-chlorinated phenols. *Archives of Microbiology* **165,** 132–140 (1996).
3. Holliger, C., Schraa, G., Stams, A. & Zehnder, A. A highly purified enrichment culture couples the reductive dechlorination of tetrachloroethene to growth. *Applied and Environmental Microbiology* **59,** 2991–2997 (1993).
4. Krumholz, L. R., Sharp, R. & Fishbain, S. S. A freshwater anaerobe coupling acetate oxidation to tetrachloroethylene dehalogenation. *Applied and Environmental Microbiology* **62,** 4108–4113 (1996).
5. Loffler, F. E., Sanford, R. A. & Tiedje, J. M. Initial Characterization of a Reductive Dehalogenase from *Desulfitobacterium chlororespirans* Co23. *Applied and Environmental Microbiology* **62,** 3809–3813 (1996).
6. Maymó-Gatell, X., Anguish, T. & Zinder, S. H. Reductive dechlorination of chlorinated ethenes and 1, 2-dichloroethane by *"Dehalococcoides ethenogenes"* 195. *Applied and Environmental Microbiology* **65,** 3108–3113 (1999).
7. Hendrickson, E. R. *et al.* Molecular analysis of *Dehalococcoides* 16S ribosomal DNA from chloroethene-contaminated sites throughout North America and Europe. *Applied and Environmental Microbiology* **68,** 485–495 (2002).
8. Lu, X., Wilson, J. T. & Kampbell, D. H. Relationship between *Dehalococcoides* DNA in ground water and rates of reductive dechlorination at field scale. *Water Research* **40,** 3131–3140 (2006).
9. Adrian, L., Szewzyk, U., Wecke, J. & Görisch, H. Bacterial dehalorespiration with chlorinated benzenes. *Nature* **408,** 580–583 (2000).
10. Amos, B. K., Suchomel, E. J., Pennell, K. D. & Löffler, F. E. Spatial and temporal distributions of Geobacter lovleyi and Dehalococcoides spp. during bioenhanced PCE-NAPL dissolution. *Environmental Science & Technology* **43,** 1977–1985 (2009).
11. Duhamel, M. & Edwards, E. A. Growth and yields of dechlorinators, acetogens, and methanogens during reductive dechlorination of chlorinated ethenes and dihaloelimination of 1, 2-dichloroethane. *Environmental Science & Technology* **41,** 2303–2310 (2007).
12. Duhamel, M. *et al.* Comparison of anaerobic dechlorinating enrichment cultures maintained on tetrachloroethene, trichloroethene, /textitcis-dichloroethene and vinyl chloride. *Water Research* **36,** 4193–4202 (2002).
13. Grostern, A. & Edwards, E. A. A 1, 1, 1-trichloroethane-degrading anaerobic mixed microbial culture enhances biotransformation of mixtures of chlorinated ethenes and ethanes. *Applied and Environmental Microbiology* **72,** 7849–7856 (2006).
14. Huang, D. & Becker, J. G. Determination of intrinsic monod kinetic parameters for two heterotrophic tetrachloroethene (PCE)-respiring strains and insight into their application. *Biotechnology and Bioengineering* **104,** 301–311 (2009).
15. Mayer-Blackwell, K. *et al.* 1, 2-Dichloroethane exposure alters the population structure, metabolism, and kinetics of a trichloroethene-dechlorinating dehalococcoides mccartyi consortium. *Environmental Science & Technology* **50,** 12187–12196 (2016).
16. Krajmalnik-Brown, R. *et al.* Genetic identification of a putative vinyl chloride reductase in Dehalococcoides sp. strain BAV1. *Applied and Environmental Microbiology* **70,** 6347–6351 (2004).
17. Müller, J. A. *et al.* Molecular identification of the catabolic vinyl chloride reductase from *Dehalococcoides* sp. strain VS and its environmental distribution. *Applied and Environmental Microbiology* **70,** 4880–4888 (2004).
18. Ritalahti, K. M. *et al.* Quantitative PCR targeting 16S rRNA and reductive dehalogenase genes simultaneously monitors multiple *Dehalococcoides* strains. *Applied and Environmental Microbiology* **72,** 2765–2774 (2006).

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

19. Molenda, O., Quaile, A. T. & Edwards, E. A. Dehalogenimonas sp. strain WBC-2 genome and identification of its trans-dichloroethene reductive dehalogenase, TdrA. *Applied and Environmental Microbiology* **82,** 40–50 (2016).
20. Yang, Y. *et al.* Grape pomace compost harbors organohalide-respiring Dehalogenimonas species with novel reductive dehalogenase genes. *The ISME Journal* **11,** 2767 (2017).
21. Maillard, J. *et al.* Reductive dechlorination of tetrachloroethene by a stepwise catalysis of different organohalide respiring bacteria and reductive dehalogenases. *Biodegradation* **22,** 949–960 (2011).
22. Grostern, A. & Edwards, E. A. Growth of Dehalobacter and Dehalococcoides spp. during degradation of chlorinated ethanes. *Applied and Environmental Microbiology* **72,** 428–436 (2006).
23. Moe, W. M., Yan, J., Nobre, M. F., da Costa, M. S. & Rainey, F. A. *Dehalogenimonas lykanthroporepellens* gen. nov., sp. nov., a reductively dehalogenating bacterium isolated from chlorinated solvent-contaminated groundwater. *International Journal of Systematic and Evolutionary Microbiology* **59,** 2692–2697 (2009).
24. Yan, J., Rash, B., Rainey, F. & Moe, W. Isolation of novel bacteria within the Chloroflexi capable of reductive dechlorination of 1, 2, 3-trichloropropane. *Environmental Microbiology* **11,** 833–843 (2009).
25. De Wildeman, S., Diekert, G., Van Langenhove, H. & Verstraete, W. Stereoselective microbial dehalorespiration with vicinal dichlorinated alkanes. *Applied and Environmental Microbiology* **69,** 5643–5647 (2003).
26. Tang, S. & Edwards, E. A. Identification of *Dehalobacter* reductive dehalogenases that catalyse dechlorination of chloroform, 1,1,1-trichloroethane and 1,1-dichloroethane. *Phil. Trans. R. Soc. B* **368,** 20120318 (2013).
27. Grostern, A., Duhamel, M., Dworatzek, S. & Edwards, E. A. Chloroform respiration to dichloromethane by a *Dehalobacter* population. *Environmental Microbiology* **12,** 1053–1060 (2010).
28. Justicia-Leon, S. D., Ritalahti, K. M., Mack, E. E. & Löffler, F. E. Dichloromethane fermentation by a *Dehalobacter* sp. in an enrichment culture derived from pristine river sediment. *Applied and Environmental Microbiology* **78,** 1288–1291 (2012).
29. Field, J. A. & Sierra-Alvarez, R. Microbial degradation of chlorinated benzenes. *Biodegradation* **19,** 463–480 (2008).
30. Jayachandran, G., Görisch, H. & Adrian, L. Dehalorespiration with hexachlorobenzene and pentachlorobenzene by *Dehalococcoides* sp. strain CBDB1. *Archives of Microbiology* **180,** 411–416 (2003).
31. Wu, Q. *et al.* Dechlorination of chlorobenzenes by a culture containing bacterium DF-1, a PCB dechlorinating microorganism. *Environmental Science & Technology* **36,** 3290–3294 (2002).
32. Fung, J. M. *et al.* Reductive dehalogenation of dichlorobenzenes and monochlorobenzene to benzene in microcosms. *Environmental Science & Technology* **43,** 2302–2307 (2009).
33. Nelson, J. L., Fung, J. M., Cadillo-Quiroz, H., Cheng, X. & Zinder, S. H. A role for *Dehalobacter* spp. in the reductive dehalogenation of dichlorobenzenes and monochlorobenzene. *Environmental Science & Technology* **45,** 6806–6813 (2011).
34. Adrian, L., Hansen, S. K., Fung, J. M., Görisch, H. & Zinder, S. H. Growth of *Dehalococcoides* strains with chlorophenols as electron acceptors. *Environmental Science & Technology* **41,** 2318–2323 (2007).
35. Bouchard, B. *et al.* Isolation and characterization of *Desulfitobacterium frappieri* sp. nov., an anaerobic bacterium which reductively dechlorinates pentachlorophenol to 3-chlorophenol. *International Journal of Systematic and Evolutionary Microbiology* **46,** 1010–1015 (1996).
36. Sanford, R. A., Cole, J. R., Löffler, F. & Tiedje, J. M. Characterization of *Desulfitobacterium chlororespirans* sp. nov., which grows by coupling the oxidation of lactate to the reductive dechlorination of 3-chloro-4-hydroxybenzoate. *Applied and Environmental Microbiology* **62,** 3800–3808 (1996).
37. Field, J. & Sierra-Alvarez, R. Biodegradability of chlorinated solvents and related chlorinated aliphatic compounds. *Reviews in Environmental Science and Biotechnology* **3,** 185–254 (2004).

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

38. Chang, H.-L. & Alvarez-Cohen, L. Biodegradation of individual and multiple chlorinated aliphatic hydrocarbons by methane-oxidizing cultures. *Applied and Environmental Microbiology* **62,** 3371–3377 (1996).
39. Colby, J., Stirling, D. I. & Dalton, H. The soluble methane mono-oxygenase of Methylococcus capsulatus (Bath). Its ability to oxygenate n-alkanes, n-alkenes, ethers, and alicyclic, aromatic and heterocyclic compounds. *Biochemical Journal* **165,** 395–402 (1977).
40. Oldenhuis, R., Oedzes, J. Y., Van der Waarde, J. & Janssen, D. B. Kinetics of chlorinated hydrocarbon degradation by Methylosinus trichosporium OB3b and toxicity of trichloroethylene. *Applied and Environmental Microbiology* **57,** 7–14 (1991).
41. Van Hylckama, V. J., De Koning, W. & Janssen, D. B. Transformation kinetics of chlorinated ethenes by Methylosinus trichosporium OB3b and detection of unstable epoxides by on-line gas chromatography. *Applied and Environmental Microbiology* **62,** 3304–3312 (1996).
42. Futamata, H., Harayama, S. & Watanabe, K. Group-specific monitoring of phenol hydroxylase genes for a functional assessment of phenol-stimulated trichloroethylene bioremediation. *Applied and Environmental Microbiology* **67,** 4671–4677 (2001).
43. McClay, K., Streger, S. H. & Steffan, R. J. Induction of toluene oxidation activity in Pseudomonas mendocina KR1 and Pseudomonas sp. strain ENVPC5 by chlorinated solvents and alkanes. *Applied and Environmental Microbiology* **61,** 3479–3481 (1995).
44. Newman, L. M. & Wackett, L. P. Trichloroethylene oxidation by purified toluene 2-monooxygenase: products, kinetics, and turnover-dependent inactivation. *Journal of Bacteriology* **179,** 90–96 (1997).
45. Byrne, A. M. & Olsen, R. H. Cascade regulation of the toluene-3-monooxygenase operon (tbuA1UBVA2C) of *Burkholderia pickettii* PKO1: role of the tbuA1 promoter (PtbuA1) in the expression of its cognate activator, TbuT. *Journal of Bacteriology* **178,** 6327–6337 (1996).
46. Wackett, L. P. & Gibson, D. T. Degradation of trichloroethylene by toluene dioxygenase in whole-cell studies with Pseudomonas putida F1. *Applied and Environmental Microbiology* **54,** 1703–1708 (1988).
47. Leahy, J. G., Byrne, A. M. & Olsen, R. H. Comparison of factors influencing trichloroethylene degradation by toluene-oxidizing bacteria. *Applied and Environmental Microbiology* **62,** 825–833 (1996).
48. Wiedemeier, T. H., Wilson, J. T., Freedman, D. L. & Lee, B. *Providing Additional Support for MNA by Including Quantitative Lines of Evidence for Abiotic Degradation and Co-metabolic Oxidation of Chlorinated Ethylenes* tech. rep. (TH Wiedemeier and Associates, Inc. Sedalia United States, 2017).
49. Mattes, T. E., Alexander, A. K. & Coleman, N. V. Aerobic biodegradation of the chloroethenes: pathways, enzymes, ecology, and evolution. *FEMS Microbiology Reviews* **34,** 445–475 (2010).
50. Coleman, N. V. & Spain, J. C. Epoxyalkane: coenzyme M transferase in the ethene and vinyl chloride biodegradation pathways of *Mycobacterium* strain JS60. *Journal of Bacteriology* **185,** 5536–5545 (2003).
51. Dominguez, R. F. *et al.* Aerobic bioremediation of chlorobenzene source-zone soil in flow-through columns: performance assessment using quantitative PCR. *Biodegradation* **19,** 545–553 (2008).
52. La Roche, S. D. & Leisinger, T. Sequence analysis and expression of the bacterial dichloromethane dehalogenase structural gene, a member of the glutathione S-transferase supergene family. *Journal of Bacteriology* **172,** 164–171 (1990).

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Lori Herberich
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Phone: 978-302-0089

Fax:

Identifier: 131TI **Date Rec:** 09/30/2022 **Report Date:** 10/24/2022

Client Project #: 60688023 **Client Project Name:** LMC Wilmington

Purchase Order #: 148281

Test results provided for: CSIA

Reviewed By:



NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

Results relate only to the items tested and the sample(s) as received by the laboratory.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **AECOM**
Project: LMC Wilmington

MI Project Number: **131TI**
Date Received: 09/30/2022

Sample Information

Client Sample ID:	**22A-AE106R3-092922-1**	**22A-AE105R2-092922-1**	**22A-AE102RR1-092822-1**	**22A-AE103R5-092822-1**	**22A-TRC301R4-092922-1**
Sample Date:	09/29/2022	09/29/2022	09/28/2022	09/28/2022	09/29/2022
Analyst/Reviewer:	SB/MW	SB/MW	SB/MW	SB/MW	SB/MW

Carbon	**Units**					
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-19.3**	**-26.4**	**-20.5**	**-21.8**	**-22.9**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-15.2**	**-25.8**	**NA**	**-22.9**	**-24.5**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-17.1**	**-24.3**	**-3.4**	**-25.5**	**-21.8**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**NA**	**ND**	**NA**	**-24.4**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **AECOM**
Project: LMC Wilmington

MI Project Number: **131TI**
Date Received: 09/30/2022

Sample Information

Client Sample ID:	22A-AE28R2-100522-1	22A-AE29R6-100422-1	22A-AE100R5-100422-1	22A-AE112R5-100622-1	22A-STM8R1-100622-1
Sample Date:	10/05/2022	10/04/2022	10/04/2022	10/06/2022	10/06/2022
Analyst/Reviewer:	SB/MW	SB/MW	SB/MW	SB/MW	SB/MW

Carbon	Units					
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-28.3 (J)**	**-25.8**	**-22.7**	**-31.4**	**ND**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-24.2**	**NA**	**-24.3**	**NA**	**-21.2 (J)**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-26.6**	**2.0**	**-24.9**	**-0.2 (J)**	**-26.7**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**-28.1 (J)**	**ND**	**NA**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

Quality Assurance/Quality Control Data

Samples Received **9/30/2022**

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control (‰ Std. Dev.)*	Blank
$^{13}C/^{12}C$ PCE (‰)	09/30/2022	10/24/2022	0 °C	0.2	Pass
$^{13}C/^{12}C$ TCE (‰)	09/30/2022	10/24/2022	0 °C	0.1	Pass
$^{13}C/^{12}C$ cis-DCE (‰)	09/30/2022	10/24/2022	0 °C	0.1	Pass
$^{13}C/^{12}C$ Vinyl Chloride (‰)	09/30/2022	10/24/2022	0 °C	0.2	Pass

* $\delta^{13}C$ positive control values are within +- 0.5‰ of true value.

10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Identifier: 131TI **Date Rec:** 09/30/2022 **Report Date:** 10/24/2022

Client Project #: 60688023 **Client Project Name:** LMC Wilmington

Purchase Order #: 148281

Comments: An in-house screening method was used to estimate VOC concentrations. Compounds expected to be below the CSIA limit of detection after required dilutions were not analyzed (NA). Please note that vinyl chloride in samples 22A-AE102RR1-092822-1 & 22A-AE100R5-100422-1, and c-DCE in sample 22A-STM8R1-100622-1 were expected to be within the CSIA limit of detection after required dilutions, based on the VOC data, but were not detected (ND).

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM44228		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	October 26, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 28, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM44228.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-AE102RR1-092822-1
22A-AE102RR2-092822-1
22A-AE102RR4-092822-1
22A-AE103R1-092822-1
22A-AE103R2-092822-1
22A-AE103R3-092822-1
22A-AE103R5-092822-1
22A-AE108R1-092822-1
22A-AE108R3-092822-1
22A-AE108R5-092822-1
22A-TB01-092822-1 (Trip Blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646250	1,2-Dibromo-3-chloropropane	0.031	≥ 0.05	J+/UJ
	2-Hexanone	0.063	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
	Bromoform	0.066	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≥ 0.05	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	Dibromochloromethane	22	≤ 20	J/UJ
	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Tetrahydrofuran	29	≤ 20	J/UJ
	Trans-1,3-dichloropropene	21	≤ 20	J/UJ
Associated samples: 22A-AE102RR1-092822-1 (20X), 22A-AE102RR2-092822-1 (20X), 22A-AE102RR4-092822-1 (20X), 22A-AE103R2-092822-1 (400X), 22A-AE103R3-092822-1 (20X), 22A-AE103R5-092822-1 (400X), 22A-AE108R1-092822-1, 22A-AE108R3-092822-1, 22A-TB01-092822-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646504	1,2-Dibromo-3-chloropropane	0.031	≥ 0.05	J+/UJ
	2-Hexanone	0.063	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ
	Bromoform	0.066	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≥ 0.05	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Dibromochloromethane	22	≤ 20	J/UJ
	Tetrahydrofuran	29	≤ 20	J/UJ
	Trans-1,3-dichloropropene	21	≤ 20	J/UJ
Associated samples: 22A-AE102RR1-092822-1 (5X), 22A-AE102RR2-092822-1 (5X), 22A-AE102RR4-092822-1 (5X), 22A-AE103R2-092822-1 (20X), 22A-AE103R3-092822-1 (200X), 22A-AE103R5-092822-1 (50X), 22A-AE108R5-092822-1 (5X)				

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 646250	1,1,2,2-Tetrachloroethane	0.272	≥ 0.3	J+/UJ
	1,2-Dibromo-3-chloropropane	0.035	≥ 0.05	J+/UJ
	2-Hexanone	0.063	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.083	≥ 0.1	J+/UJ
	Acetone	0.032	≥ 0.1	J+/UJ
	Bromoform	0.075	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.062	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.036	0.05	J+/UJ
	Compound	**% D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Hexachlorobutadiene	29	<20	J+/Accept
	2,2-Dichloropropane	22	<20	J+/Accept
	N-Butylbenzene	23	<20	J+/Accept
Associated samples: 22A-AE102RR1-092822-1 (20X), 22A-AE102RR2-092822-1 (20X), 22A-AE102RR4-092822-1 (20X), 22A-AE103R2-092822-1 (400X), 22A-AE103R3-092822-1 (20X), 22A-AE103R5-092822-1 (400X), 22A-AE108R1-092822-1, 22A-AE108R3-092822-1, 22A-TB01-092822-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646504	1,1,2,2-Tetrachloroethane	0.294	0.3	J+/UJ
	1,2-Dibromo-3-chloropropane	0.035	0.05	J+/UJ
	2-Hexanone	0.063	0.1	J+/UJ
	4-Methyl-2-pentanone	0.082	0.1	J+/UJ
	Acetone	0.035	0.1	J+/UJ
	Bromoform	0.073	0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.061	0.1	J+/UJ
	Tetrahydrofuran	0.037	0.05	J+/UJ
	Compound	**% D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	N-Butylbenzene	27	<20	J+/Accept
	N-Propylbenzene	22	<20	J+/Accept
	P-Isopropyltoluene (Cymene)	23	<20	J+/Accept
	Sec-Butylbenzene (2-Phenylbutane)	23	<20	J+/Accept
	Tert-Butylbenzene	21	<20	J+/Accept
Associated samples: 22A-AE102RR1-092822-1 (5X), 22A-AE102RR2-092822-1 (5X), 22A-AE102RR4-092822-1 (5X), 22A-AE103R2-092822-1 (20X), 22A-AE103R3-092822-1 (200X), 22A-AE103R5-092822-1 (50X), 22A-AE108R5-092822-1 (5X)				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM45643		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	November 8, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 28 and 29, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM45643.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-TB02-092822-1 (Trip Blank)
22A-AE102RR5-092822-1
22A-AE102RR5-092822-2 (Field Duplicate of 22A-AE102RR5-092822-1)
22A-AE103R4-092822-1
22A-AE103R7-092822-1
22A-AE104R1-092822-1
22A-AE104R3-092822-1
22A-AE104R5-092822-1
22A-AE105D-092922-1
22A-AE106M-092922-1
22A-TRC301R4-092922-1
22A-AE106M-092922-2 (Field Duplicate of 22A-AE106M-092922-1)
22A-AE102RR6-092822-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646520, 646504, and 646742	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Dibromochloromethane	22	≤ 20	J/UJ
	Tetrahydrofuran	29	≤ 20	J/UJ
	trans-1,3-Dichloropropene	21	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.031	≥ 0.05	J+/UJ
	2-Hexanone	0.063	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ
	Bromoform	0.066	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≥ 0.05	J+/UJ
Associated samples: All samples				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646250	2,2-Dichloropropane	22	≤ 20	J+/Accept
	Hexachlorobutadiene	29	≤ 20	J+/Accept
	n-Butylbenzene	23	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.035	≥ 0.05	J+/UJ
	2-Hexanone	0.063	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.083	≥ 0.1	J+/UJ
	Acetone	0.032	≥ 0.1	J+/UJ
	Bromoform	0.075	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.062	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.036	≥ 0.05	J+/UJ
	1,1,2,2-Tetrachloroethane	0.272	≥ 0.3	J+/UJ
Associated samples: 22A-TB02-092822-1, 22A-AE102RR5-092822-1 (100X), 22A-AE102RR5-092822-2 (100X), 22A-AE104R1-092822-1 (20X), 22A-AE104R3-092822-1 (100X), 22A-AE104R5-092822-1 (100X), 22A-AE105D-092922-1				

Calibration	Compound	%D (High Bias)	QC limit	Actions (Detects/Nondetects)
CCAL for batch 646504	n-Butylbenzene	27	≤ 20	J+/Accept
	n-Propylbenzene	22	≤ 20	J+/Accept
	p-Isopropyltoluene (Cymene)	23	≤ 20	J+/Accept
	sec-Butylbenzene (2-Phenylbutane)	23	≤ 20	J+/Accept
	tert-Butylbenzene	21	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.035	≧ 0.05	J+/UJ
	2-Hexanone	0.063	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.082	≧ 0.1	J+/UJ
	Acetone	0.035	≧ 0.1	J+/UJ
	Bromoform	0.073	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.061	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.037	≧ 0.05	J+/UJ
	1,1,2,2-Tetrachloroethane	0.294	≧ 0.3	J+/UJ
Associated samples: 22A-AE102RR5-092822-1 (20X), 22A-AE102RR5-092822-2 (20X), 22A-AE103R4-092822-1 (500X and 100X), 22A-AE103R7-092822-1 (500X and 40X), 22A-AE104R1-092822-1 (50X), 22A-AE106M-092922-1, 22A-TRC301R4-092922-1, 22A-AE106M-092922-2				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646742	1,2,3-Trichlorobenzene	22	≤ 20	J+/Accept
	1,2,4-Trichlorobenzene	23	≤ 20	J+/Accept
	Hexachlorobutadiene	25	≤ 20	J+/Accept
	n-Butylbenzene	24	≤ 20	J+/Accept
	Naphthalene	24	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.036	≧ 0.05	J+/UJ
	2-Hexanone	0.067	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≧ 0.1	J+/UJ
	Acetone	0.034	≧ 0.1	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 646742	Bromoform	0.074	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.068	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.036	≥ 0.05	J+/UJ
Associated samples: 22A-AE104R1-092822-1 (2X), 22A-AE104R3-092822-1 (20X), 22A-AE104R5-092822-1 (500X and 20X), 22A-AE106M-092922-1 (5X), 22A-AE106M-092922-2 (5X), 22A-AE102RR6-092822-1 (500X and 40X)				

Surrogate recoveries (%Rs)

All percent recoveries (%Rs) met the QC acceptance limits with the following exception.

Sample ID	Compound	%R	QC Limits	Actions Detects/Non-Detects
22A-AE103R4-092822-1	1,4-Dioxane-d8	Interference*	15-110%	J/UJ
*Due to matrix interference from non-target compounds, the surrogate could not be reported.				

Field duplicate results

Field duplicate relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criterion of <30% for aqueous matrices. This criterion applies if both results were greater than 5X the quantitation limit (QL). If one or both results were less than 5X the QL, the QC acceptance criterion of the absolute difference ≤ 2X QL applies. All RPDs and absolute differences met the criteria with the following exception. Only nonconformances resulting in data qualification are listed below.

Sample ID	Duplicate ID	Analyte	Sample Result	Duplicate Result	QL	Units	ABS Diff
22A-AE106M-092922-1	22A-AE106M-092922-2	Total Iron	0.075	0.040	0.010	mg/L	0.035

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH – MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM46662		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	October 28, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 29 and 30, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM46662.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-AE106R3-092922-1
22A-AE106R5-092922-1
22A-MW4A-093022-1
22A-MW4A-093022-2 (Field duplicate of 22A-MW4A-093022-1)
22A-PS3-093022-1
22A-PS5D-093022-1
22A-AE106R3-092922-1
22A-AE03-093022-1
22-AE04-093022-1
22A-TRC103-093022-1
22A-TRC102-093022-1
22A-TB01-092922-1 (Trip Blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646501	1,2-Dibromo-3-chloropropane	0.046	≥ 0.05	J+/UJ
	2-Hexanone	0.094	≥ 0.1	J+/UJ
	Acetone	0.048	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.089	≥ 0.1	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromomethane	23	≤ 20	J/UJ
Associated samples: 22A-AE106R3-092922-1, 22A-AE106R5-092922-1, 22A-MW4A-093022-1, 22A-MW4A-093022-2, 22A-PS3-093022-1, 22A-PS5D-093022-1, 22A-TRC102-093022-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646395	Acetone	0.077	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.091	≥ 0.1	J+/UJ
	Tetrachloroethene	0.178	≥ 0.2	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromoform	23	≤ 20	J/UJ
	Chloroethane	35	≤ 20	J/UJ
	Naphthalene	24	≤ 20	J/UJ
	Trichloroethene	26	≤ 20	J/UJ
Associated samples: 22A-TB01-092922-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646501	Acetone	0.062	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.093	≥ 0.1	J+/UJ
	Compound	**% D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	29	<20	J+/Accept
Associated samples: 22A-AE106R3-092922-1, 22A-AE106R5-092922-1, 22A-MW4A-093022-1, 22A-MW4A-093022-2, 22A-PS3-093022-1, 22A-PS5D-093022-1, 22A-TRC102-093022-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646395	Acetone	0.067	≥ 0.1	J+/UJ
	Tetrachloroethene	0.183	≥ 0.2	J+/UJ
	Compound	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	1,1-Dichloropropene	34	<20	J+/Accept
	2,2-Dichloropropane	21	<20	J+/Accept
	Benzene	27	<20	J+/Accept
	Chloroethane	25	<20	J+/Accept
	N-Butylbenzene	21	<20	J+/Accept
	Naphthalene	21	<20	J+/Accept
	P-Isopropyltoluene (Cymene)	21	<20	J+/Accept
	Tetrahydrofuran	30	<20	J+/Accept
Associated samples: 22A-TB01-092922-1				

Laboratory blanks/equipment blanks/trip blanks

No contaminants were detected in the laboratory blanks above the reporting limit (RL) with the following exception. Only nonconformances resulting in data qualification are listed below.

Metals

Blank ID	Analyte	Result	RL	Units	Data Validation Actions
Method Blank Batch 644778	Iron	0.015	0.010	mg/L	J+
Associated Samples: 22A-AE106R3-092922-1					

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH – MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM46673		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	October 31, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 29, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM46673.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-AE105S-092922-1
22A-AE105R3-092922-1
22A-AE105R4-092922-1
22A-AE105R5-092922-1
22A-TRC301R1-092922-1
22A-TRC301R2-092922-1
22A-TRC301R3-092922-1
22A-PS1M-092922-1
22A-PS1D-092922-1
22A-PS8D-092922-1
22A-AE106R1-092922-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646501	1,2-Dibromo-3-chloropropane	0.046	≥ 0.05	J+/UJ
	2-Hexanone	0.094	≥ 0.1	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
	Acetone	0.048	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.089	≥ 0.1	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromomethane	23	≤ 20	J/UJ
Associated samples: 22A-AE105R2-092922-1, 22A-AE105R3-092922-1, 22A-AE105R4-092922-1, 22A-AE105R5-092922-1, 22A-TRC301R1-092922-1, 22A-TRC301R2-092922-1, 22A-TRC301R3-092922-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646395	Acetone	0.077	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.091	≥ 0.1	J+/UJ
	Tetrachloroethene	0.178	≥ 0.2	J+/UJ
	Compound	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromoform	23	≤ 20	J/UJ
	Chloroethane	35	≤ 20	J/UJ
	Naphthalene	24	≤ 20	J/UJ
	Trichloroethene	26	≤ 20	J/UJ
Associated samples: 22A-AE105R2-092922-1 (20X), 22A-AE105R3-092922-1 (20X), 22A-AE105R4-092922-1 (20X), 22A-AE105R5-092922-1 (20X), 22A-TRC301R1-092922-1 (10X), 22A-TRC301R2-092922-1 (10X), 22A-TRC301R3-092922-1 (10X), 22A-PS1M-092922-1, 22A-PS8D-092922-1, 22A-AE106R1-092922-1				
Calibration	**Compound**	**% RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646712	Bromomethane	27	≤ 20	J/UJ
Associated samples: 22A-PS1D-092922-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646501	Acetone	0.062	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.093	≥ 0.1	J+/UJ
	Compound	**% D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	29	≤ 20	J+/Accept
Associated samples: 22A-AE105R2-092922-1, 22A-AE105R3-092922-1, 22A-AE105R4-092922-1, 22A-AE105R5-092922-1, 22A-TRC301R1-092922-1, 22A-TRC301R2-092922-1, 22A-TRC301R3-092922-1				
Calibration	**Compound**	**% D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646395	1,1-Dichloropropene	34	≤ 20	J+/Accept
	2,2-Dichloropropane	21	≤ 20	J+/Accept
	Benzene	27	≤ 20	J+/Accept
	Chloroethane	25	≤ 20	J+/Accept

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
	N-Butylbenzene	21	≤ 20	J+/Accept
	Naphthalene	21	≤ 20	J+/Accept
	P-Isopropyltoluene (Cymene)	21	≤ 20	J+/Accept
	Tetrahydrofuran	30	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	0.067	≥ 0.1	J+/UJ
	Tetrachloroethene	0.183	≥ 0.2	J+/UJ
Associated samples: 22A-AE105R2-092922-1 (20X), 22A-AE105R3-092922-1 (20X), 22A-AE105R4-092922-1 (20X), 22A-AE105R5-092922-1 (20X), 22A-TRC301R1-092922-1 (10X), 22A-TRC301R2-092922-1 (10X), 22A-TRC301R3-092922-1 (10X), 22A-PS1M-092922-1, 22A-PS8D-092922-1, 22A-AE106R1-092922-1				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM47533		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	October 28, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 29 and 30, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM47533.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-TB01-100322-1 (Trip Blank)
22A-AE101R2-100322-1
22A-AE101R4-100322-1
22A-AE101R6-100322-1
22A-AE102M-100322-1
22A-AE103D-100322-1
22A-AE103S-100322-1
22A-GZA102S-100322-1
22A-GZA102S-100322-2 (Field Duplicate of 22A-GZA102S-100322-1)
22A-PZ2S-100322-1
22A-MW5-100322-1
22A-MW7-100322-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
*	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646485	Bromomethane	27	$\leq$ 20	J/UJ
Associated samples: 22A-TB01-100322-1, 22A-AE101R2-100322-1 (10X), 22A-AE101R4-100322-1 (20X), 22A-AE102M-100322-1 (10X), 22A-AE103D-100322-1 (10X), 22A-MW5-100322-1, 22A-MW7-100322-1				

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646712	Bromomethane	27	≤ 20	J/UJ
Associated samples: 22A-AE101R2-100322-1, 22A-AE101R4-100322-1 (2X), 22A-AE101R6-100322-1 (20X), 22A-AE102M-100322-1, 22A-AE103D-100322-1, 22A-GZA102S-100322-1, 22A-GZA102S-100322-2				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for "Presumptive Certainty" status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH – MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM49146		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	November 3, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on October 3 and 4, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM49146.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-IP1R2-100322-1
22A-TRC101-100322-1
22A-AE101R4-100322-1
22A-AE104D-100322-1
22A-AE104D-100322-2 (Field Duplicate of 22A-AE104D-100322-1)
22A-GZA12-100422-1
22A-GZA101R-100422-1
22A-AE29R1-100422-1
22AAE29R3-100422-1
22A-AE29R5-100422-1
22A-AE29R6-100422-1
22A-AE100R1-100422-1
22A-AE100R2-100422-1

Sample ID
22A-AE100R3-100422-1
22A-AE100R4-100422-1
22A-AE100R5-100422-1
22A-TB02-100322-1 (Trip Blank)
22A-EMW10D-100422-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
*	Field duplicate results
*	Internal standard (IS) performance#
	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences

or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646770	Bromomethane	23	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.046	≥ 0.05	J+/UJ
	2-Hexanone	0.094	≥ 0.1	J+/UJ
	Acetone	0.048	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.089	≥ 0.1	J+/UJ
Associated samples: 22A-AE100R2-100422-1 (50X and 5X), 22A-AE100R5-100422-1 (100X), 22A-TB02-100322-1, 22A-EMW10D-100422-1				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647251	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	27	≤ 20	J/UJ
	Bromomethane	35	≤ 20	J/UJ
	Naphthalene	22	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.046	≥ 0.05	J+/UJ
	2-Hexanone	0.099	≥ 0.1	J+/UJ
	Acetone	0.065	≥ 0.1	J+/UJ
	Bromoform	0.094	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.096	≥ 0.1	J+/UJ
Associated samples: 22A-AE100R3-100422-1 (10X), 22A-AE100R4-100422-1 (200X and 20X), 22A-AE100R5-100422-1 (10X), 22A-EMW10D-100422-1 (10X)				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646485	Bromomethane	27	≤ 20	J/UJ
Associated samples: 22A-AE2R-100322-1, 22A-AE104D-100322-1, 22A-AE104D-100322-2, 22A-GZA101R-100422-1 (20X), 22A-AE29R5-100422-1 (20X), 22A-AE29R6-100422-1 (20X)				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646712	Bromomethane	27	≤ 20	J/UJ
Associated samples: 22A-IP1R2-100322-1 (20X), 22A-GZA12-100422-1, 22A-GZA101R-100422-1 (2X), 22A-AE29R5-100422-1(2X), 22A-AE29R6-100422-1 (2X)				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646716	Bromomethane	27	≤ 20	J/UJ
Associated samples: 22A-AE29R1-100422-1				

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646962	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Dibromochloromethane	22	≤ 20	J/UJ
	Tetrahydrofuran	29	≤ 20	J/UJ
	Trans-1,3-dichloropropene	21	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.031	≥ 0.05	J+/UJ
	2-Hexanone	0.063	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ
	Bromoform	0.066	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≥ 0.05	J+/UJ
Associated samples: 22A-IP1R2-100322-1 (400X) and 22AAE29R3-100422-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647791	Tetrachloroethene	0.181	≥ 0.2	J+/UJ
Associated samples: 22A-AE100R3-100422-1 (500X)				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646770	N-Butylbenzene	21	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.043	≥ 0.05	J+/UJ
	2-Hexanone	0.094	≥ 0.1	J+/UJ
	Acetone	0.063	≥ 0.1	J+/UJ
	Bromoform	0.087	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.085	≥ 0.1	J+/UJ
Associated samples: 22A-AE100R2-100422-1 (50X and 5X), 22A-AE100R5-100422-1 (100X), 22A-TB02-100322-1, 22A-EMW10D-100422-1				
Calibration	**Compound**	**%D (Low Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647251	1,2,3-Trichlorobenzene	21	≤ 20	J-/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.043	≥ 0.05	J+/UJ
	2-Hexanone	0.094	≥ 0.1	J+/UJ
	Acetone	0.063	≥ 0.1	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 647251	Bromoform	0.087	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.085	≥ 0.1	J+/UJ
Associated samples: 22A-AE100R3-100422-1 (10X), 22A-AE100R4-100422-1 (200X and 20X), 22A-AE100R5-100422-1 (10X), 22A-EMW10D-100422-1 (10X)				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646962	1,1,2,2-Tetrachloroethane	21	≤ 20	J+/Accept
	1,2,3-Trichlorobenzene	29	≤ 20	J+/Accept
	1,2,4-Trichlorobenzene	25	≤ 20	J+/Accept
	2-Hexanone	25	≤ 20	J+/Accept
	Dibromochloromethane	21	≤ 20	J+/Accept
	Hexachlorobutadiene	27	≤ 20	J+/Accept
	Methyl ethyl ketone (2-Butanone)	28	≤ 20	J+/Accept
	N-Butylbenzene	24	≤ 20	J+/Accept
	Naphthalene	31	≤ 20	J+/Accept
	Compound	**%D (Low Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromomethane	30	≤ 20	J-/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.037	≥ 0.05	J+/UJ
	2-Hexanone	0.079	≥ 0.1	J+/UJ
	Acetone	0.040	≥ 0.1	J+/UJ
	Bromoform	0.078	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.077	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.042	≥ 0.05	J+/UJ
Associated samples: 22A-IP1R2-100322-1 (400X) and 22AAE29R3-100422-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647791	Tetrachloroethene	0.181	≥ 0.2	J+/UJ
Associated samples: 22A-AE100R3-100422-1 (500X)				

General Reporting Issues

The total and dissolved metals results were compared to verify that the total concentration was greater than the dissolved concentration. All total/dissolved results met the QC acceptance criteria with the following exception for arsenic. Only nonconformances resulting in data qualification are listed below.

Sample ID	Analyte	Total Result (mg/L)	Dissolved Result (mg/L)	%D	QC Limit	Data Validation Actions
22A-AE100R1-100422-1	Arsenic	0.027	0.059	119	20	J

The laboratory confirmed the result for total arsenic but was unable to confirm the dissolved arsenic result in the table above since it was unable to locate the original sample container. The total and dissolved arsenic results for 22A-AE100R1-100422-1 were qualified as estimated (J).

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH – MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM50288		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	November 8, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 29 and 30, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM50288.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-TB01-100422-1 (Trip Blank)
22A-AE109R1-100422-1
22A-AE109R2-100422-1
22A-AE109R4-100422-1
22A-AE109R6-100422-1
22A-AE109R8-100422-1
22A-GZA10-100422-1
22A-AE26R1-100522-1
22A-AE26R4-100522-1
22A-AE26S-100522-1
22A-AE27R-100522-1
22A-AE24-100522-1
22A-AE24-100522-2 (Field Duplicate of 22A-AE24-100522-1)
22A-AE23S-100522-1

Sample ID
22A-AE23R-100522-1
22A-AE28R1-100522-1
22A-AE28R2-100522-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
*	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

<u>VOCs</u>

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646725	Bromomethane	27	≤ 20	J/UJ
Associated samples: 22A-TB01-100422-1, 22A-AE109R4-100422-1 (100X), 22A-AE109R6-100422-1 (100X), 22A-AE26R1-100522-1 (100X), 22A-AE26R4-100522-1 (100X), 22A-AE27R-100522-1 (100X), 22A-AE24-100522-1 (100X), 22A-AE24-100522-2 (100X), 22A-AE28R1-100522-1 (100X), 22A-AE28R2-100522-1 (100X)				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646962	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Dibromochloromethane	22	≤ 20	J/UJ
	Tetrahydrofuran	29	≤ 20	J/UJ
	trans-1,3-dichloropropene	21	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.031	≧ 0.05	J+/UJ
	2-Hexanone	0.063	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≧ 0.1	J+/UJ
	Acetone	0.035	≧ 0.1	J+/UJ
	Bromoform	0.066	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≧ 0.05	J+/UJ
Associated samples: 22A-AE109R1-100422-1, 22A-AE109R2-100422-1, 22A-AE109R4-100422-1 (2X), 22A-AE109R8-100422-1, 22A-AE26R1-100522-1 (5X), 22A-AE26S-100522-1, 22A-AE27R-100522-1 (2X)				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646964	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Dibromochloromethane	22	≤ 20	J/UJ
	Tetrahydrofuran	29	≤ 20	J/UJ
	trans-1,3-dichloropropene	21	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.031	≧ 0.05	J+/UJ
	2-Hexanone	0.063	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≧ 0.1	J+/UJ
	Acetone	0.035	≧ 0.1	J+/UJ
	Bromoform	0.066	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≧ 0.05	J+/UJ
Associated samples: 22A-AE26R4-100522-1 (5X), 22A-AE24-100522-1 (5X), 22A-AE24-100522-2 (5X), 22A-AE23R-100522-1 (10000X and 500X)				

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 647344	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	22	≤ 20	J/UJ
	Bromomethane	27	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.034	≧ 0.05	J+/UJ
	2-Hexanone	0.072	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.094	≧ 0.1	J+/UJ
	Acetone	0.041	≧ 0.1	J+/UJ
	Bromoform	0.070	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.067	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.044	≧ 0.05	J+/UJ
Associated samples: 22A-AE26S-100522-1 (10X), 22A-AE23S-100522-1, 22A-AE28R1-100522-1 (1000X), 22A-AE28R2-100522-1 (1000X)				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647511	1,2-Dibromo-3-chloropropane	0.031	≧ 0.05	J+/UJ
	2-Hexanone	0.062	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.080	≧ 0.1	J+/UJ
	Acetone	0.035	≧ 0.1	J+/UJ
	Bromoform	0.069	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.040	≧ 0.05	J+/UJ
Associated samples: 22A-AE109R6-100422-1 (2X)				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646725	1,2-Dichloroethane	22	≤ 20	J+/Accept
	Bromomethane	30	≤ 20	J+/Accept
Associated samples: 22A-TB01-100422-1, 22A-AE109R4-100422-1 (100X), 22A-AE109R6-100422-1 (100X), 22A-AE26R1-100522-1 (100X), 22A-AE26R4-100522-1 (100X), 22A-AE27R-100522-1 (100X), 22A-AE24-100522-1 (100X), 22A-AE24-100522-2 (100X), 22A-AE28R1-100522-1 (100X), 22A-AE28R2-100522-1 (100X)				

Calibration	Compound	%D (High Bias)	QC limit	Actions (Detects/Nondetects)
CCAL for batch 646962	1,1,2,2-Tetrachloroethane	21	≤ 20	J+/Accept
	1,2,3-Trichlorobenzene	29	≤ 20	J+/Accept
	1,2,4-Trichlorobnzene	25	≤ 20	J+/Accept
	2-Hexanone	25	≤ 20	J+/Accept
	Dibromochloromethane	21	≤ 20	J+/Accept
	Hexachlorobutadiene	27	≤ 20	J+/Accept
	Methyl ethyl ketone (2-Butanone)	28	≤ 20	J+/Accept
	n-Butylbenzene	24	≤ 20	J+/Accept
	Naphthalene	31	≤ 20	J+/Accept
	Compound	**%D (Low Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromomethane	30	≤ 20	J-/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.037	≧ 0.05	J+/UJ
	2-Hexanone	0.079	≧ 0.1	J+/UJ
	Acetone	0.040	≧ 0.1	J+/UJ
	Bromoform	0.078	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.077	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.042	≧ 0.05	J+/UJ
Associated samples: 22A-AE109R1-100422-1, 22A-AE109R2-100422-1, 22A-AE109R4-100422-1 (2X), 22A-AE109R8-100422-1, 22A-AE26R1-100522-1 (5X), 22A-AE26S-100522-1, 22A-AE27R-100522-1 (2X)				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646964	1,2,3-Trichlorobenzene	29	≤ 20	J+/Accept
	1,2,4-Trichlorobenzene	27	≤ 20	J+/Accept
	1,2-Dibromo-3-chloropropane	29	≤ 20	J+/Accept
	2-Hexanone	24	≤ 20	J+/Accept
	Hexachlorobutadiene	26	≤ 20	J+/Accept

Calibration	Compound	%D (High Bias)	QC limit	Actions (Detects/Nondetects)
CCAL for batch 646964	n-Butylbenzene	24	≤ 20	J+/Accept
	Naphthalene	33	≤ 20	J+/Accept
	Compound	**%D (Low Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Bromomethane	38	≤ 20	J-/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.04	≧ 0.05	J+/UJ
	2-Hexanone	0.078	≧ 0.1	J+/UJ
	Acetone	0.039	≧ 0.1	J+/UJ
	Bromoform	0.077	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.068	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.04	≧ 0.05	J+/UJ
Associated samples: 22A-AE26R4-100522-1 (5X), 22A-AE24-100522-1 (5X), 22A-AE24-100522-2 (5X), 22A-AE23R-100522-1 (10000X and 500X)				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647344	1,1,1-Trichloroethane	22	≤ 20	J+/Accept
	Hexachlorobutadiene	21	≤ 20	J+/Accept
	n-Butylbenzene	24	≤ 20	J+/Accept
	p-Isopropyltoluene (Cymene)	22	≤ 20	J+/Accept
	sec-Butylbenzene (2-Phenylbutane)	21	≤ 20	J+/Accept
	Trichlorofluoromethane	22	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.039	≧ 0.05	J+/UJ
	2-Hexanone	0.072	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.098	≧ 0.1	J+/UJ
	Acetone	0.036	≧ 0.1	J+/UJ
	Bromoform	0.08	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.07	≧ 0.1	J+/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 647344	Tetrahydrofuran	0.043	≧ 0.05	J+/UJ
Associated samples: 22A-AE26S-100522-1 (10X), 22A-AE23S-100522-1, 22A-AE28R1-100522-1 (1000X), 22A-AE28R2-100522-1 (1000X)				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647511	1,1,2,2-Tetrachloroethane	0.289	≧ 0.3	J+/UJ
	1,2-Dibromo-3-propane	0.034	≧ 0.05	J+/UJ
	2-Hexanone	0.066	≧ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≧ 0.1	J+/UJ
	Acetone	0.036	≧ 0.1	J+/UJ
	Bromoform	0.076	≧ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.064	≧ 0.1	J+/UJ
	Tetrahydrofuran	0.041	≧ 0.05	J+/UJ
Associated samples: 22A-AE109R6-100422-1 (2X)				

Surrogate recoveries (%Rs)

All percent recoveries (%Rs) met the QC acceptance limits with the following exception.

Sample ID	Compound	%R	QC Limits	Actions Detects/Non-Detects
22A-AE23R-100522-1	1,4-Dioxane-d8	Interference*	15-110%	J/UJ
*Due to matrix interference from non-target compounds, the surrogate could not be reported.				

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH – MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM51230		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	November 3, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on October 5 and 6, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM51230.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-TB01-100522-1 (Trip Blank)
22A-AE26R5-100522-1
22A-AE28R3-100522-1
22A-AE28R4-100522-1
22A-AE110R1-100522-1
22A-AE110R2-100522-1
22A-AE110R5-100522-1
22A-AE110R7-100522-1
22A-STM8R-100622-1
22A-STM8D-100622-1
22A-STM8R1-100622-1
22A-AE111R1-100622-1
22A-AE111R2-100622-1

Sample ID
22A-AE111R6-100622-1
22A-AE112D-100622-1
22A-AE109D-100622-1
22A-GZA105R-100622-1
22A-GZA105S-100622-1
22A-AE112R1-100622-1
22A-AE112R3-100622-1
22A-AE112R5-100622-1

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

*	Chain-of-custody (COC)/sample integrity
*	Holding times and sample preservation
*	GC/MS tuning#
	Initial calibration/initial calibration and continuing calibration verifications#
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)#
	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
*	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results#
NA	Serial dilution results#
NA	Field duplicate results
*	Internal standard (IS) performance#
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 646725	Bromomethane	27	≤ 20	J/UJ
Associated samples: 22A-TB01-100522-1				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647343	Bromoform	35	≤ 20	J/UJ
	Bromomethane	21	≤ 20	J/UJ
	Chloroethane	23	≤ 20	J/UJ
Associated samples: 22A-AE109D-100622-1, 22A-GZA105R-100622-1 (500X), 22A-GZA105S-100622-1, 22A-AE112R1-100622-1				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 646560	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	24	≤ 20	J/UJ
	Dibromochloromethane	22	≤ 20	J/UJ
	Tetrahydrofuran	29	≤ 20	J/UJ
	trans-1,3-Dichloropropene	21	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.031	≥ 0.05	J+/UJ
	2-Hexanone	0.063	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ
	Bromoform	0.066	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≥ 0.05	J+/UJ
Associated samples: 22A-AE28R3-100522-1 (50X), 22A-AE28R4-100522-1 (50X), 22A-GZA105R-100622-1 (50X)				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647344	1,2-Dibromo-3-chloropropane	23	≤ 20	J/UJ
	Bromoform	22	≤ 20	J/UJ
	Bromomethane	27	≤ 20	J/UJ

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
ICAL for batch 647344	1,2-Dibromo-3-chloropropane	0.034	≥ 0.05	J+/UJ
	2-Hexanone	0.072	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.094	≥ 0.1	J+/UJ
	Acetone	0.041	≥ 0.1	J+/UJ
	Bromoform	0.070	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.067	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.044	≥ 0.05	J+/UJ
Associated samples: 22A-AE26R5-100522-1 (100X and 20X), 22A-AE28R3-100522-1 (250X), 22A-AE28R4-100522-1 (500X), 22A-AE110R1-100522-1, 22A-AE110R2-100522-1, 22A-AE110R5-100522-1, 22A-AE110R7-100522-1, 22A-STM8R-100622-1, 22A-STM8R1-100622-1, 22A-AE111R1-100622-1, 22A-AE111R6-100622-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647511	1,2-Dibromo-3-chloropropane	0.031	≥ 0.05	J+/UJ
	2-Hexanone	0.062	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.080	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ
	Bromoform	0.069	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.040	≥ 0.05	J+/UJ
Associated samples: 22A-AE112D-100622-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 648045	1,2-Dibromo-3-chloropropane	0.031	≥ 0.05	J+/UJ
	2-Hexanone	0.062	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.080	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ
	Bromoform	0.069	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.060	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.040	≥ 0.05	J+/UJ
Associated samples: 22A-STM8D-100622-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647576	Acetone	0.057	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.095	≥ 0.1	J+/UJ
	Tetrachloroethene	0.176	≥ 0.2	J+/UJ

Calibration	Compound	RSD%	QC limit	Actions (Detects/Nondetects)
ICAL for batch 647576	Chloroethane	22	≤ 20	J/UJ
	Dichlorodifluoromethane	21	≤ 20	J/UJ
Associated samples: 22A-AE111R2-100622-1, 22A-AE112R3-100622-1, 22A-AE112R5-100622-1				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646725	1,2-Dichloroethane	22	≤ 20	J+/Accept
	Bromomethane	30	≤ 20	J+/Accept
Associated samples: 22A-TB01-100522-1				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647343	Carbon disulfide	23	≤ 20	J+/Accept
	Hexachlorobutadiene	22	≤ 20	J+/Accept
	Trichlorofluoromethane	31	≤ 20	J+/Accept
	Trichlorotrifluoroethane (Freon TF)	33	≤ 20	J+/Accept
Associated samples: 22A-AE109D-100622-1, 22A-GZA105R-100622-1 (500X), 22A-GZA105S-100622-1, 22A-AE112R1-100622-1				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646560	1,2,4-Trichlorobenzene	21	≤ 20	J+/Accept
	Hexachlorobutadiene	22	≤ 20	J+/Accept
	N-Butylbenzene	24	≤ 20	J+/Accept
	Naphthalene	21	≤ 20	J+/Accept
	p-Isopropyltoluene (Cymene)	21	≤ 20	J+/Accept
	sec-Butylbenzene (2-Phenylbutane)	22	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.036	≥ 0.05	J+/UJ
	2-Hexanone	0.067	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.085	≥ 0.1	J+/UJ
	Acetone	0.035	≥ 0.1	J+/UJ
	Bromoform	0.074	≥ 0.1	J+/UJ
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 646560	Methyl ethyl ketone (2-Butanone)	0.064	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.036	≥ 0.05	J+/UJ

Associated samples: 22A-AE28R3-100522-1 (50X), 22A-AE28R4-100522-1 (50X), 22A-GZA105R-100622-1 (50X)				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for 647344	1,1,1-Trichloroethane	22	≤ 20	J+/Accept
	Hexachlorobutadiene	21	≤ 20	J+/Accept
	N-Butylbenzene	24	≤ 20	J+/Accept
	P-Isopropyltoluene (Cymene)	22	≤ 20	J+/Accept
	Sec-Butylbenzene (2-Phenylbutane)	21	≤ 20	J+/Accept
	Trichlorotrifluoroethane (Freon TF)	22	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.039	≥ 0.05	J+/UJ
	2-Hexanone	0.072	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.098	≥ 0.1	J+/UJ
	Acetone	0.036	≥ 0.1	J+/UJ
	Bromoform	0.080	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.070	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.043	≥ 0.05	J+/UJ
Associated samples: 22A-AE26R5-100522-1 (100X and 20X), 22A-AE28R3-100522-1 (250X), 22A-AE28R4-100522-1 (500X), 22A-AE110R1-100522-1, 22A-AE110R2-100522-1, 22A-AE110R5-100522-1, 22A-AE110R7-100522-1, 22A-STM8R-100622-1, 22A-STM8R1-100622-1, 22A-AE111R1-100622-1, 22A-AE111R6-100622-1				
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647511	1,1,2,2-Tetrachloroethane	0.289	≥ 0.3	J+/UJ
	1,2-Dibromo-3-chloropropane	0.034	≥ 0.05	J+/UJ
	2-Hexanone	0.066	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≥ 0.1	J+/UJ
	Acetone	0.036	≥ 0.1	J+/UJ
Calibration	**Compound**	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647511	Bromoform	0.076	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.064	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.041	≥ 0.05	J+/UJ

Associated samples: 22A-AE112D-100622-1				
Calibration	**Compound**	**%D (Low Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 648045	Bromomethane	24	≤ 20	J-/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	1,2-Dibromo-3-chloropropane	0.035	≥ 0.05	J+/UJ
	2-Hexanone	0.065	≥ 0.1	J+/UJ
	4-Methyl-2-pentanone	0.086	≥ 0.1	J+/UJ
	Acetone	0.040	≥ 0.1	J+/UJ
	Bromoform	0.074	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.068	≥ 0.1	J+/UJ
	Tetrahydrofuran	0.042	≥ 0.05	J+/UJ
Associated samples: 22A-STM8D-100622-1				
Calibration	**Compound**	**%D (Low Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647576	1,2-Dibromo-3-chloropropane	21	≤ 20	J-/UJ
	2,2-Dichloropropane	37	≤ 20	J-/UJ
	Compound	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Dichlorodifluoromethane	31	≤ 20	J+/Accept
	Trichlorofluoromethane	22	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	0.066	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.099	≥ 0.1	J+/UJ
	Tetrachloroethene	0.162	≥ 0.2	J+/UJ
Associated samples: 22A-AE111R2-100622-1, 22A-AE112R3-100622-1, 22A-AE112R5-100622-1				

Matrix Duplicate (MD)/Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) Results

VOCs

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

Sample ID	Compound	MS %R	MSD %R	Lower Limit %R	Upper Limit %R	Data Validation Actions
22A-AE28R3-100522-1	1,1-Dichloroethene	ok	136	70	130	J+
22A-AE28R3-100522-1	Vinyl chloride	148	161	70	130	J+

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH – MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Phoenix Environmental Laboratories, Inc. SDG: GCM52356		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	November 3, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on October 6, 2022 and tabulated below. Phoenix Environmental Laboratories, Inc. (Phoenix) in Manchester, CT analyzed the samples and reported the data in sample delivery group (SDG) GCM52356.

The data review was performed with reference to Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 2, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007; the applicable MADEP Compendium of Analytical Methods performance standards; and the project-specific work plan. The current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Data for volatile organic compounds (VOCs), 1,4-dioxane, volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), select metals, total organic carbon (TOC), nitrate, nitrite, chloride, sulfate, and/or sulfide for the following samples was assessed:

Sample ID
22A-AE109D-100622-1
22A-AE101D-100622-1
22A-GZA105D-100622-1
22A-TRC201R-100622-1
22A-GZA6-100622-1
22A-TB01-100622-1 (Trip Blank)
22A-EB01-100622-1 (Equipment Blank)
22A-EB02-100622-1 (Equipment Blank)

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity

*	Holding times and sample preservation
*	GC/MS tuning[#]
	Initial calibration/initial calibration and continuing calibration verifications[#]
*	Laboratory blanks/equipment blanks/trip blanks
*	Surrogate recoveries (%Rs)
*	Labeled compound recovery (1,4-dioxane only)[#]
*	Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
	Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
*	Interference check standard results[#]
NA	Serial dilution results[#]
NA	Field duplicate results
*	Internal standard (IS) performance[#]
*	General reporting issues

The laboratory is required to completely and accurately narrate all quality control exceptions. The symbol (#) indicates that nonconformances concerning this review element are only described in the SDG case narrative since complete results for these review elements are not a required report deliverable. The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An "NA" indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

Initial Calibration/Initial Calibration and Continuing Calibration Verifications

VOCs

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 647499	Chloroethane	22	≤ 20	J/UJ
	Dichlorodifluoromethane	21	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	0.057	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.095	≥ 0.1	J+/UJ
	Tetrachloroethene	0.176	≥ 0.2	J+/UJ
Associated samples: 22A-TRC201R-100622-1 (50X), 22A-TB01-100622-1				

Calibration	Compound	%RSD	QC limit	Actions (Detects/Nondetects)
ICAL for batch 647576	Chloroethane	22	≤ 20	J/UJ
	Dichlorodifluoromethane	21	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	0.057	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.095	≥ 0.1	J+/UJ
	Tetrachloroethene	0.176	≥ 0.2	J+/UJ
Associated samples: 22A-AE101D-100622-1, 22A-GZA105D-100622-1, 22A-TRC201R-100622-1, 22A-EB02-100622-1				
Calibration	**Compound**	**%RSD**	**QC limit**	**Actions (Detects/Nondetects)**
ICAL for batch 647784	1,2-Dibromo-3-chloropropane	30	≤ 20	J/UJ
	Bromoform	22	≤ 20	J/UJ
	Chloroethane	26	≤ 20	J/UJ
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	0.065	≥ 0.1	J+/UJ
	Tetrachloroethene	0.181	≥ 0.2	J+/UJ
Associated samples: 22A-EB01-100622-1				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647499	Chloroethane	21	≤ 20	J+/Accept
	Dichlorodifluoromethane	39	≤ 20	J+/Accept
	Trichlorofluoromethane	29	≤ 20	J+/Accept
	Trichlorotrifluoroethane (Freon TF)	23	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	0.057	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.097	≥ 0.1	J+/UJ
	Tetrachloroethene	0.176	≥ 0.2	J+/UJ
Associated samples: 22A-TRC201R-100622-1 (50X), 22A-TB01-100622-1				
Calibration	**Compound**	**%D (Low Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647576	1,2-Dibromo-3-chloropropane	21	≤ 20	J-/UJ
	2,2-Dichloropropane	37	≤ 20	J-/UJ
	Compound	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
	Dichlorodifluoromethane	31	≤ 20	J+/Accept
	Trichlorofluoromethane	22	≤ 20	J+/Accept

Calibration	Compound	RF	QC limit	Actions (Detects/Nondetects)
CCAL for batch 647576	Acetone	0.066	≥ 0.1	J+/UJ
	Methyl ethyl ketone (2-Butanone)	0.099	≥ 0.1	J+/UJ
	Tetrachloroethene	0.162	≥ 0.2	J+/UJ
Associated samples: 22A-AE101D-100622-1, 22A-GZA105D-100622-1, 22A-TRC201R-100622-1, 22A-EB02-100622-1				
Calibration	**Compound**	**%D (High Bias)**	**QC limit**	**Actions (Detects/Nondetects)**
CCAL for batch 647784	Chloroethane	26	≤ 20	J+/Accept
	Compound	**RF**	**QC limit**	**Actions (Detects/Nondetects)**
	Acetone	0.067	≥ 0.1	J+/UJ
	Tetrachloroethene	0.166	≥ 0.2	J+/UJ
Associated samples: 22A-EB01-100622-1				

EPH

The laboratory narrated the nonconformances tabulated below for the initial calibration and/or continuing calibration verification (CCV) response factors (RFs), percent relative standard deviations (% RSDs), and percent differences or percent drifts (%Ds) that did not meet the QC limits.

Calibration	Compound	%D (Low Bias)	QC limit	Actions (Detects/Nondetects)
CCAL for batch 646398	Fluoranthene	21	≤ 20	J-/UJ
Associated samples: 22A-GZA105D-100622-1				

Laboratory Control Sample/Laboratory Control Duplicate Sample (LCS/LCSD) Results

VOCs

All percent recoveries (%Rs) and relative percent differences (RPDs) met the QC acceptance limits with the following exceptions. Only nonconformances resulting in data qualification are listed below.

LCS ID	Compound	LCS %R	LCSD %R	Lower Limit %R	Upper Limit %R	Data Validation Actions (Detects/Nondetects)
Batch 647576	1,1-Dichloroethene	ok	136	70	130	J+/Accept
Batch 647576	Vinyl chloride	135	134	70	130	J+/Accept

General Reporting Issues

The MassDEP Analytical Protocol Certification Form was reviewed and indicates that the data have met the requirements for “Presumptive Certainty” status for all parameters for which there is a CAM protocol.

Laboratory quantitation limits exceed Project Action Limits (PALs) for several VOCs in the undiluted analyses. Analytical dilutions, if performed, will further elevate those quantitation limits and will cause additional quantitation limits to exceed the PALs. Review elements which may impact sensitivity (i.e., laboratory and field blanks or sample dilutions) have also been reviewed and are summarized, if applicable.

The following methods were used to analyze samples:
VOCs – 8260C
1,4-Dioxane - 8270D
TOC – SM5310-B
VPH – MADEP VPH 2/2018
EPH – MADEP EPH 12/2019
Arsenic, manganese, and iron – 6010D
Nitrate, nitrite, chloride, and sulfate – 300.0
Sulfide – SM4500-S D

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation Summary Lockheed Martin-Wilmington, MA Site Microbial Insights Compound-Specific Isotope Analysis (CSIA) Laboratory Report: 131TI		
From	Paula DiMattei		
Reviewed by	Lori Herberich		60688023.02.1
Date	December 8, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 28-29, 2022, and October 4-6, 2022, and tabulated below. Microbial Insights in Knoxville, TN analyzed the samples and reported the data in laboratory report 131TI.

The data was reviewed for compliance with Massachusetts Department of Environmental Protection (MADEP) document WSC-CAM-VIIA, *Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data in Support of Response Actions Conducted Under the Massachusetts Contingency Plan (MCP)*, Revision 1, January 19, 2017, MADEP Bureau of Waste Site Cleanup; MADEP *MCP Representativeness Evaluations and Data Usability Assessments*; Policy #WSC-07-350; September 19, 2007. In the absence of an applicable MADEP Compendium of Analytical Methods performance standard, the laboratory's CSIA method summary was referenced. Current EPA Region I Data Validation Guidelines were used as a reference for evaluating the data.

Sample IDs	Analysis
22A-AE100R5-100422-1	Compound Specific Isotope Analysis (CSIA)
22A-AE102RR1-092822-1	
22A-AE103R5-092822-1	
22A-AE105R2-092922-1	
22A-AE106R3-092922-1	
22A-AE112R5-100622-1	
22A-AE28R2-100522-1	
22A-AE29R6-100422-1	
22A-STM8R1-100622-1	
22A-TRC301R4-092922-1	

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity

*	Laboratory blanks
*	Laboratory control sample (LCS) results
NA	Field duplicate results
*	General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An “NA” (Not applicable) indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The CSIA data appear valid as reported and may be used for decision making purposes.

General Reporting Issues

The minimum concentration of the volatile organic compound (VOC) compound needed in a sample for a CSIA result to be reported is 3 ppb. The laboratory qualifies the CSIA data as estimated (J) when the corresponding VOC data indicates that the concentration is between 1 ppb and 3 ppb. This qualifier is retained during data validation.

Reporting limits are not applicable to CSIA. Stable isotopes are measured as the ratio of the two most abundant isotopes of a given compound. The difference between the measured ratio of the sample and the known reference compound Pee Dee Belemnite (PDB) is expressed by the delta (δ) notation. And δ values are expressed as parts per mil (‰) difference from the reference.

The laboratory narrated that an in-house screening method was used to estimate the VOC concentrations. Compounds expected to be below the CSIA limit of detection after required dilutions were not analyzed (NA). Vinyl chloride in samples 22A-AE102RR1-092822-1, 22A-AE100R5-10422-1, and cis-1,2-dichloroethene in sample 22A-STMBR1-100622-1 were expected to be within the CSIA limit of detection after required dilutions, based on VOC data, but were not detected (ND). Tabulated below is a summary of the results which were reported in the laboratory report as NA or ND and determined to be not reportable.

Sample ID	CSIA Compound
22A-AE106R3-092922-1	$^{13}C/^{12}C$ Vinyl chloride
22A-AE105R2-092922-1	$^{13}C/^{12}C$ Vinyl chloride
22A-AE102RR1-092822-1	$^{13}C/^{12}C$ Tetrachloroethene $^{13}C/^{12}C$ Vinyl chloride
22A-AE103R5-092822-1	$^{13}C/^{12}C$ Vinyl chloride
22A-AE28R2-100522-1	$^{13}C/^{12}C$ Vinyl chloride
22A-AE29R6-100422-1	$^{13}C/^{12}C$ Tetrachloroethene
22A-AE100R5-100422-1	$^{13}C/^{12}C$ Vinyl chloride
22A-AE112R5-100622-1	$^{13}C/^{12}C$ Tetrachloroethene $^{13}C/^{12}C$ Vinyl chloride
22A-STM8R1-100622-1	$^{13}C/^{12}C$ cis-1,2-Dichloroethene $^{13}C/^{12}C$ Vinyl chloride

AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

978.905.2100 tel
978.905.2101 fax

Memorandum

To	Scott Olson	Page	1
Subject	Data Validation/Usability Summary Lockheed Martin-Wilmington, MA Site Pace Analytical Gulf Coast Reports 222100138 and 222100826		
From	Dani Woitas		
Reviewed by	Lori Herberich		60688023.02.1
Date	November 8, 2022		

Data validation was performed on the data for samples collected at the Lockheed Martin site in Wilmington, MA on September 28 and 29, 2022 and October 3-6, 2022, and tabulated below. Pace Analytical Gulf Coast in Baton Rouge, LA analyzed the samples and reported the data in report numbers 222100138 and 222100826.

The data review was performed with reference to method Dissolved Gases – Laboratory SOP AM20GAX based on RSK 175, current Region 1 - EPA New England validation guidelines, and the project-specific work plan.

Sample ID	**Sample ID**
222100138	**222100826**
22A-AE102RR1-092822-1	22A-AE100R5-100422-1
22A-AE103R5-092822-1	22A-AE112R5-100622-1
22A-AE105R2-092822-1	22A-AE28R2-100522-1
22A-AE106R3-092922-1	22A-AE29R6-100422-1
22A-TRC301R4-092922-1	22A-STM8R1-100622-1
22A-AE102RR6-0928822-1**	22A-AE101R4-100322-1**
22A-AE103R2-092822-1**	22A-AE101R6-100322-1**
22A-AE104R5-092822-1**	22A-AE102M-100322-1**
22A-AE105D-092922-1**	22A-AE103D-100322-1**
22A-AE106M-092922-1**	22A-AE109R6-100422-1**
22A-AE106M-092922-2** (Field Duplicate of 22A-AE106M-092922-1)	22A-AE26R1-100522-1**
22A-AE108R1-092822-1**	22A-AE27R-100522-1**
--	22A-EB01-100622-1** (Equipment Blank)
--	22A-GZA-102S-100322-1**
--	22A-GZA-102S-100322-2** (Field Duplicate of 22A-GZA-102S-100322-1)

Sample ID	Sample ID
--	22A-GZA12-100422-1**
--	22A-STM8R-100622-1**

*Hydrogen analysis only **Dissolved gases analysis only

The following method was used to analyze the samples for dissolved gases and/or hydrogen:

Dissolved Gases– Laboratory SOP AM20GAX based on RSK 175 [Hydrogen, Methane, Ethane, Ethene, Acetylene and Propane]

DATA REVIEW ELEMENTS

The assessment was based on the following review elements:

* Chain-of-custody (COC)/sample integrity
* Holding times and sample preservation
* Laboratory blanks
* Trip blank/Equipment blank
  Matrix duplicate (MD)/matrix spike (MS) and/or matrix spike duplicate (MSD) results
* Laboratory control sample/laboratory control duplicate sample (LCS/LCSD) results
* Field duplicate results
* General reporting issues

The symbol (*) indicates that all criteria were met, no issues were narrated, and/or no qualifications were required for these review elements. An “NA” indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The data appear valid as reported, were qualified as indicated below if required, and may be used for decision making purposes.

MD/MS/MSD Results

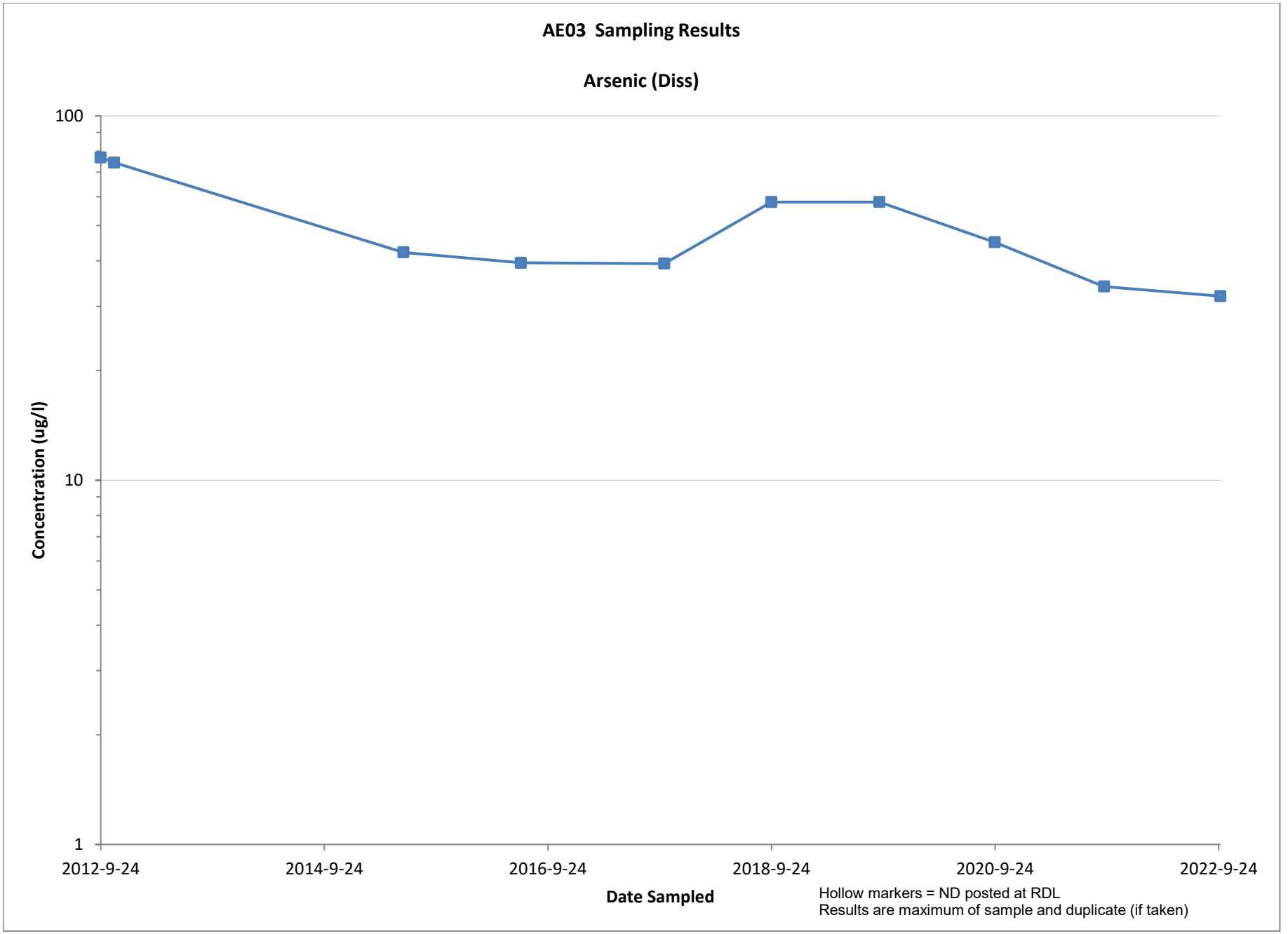
MS/MSD analyses were performed on samples 22A-GZA12-100422-1 and 22A-AE109R6-100422-1 for dissolved gases. The QC acceptance criteria were met for acetylene for both samples. All other dissolved gases did not meet the QC acceptance criteria for the MS/MSD. Nonconformances resulting in data qualification are listed below.

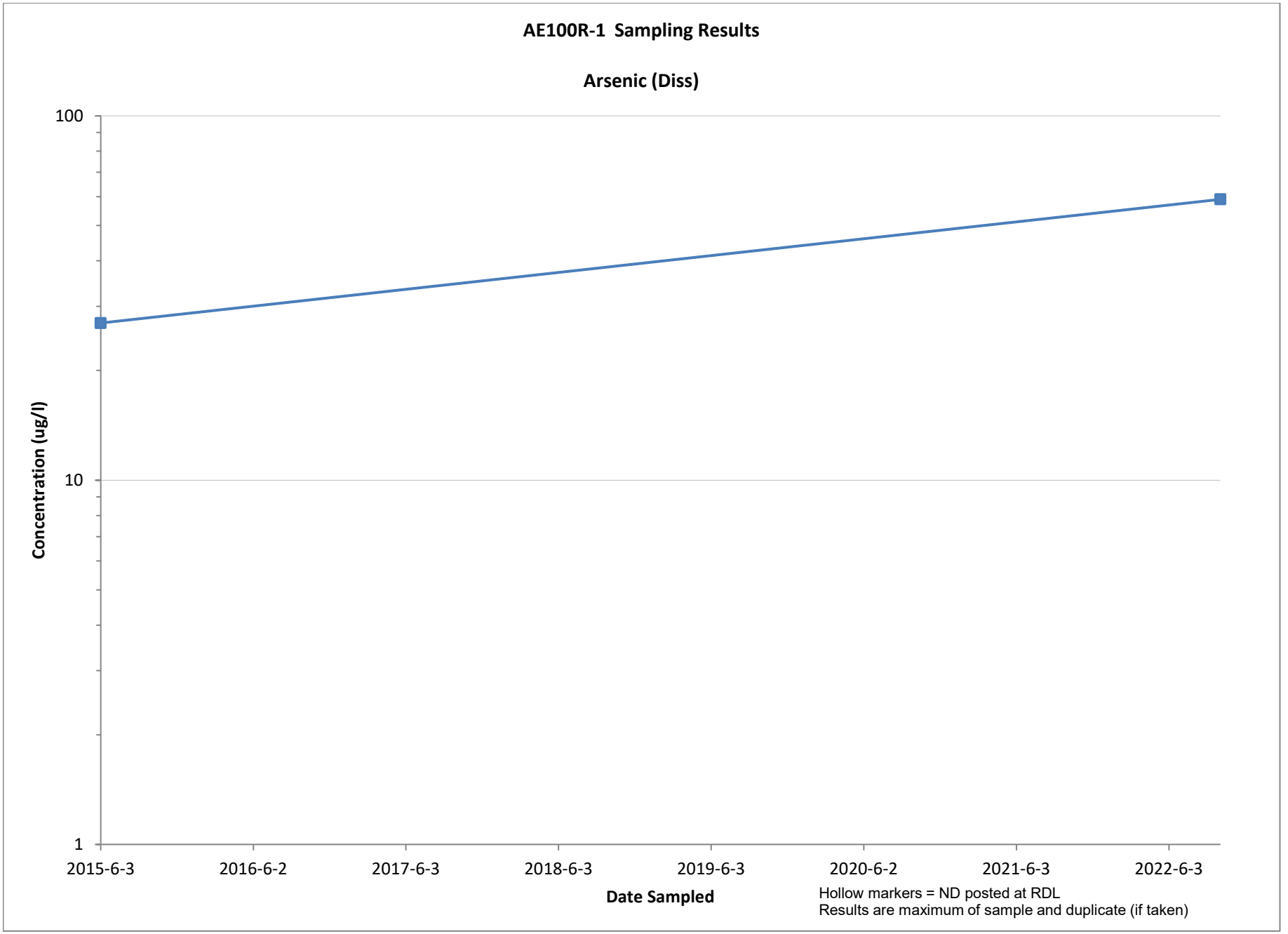
Sample ID	Compound	MS %R	MSD %R	Lower Limit %R	Upper Limit %R	Data Validation Actions (Detects/Nondetects)
22A-GZA12-100422-1	Ethane	50	46	70	130	J-/UJ
22A-GZA12-100422-1	Ethene	39	36	70	130	J-/UJ
22A-GZA12-100422-1	Methane	152	132	70	130	J+/Accept

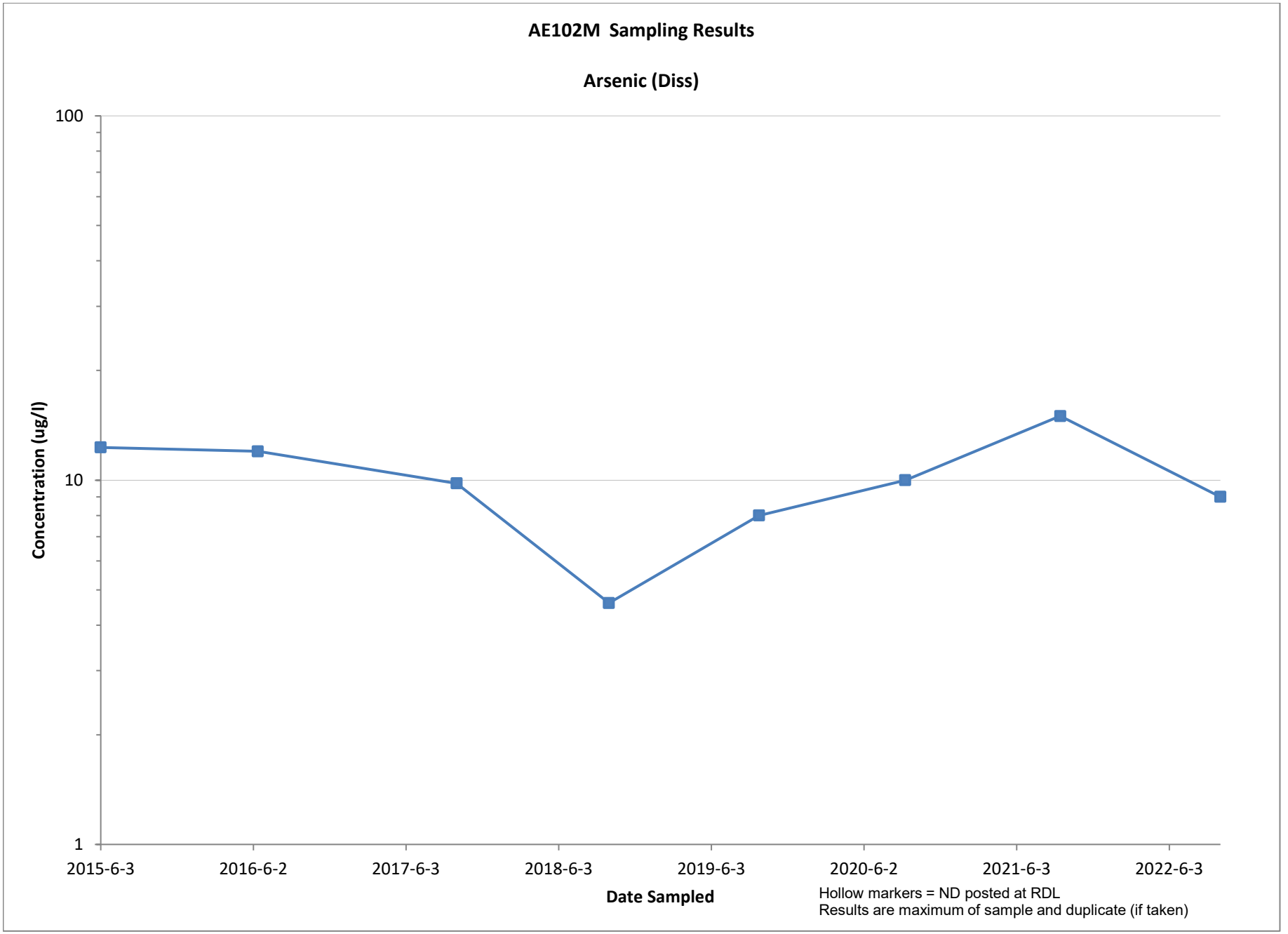
Sample ID	Compound	MS %R	MSD %R	Lower Limit %R	Upper Limit %R	Data Validation Actions (Detects/Nondetects)
22A-GZA12-100422-1	Propane	341	316	70	130	J+/Accept
22A-AE109R6-100422-1	Ethane	42	41	70	130	J-/UJ
22A-AE109R6-100422-1	Ethene	27	27	70	130	J-/UJ
22A-AE109R6-100422-1	Methane	-42	-31	70	130	J-/UJ
22A-AE109R6-100422-1	Propane	287	285	70	130	J+/Accept

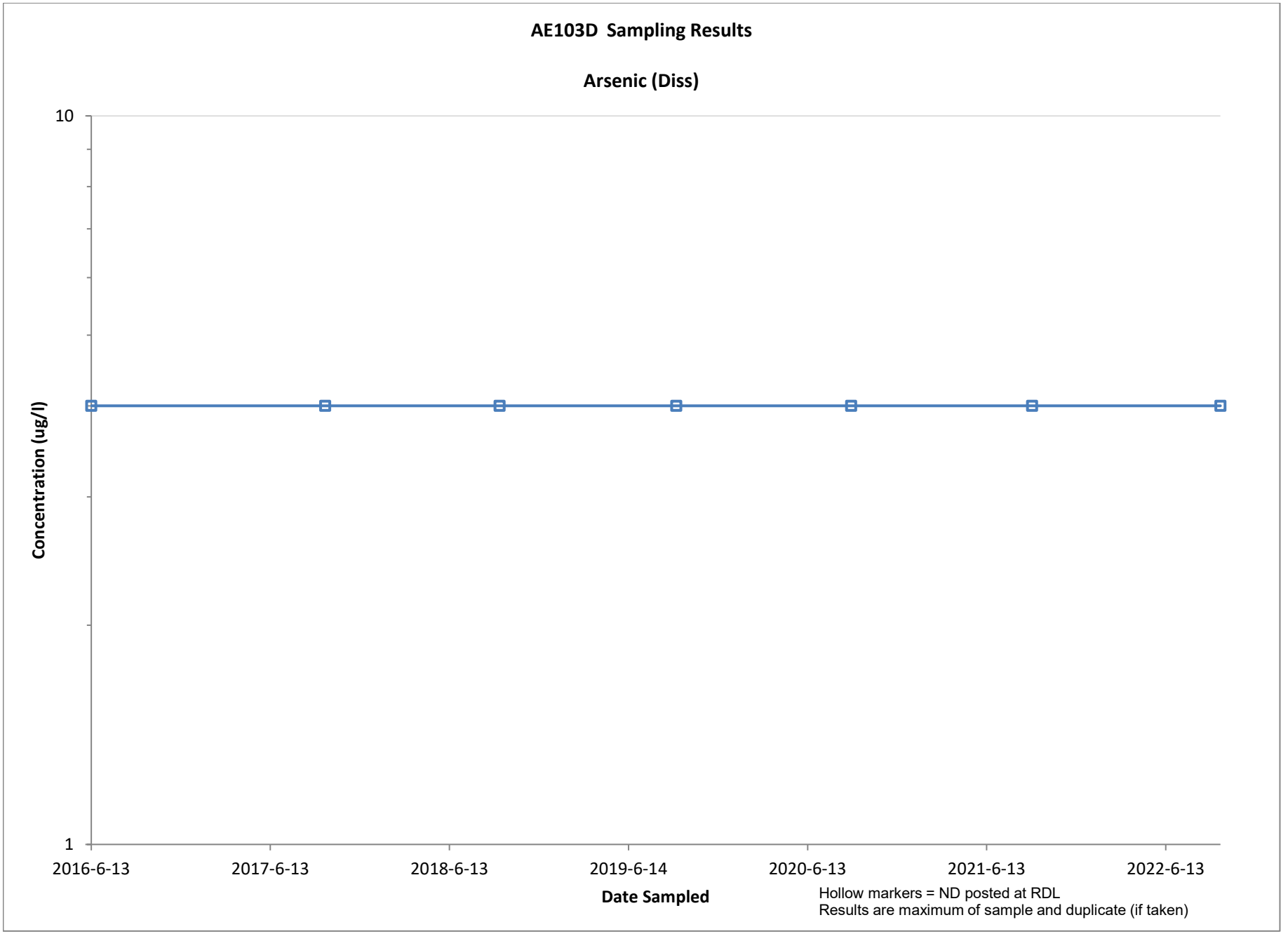
APPENDIX D
GROUNDWATER CONCENTRATION TREND GRAPHS

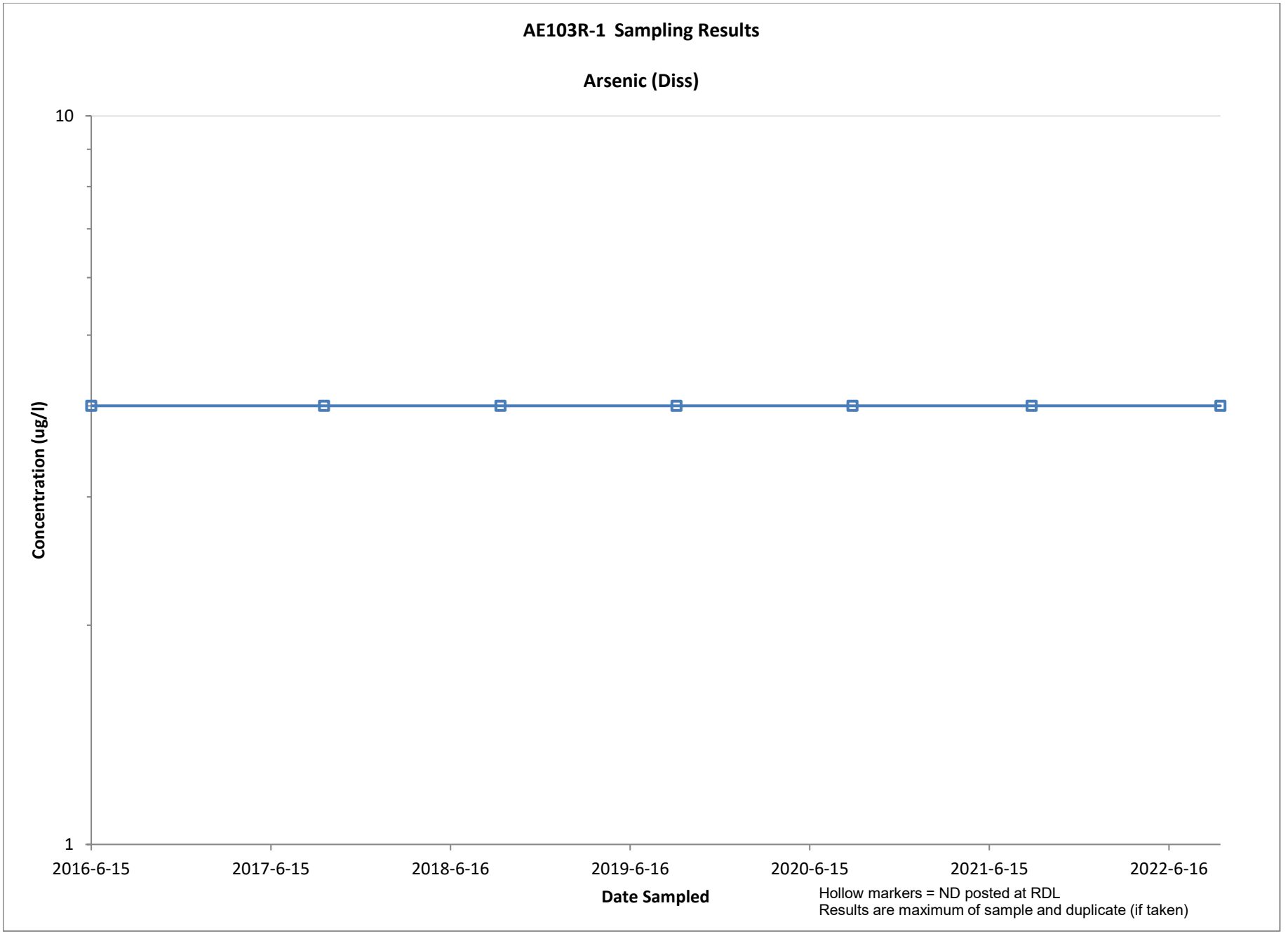
ARSENIC

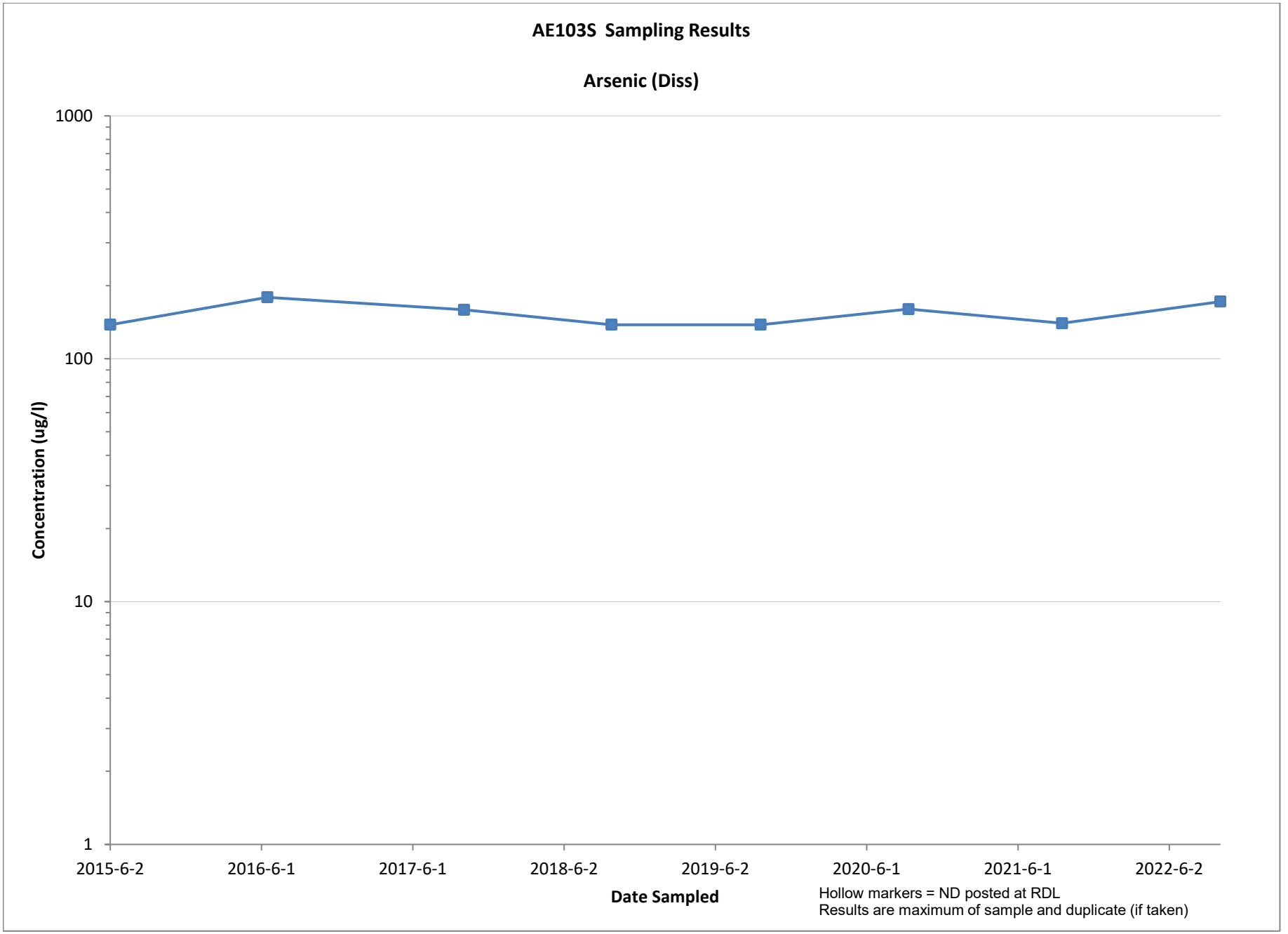

AE03 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
2022-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

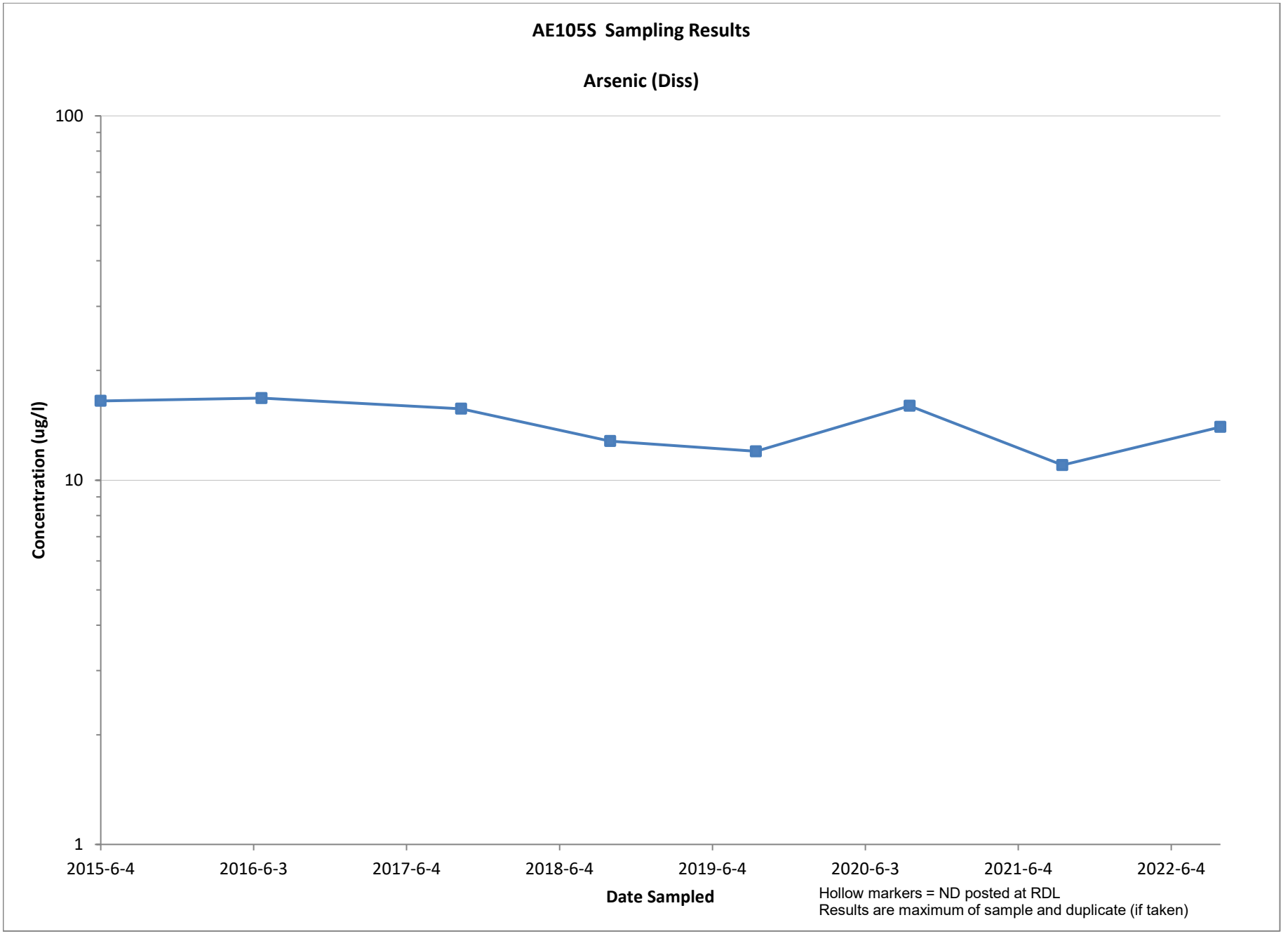

AE100R-1 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2015-6-3
2016-6-2
2017-6-3
2018-6-3
2019-6-3
2020-6-2
2021-6-3
2022-6-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

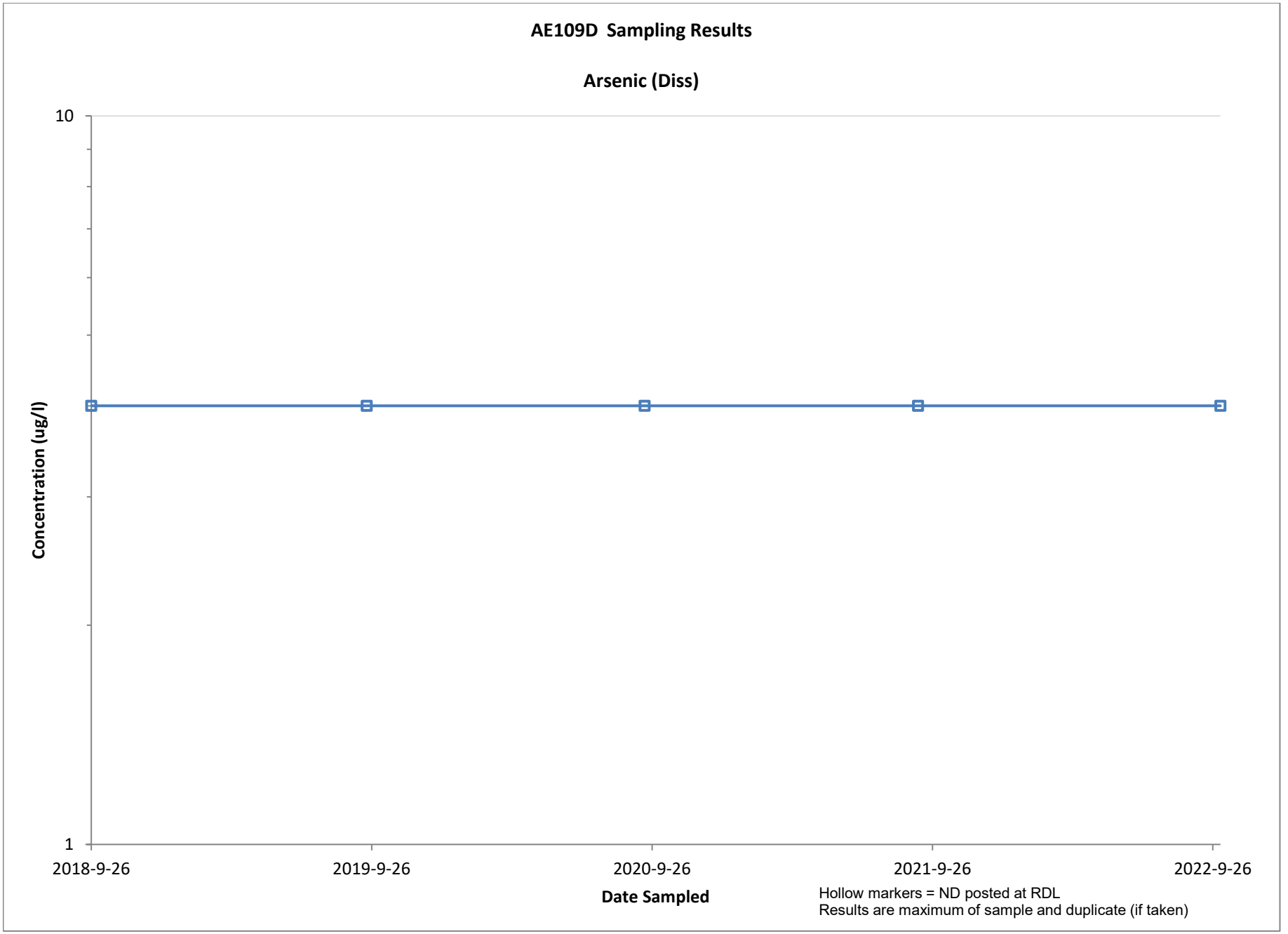

AE102M Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2015-6-3
2016-6-2
2017-6-3
2018-6-3
2019-6-3
2020-6-2
2021-6-3
2022-6-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

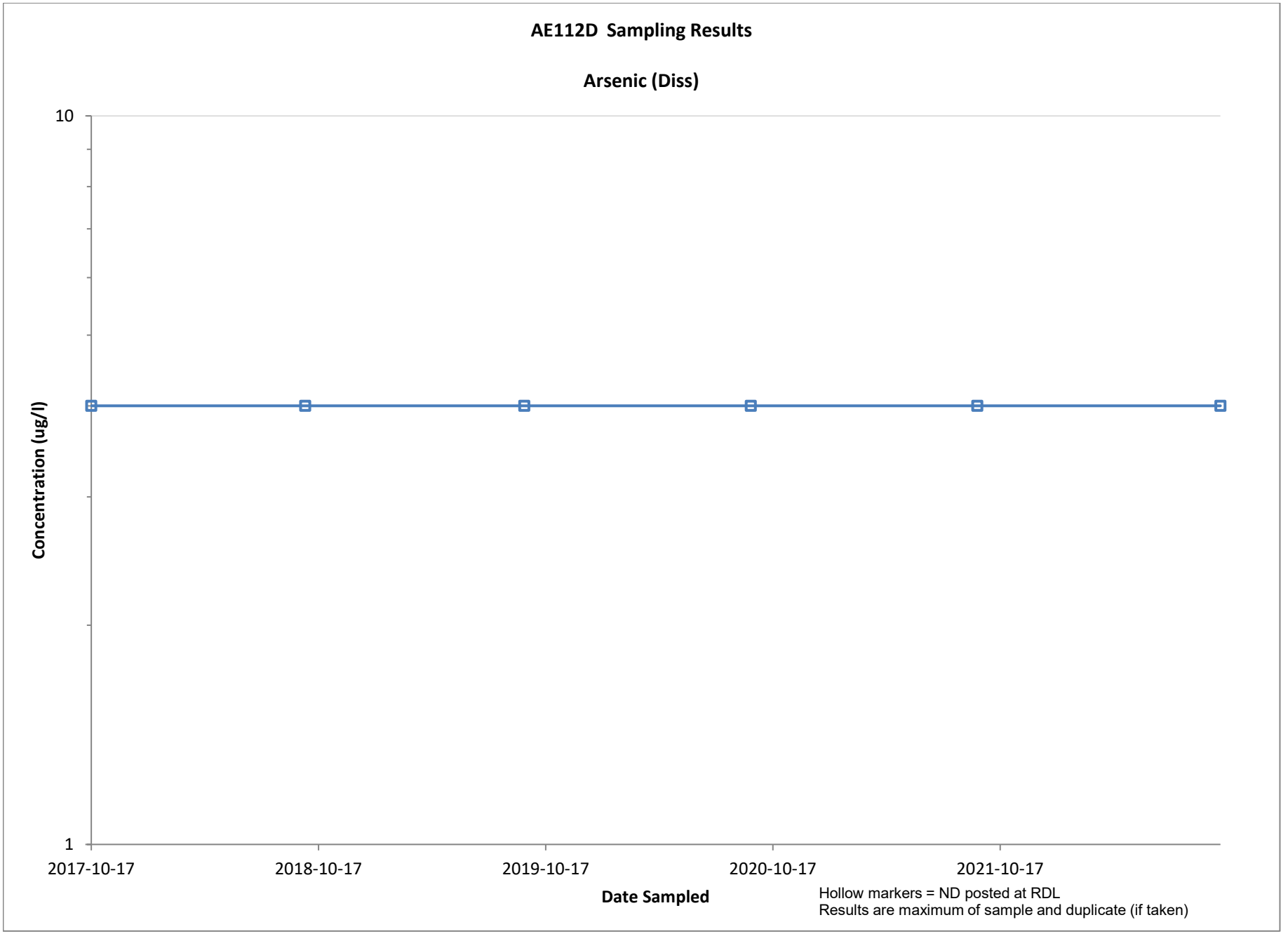

AE103D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-13
2017-6-13
2018-6-13
2019-6-14
2020-6-13
2021-6-13
2022-6-13
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

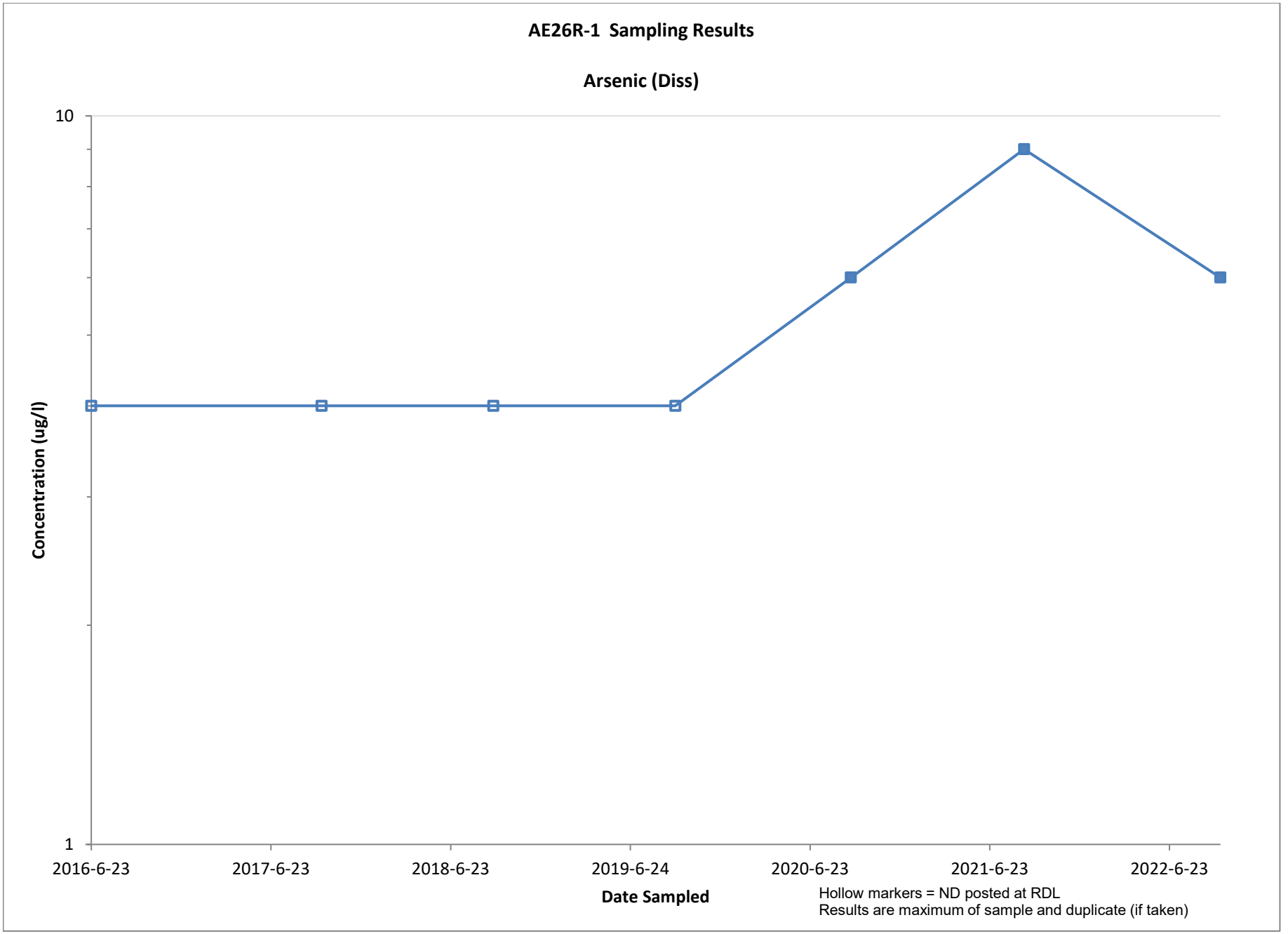

AE103R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-15
2017-6-15
2018-6-16
2019-6-16
2020-6-15
2021-6-15
2022-6-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

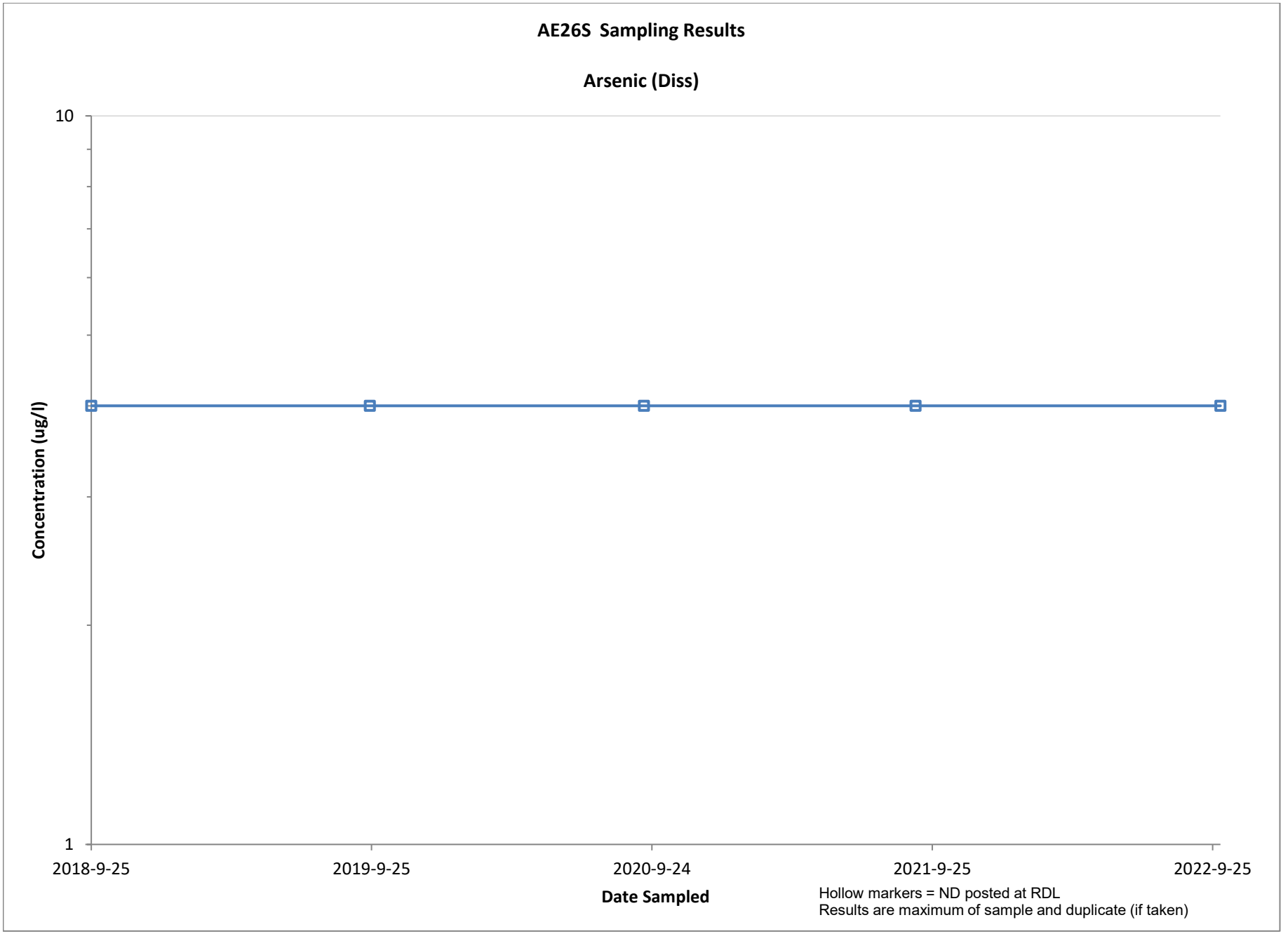

AE103S Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
2015-6-2
2016-6-1
2017-6-1
2018-6-2
2019-6-2
2020-6-1
2021-6-1
2022-6-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

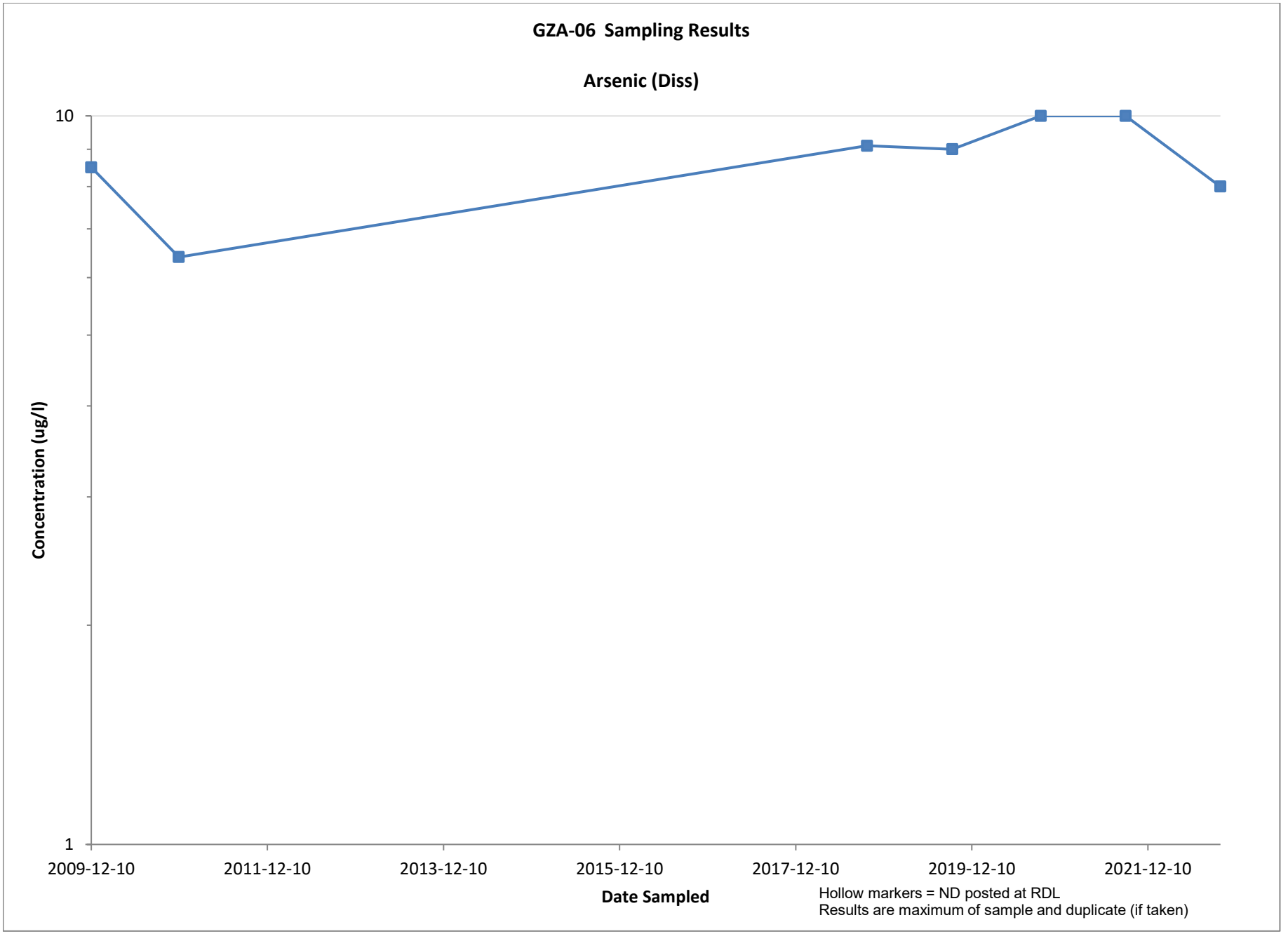

AE105S Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2015-6-4
2016-6-3
2017-6-4
2018-6-4
2019-6-4
2020-6-3
2021-6-4
2022-6-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

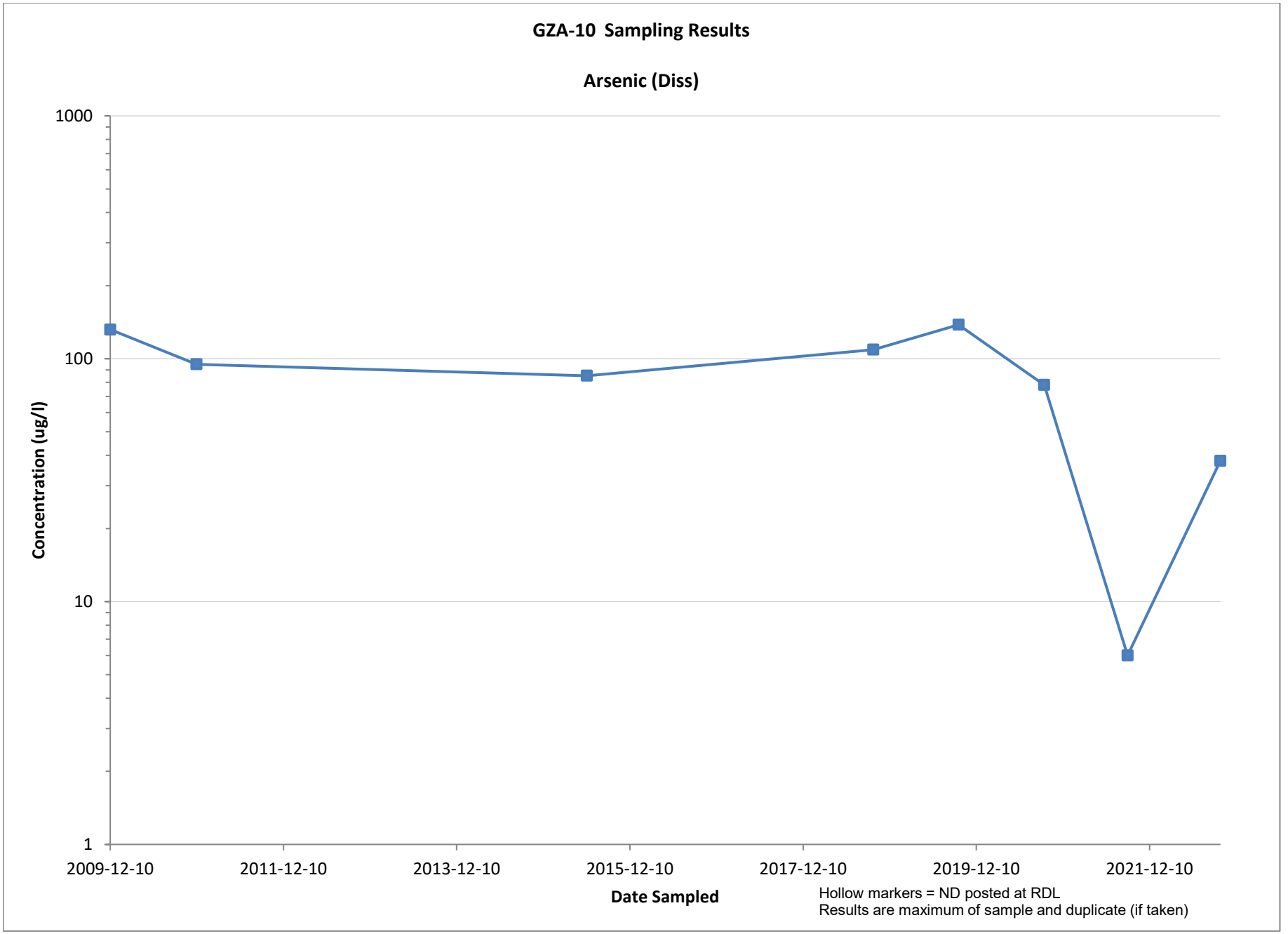

AE109D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-9-26
2019-9-26
2020-9-26
2021-9-26
2022-9-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

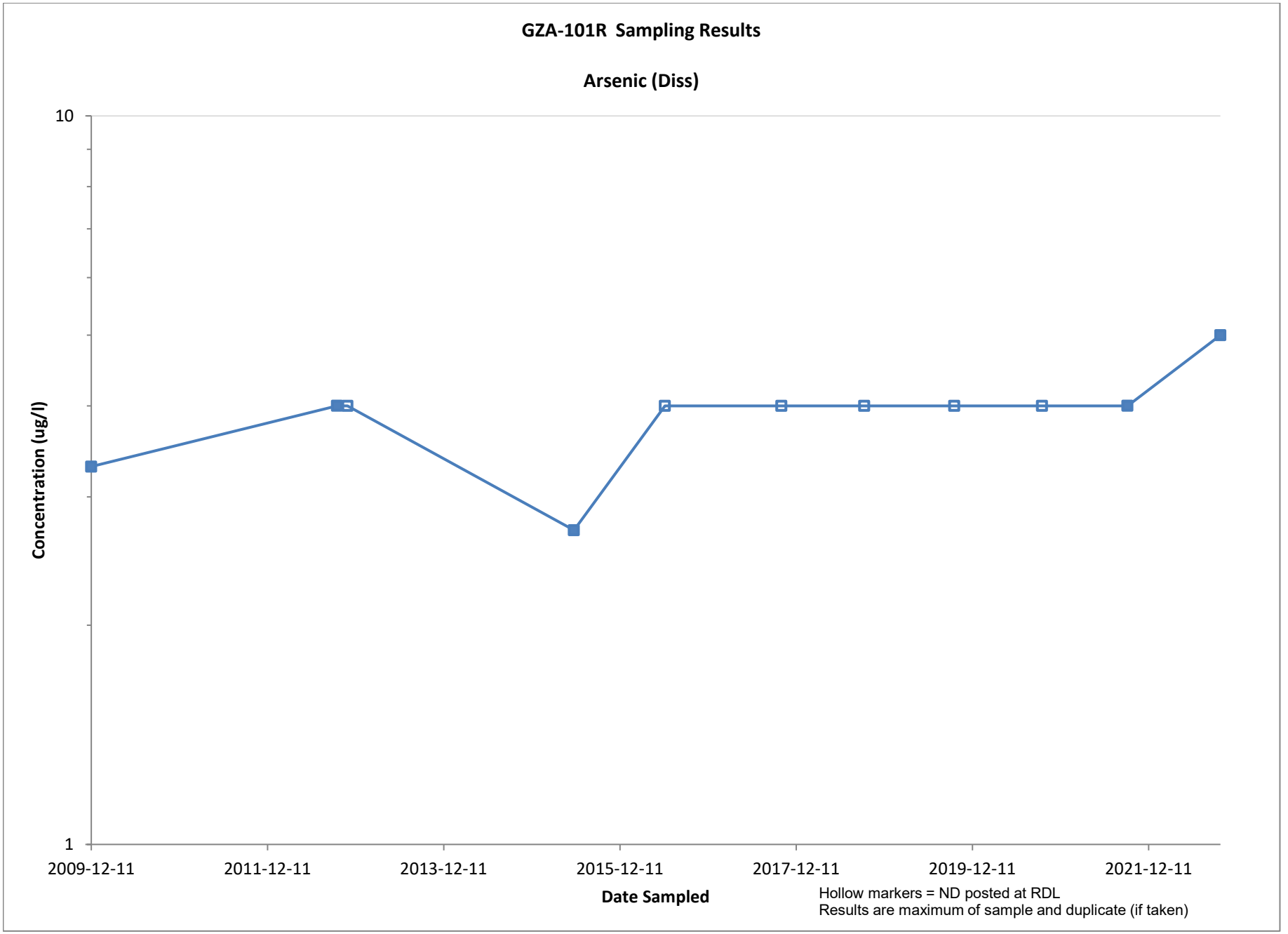

AE112D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2017-10-17
2018-10-17
2019-10-17
2020-10-17
2021-10-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

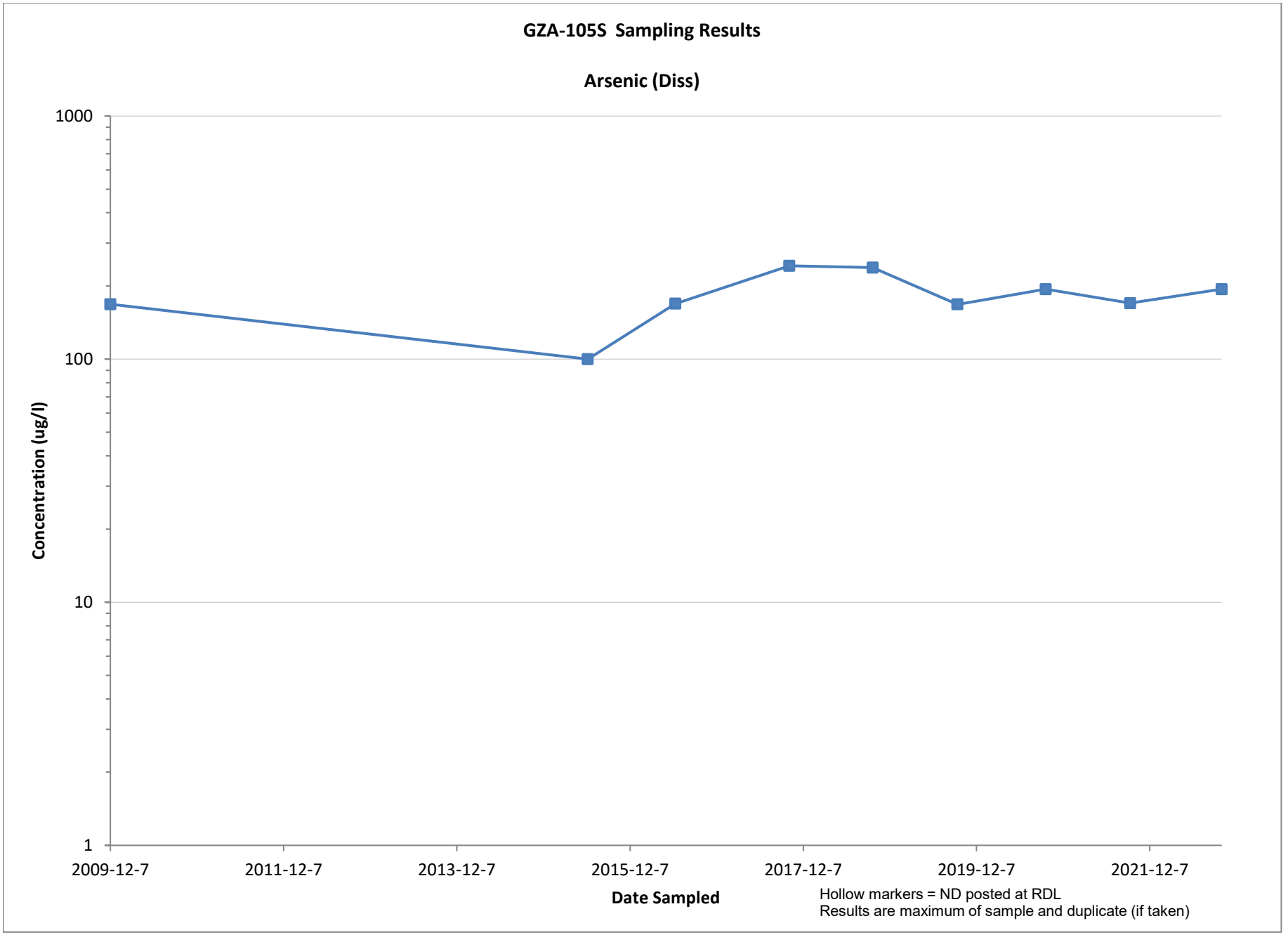

AE26R-1 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2016-6-23
2017-6-23
2018-6-23
2019-6-24
2020-6-23
2021-6-23
2022-6-23
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

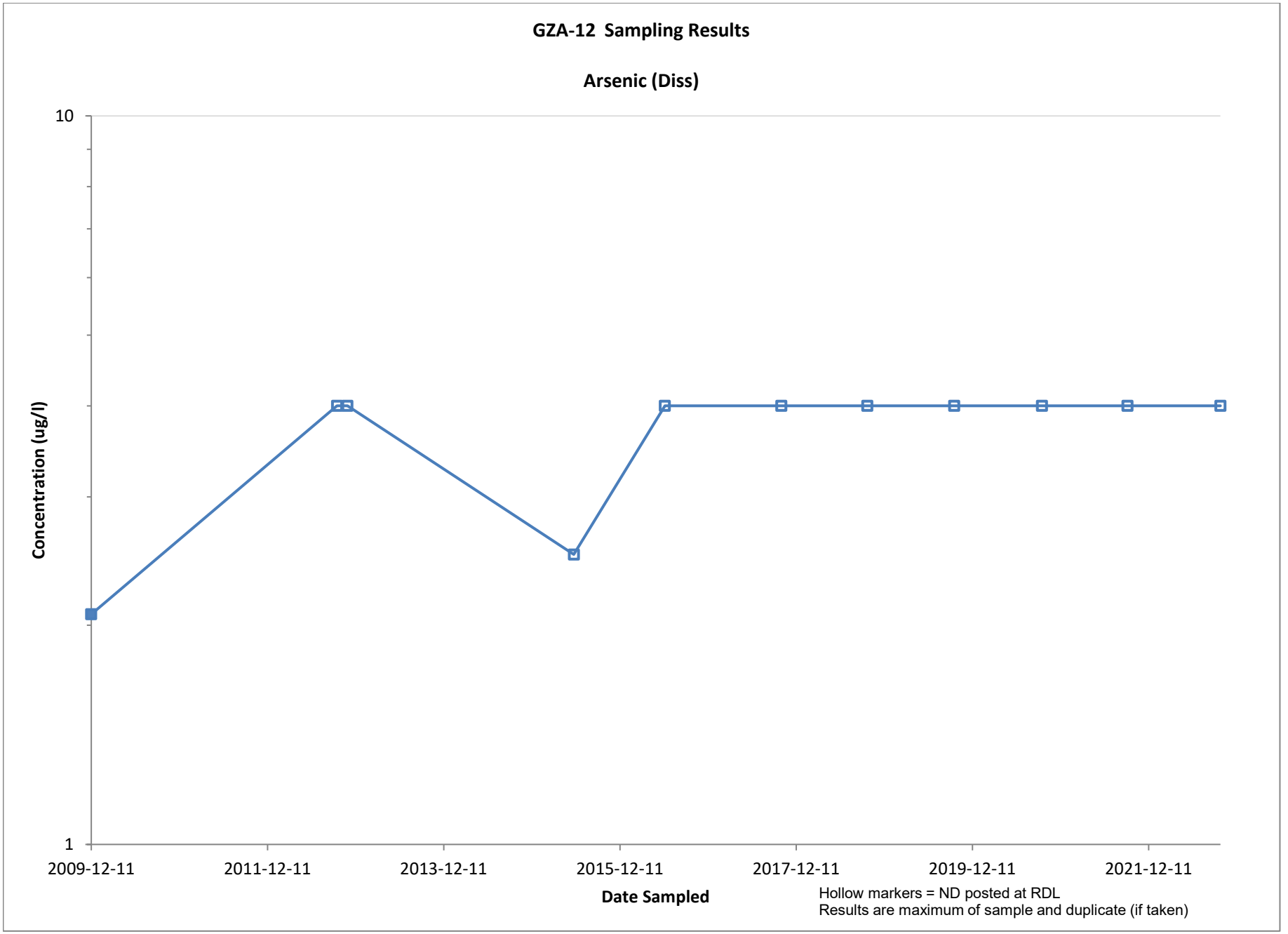

AE26S Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-9-25
2019-9-25
2020-9-24
2021-9-25
2022-9-25
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

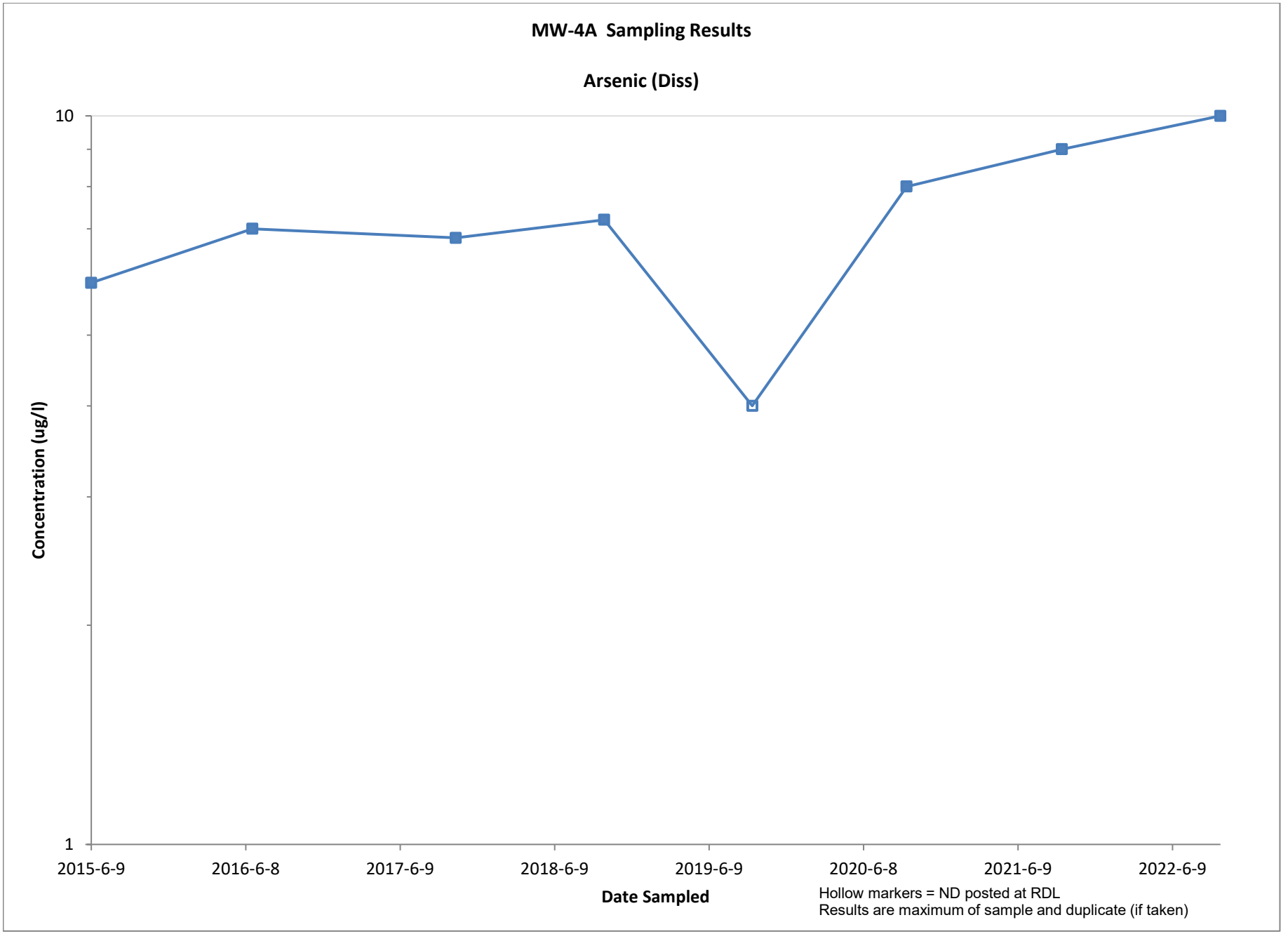

GZA-06 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2009-12-10
2011-12-10
2013-12-10
2015-12-10
2017-12-10
2019-12-10
2021-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

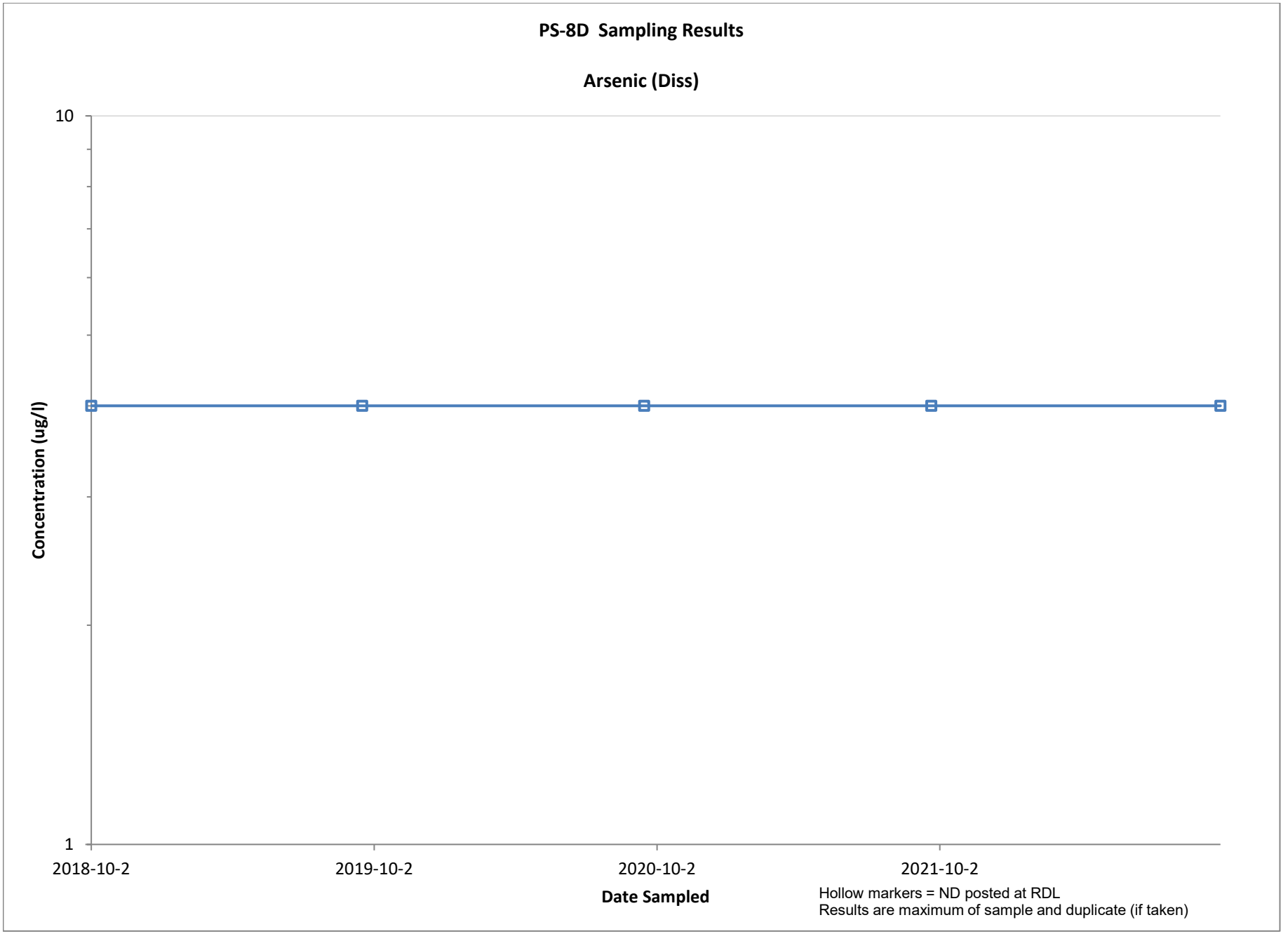

GZA-10 Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
2009-12-10
2011-12-10
2013-12-10
2015-12-10
2017-12-10
2019-12-10
2021-12-10
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

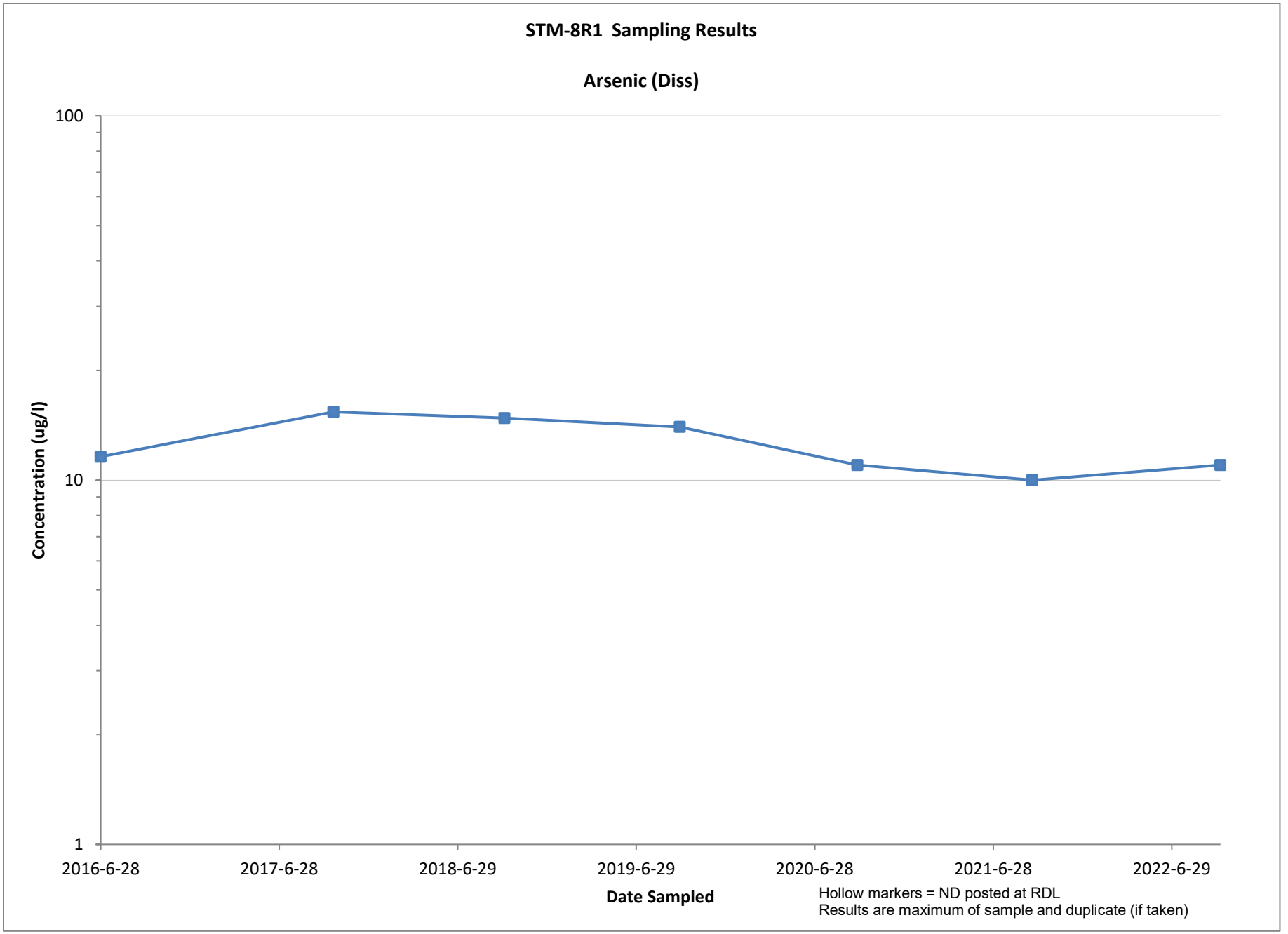

GZA-101R Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2009-12-11
2011-12-11
2013-12-11
2015-12-11
2017-12-11
2019-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

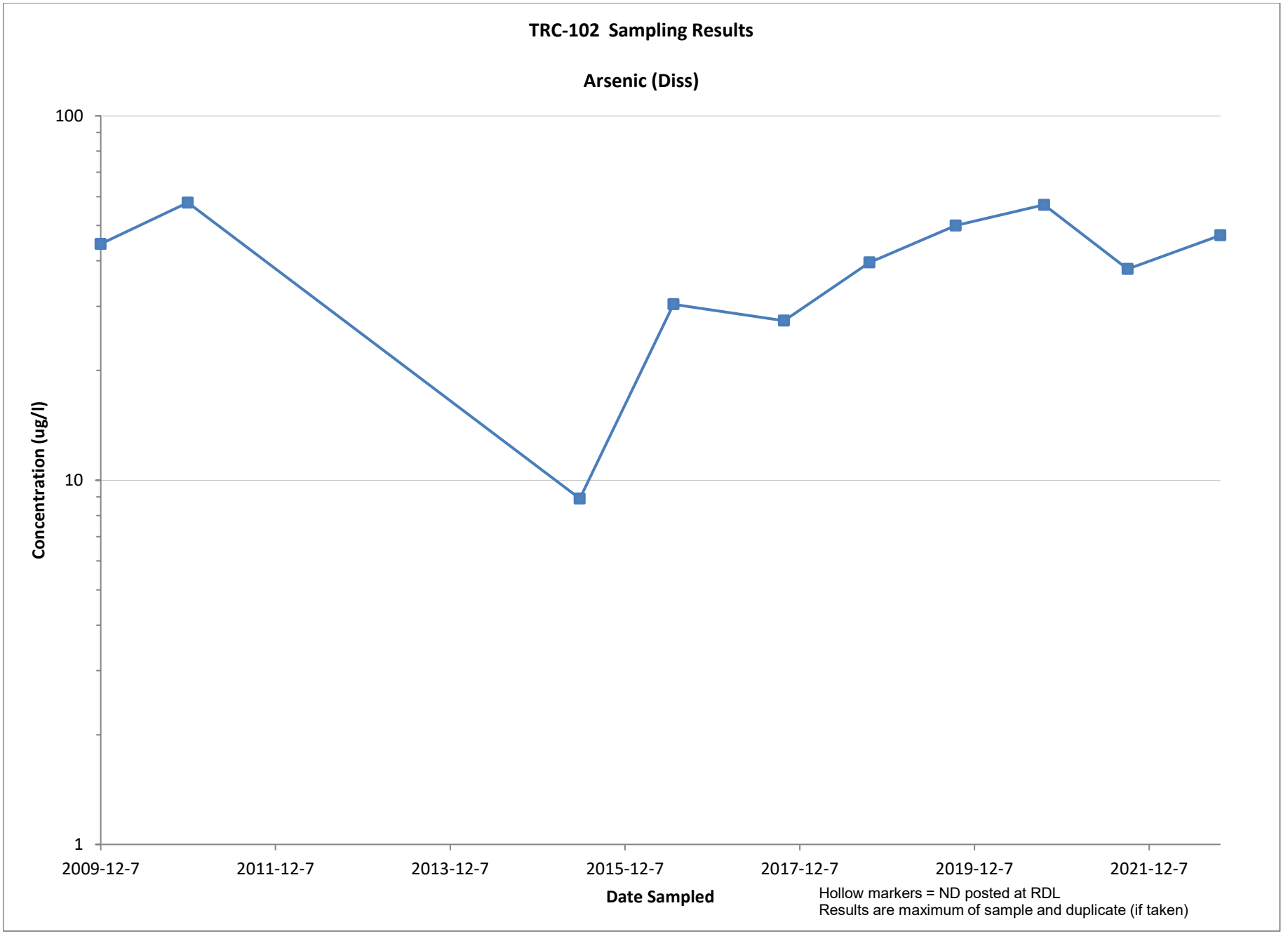

GZA-105S Sampling Results
Arsenic (Diss)
1000
100
10
1
Concentration (ug/l)
2009-12-7
2011-12-7
2013-12-7
2015-12-7
2017-12-7
2019-12-7
2021-12-7
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

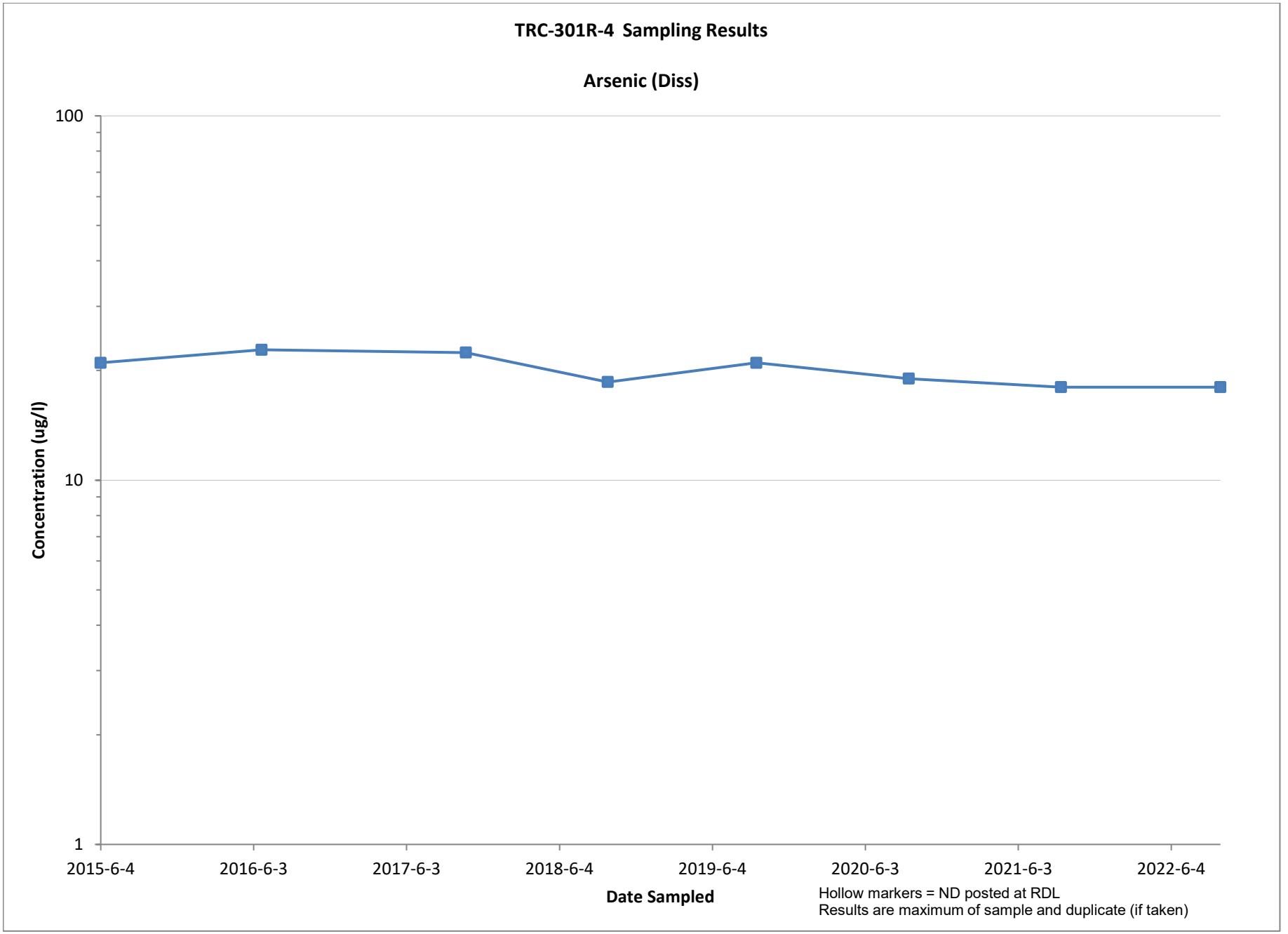

GZA-12 Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2009-12-11
2011-12-11
2013-12-11
2015-12-11
2017-12-11
2019-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)


MW-4A Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2015-6-9
2016-6-8
2017-6-9
2018-6-9
2019-6-9
2020-6-8
2021-6-9
2022-6-9
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

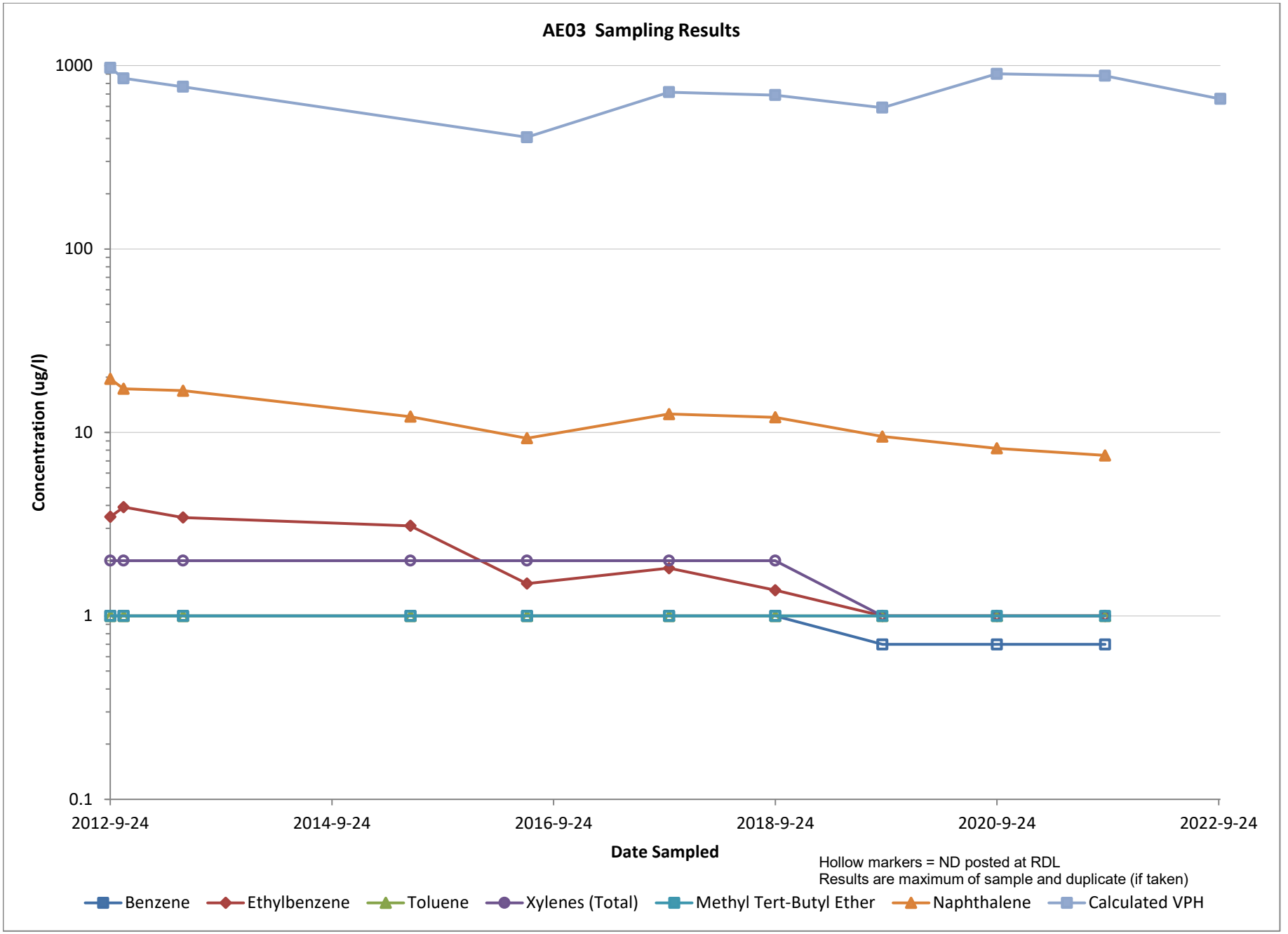

PS-8D Sampling Results
Arsenic (Diss)
10
1
Concentration (ug/l)
2018-10-2
2019-10-2
2020-10-2
2021-10-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

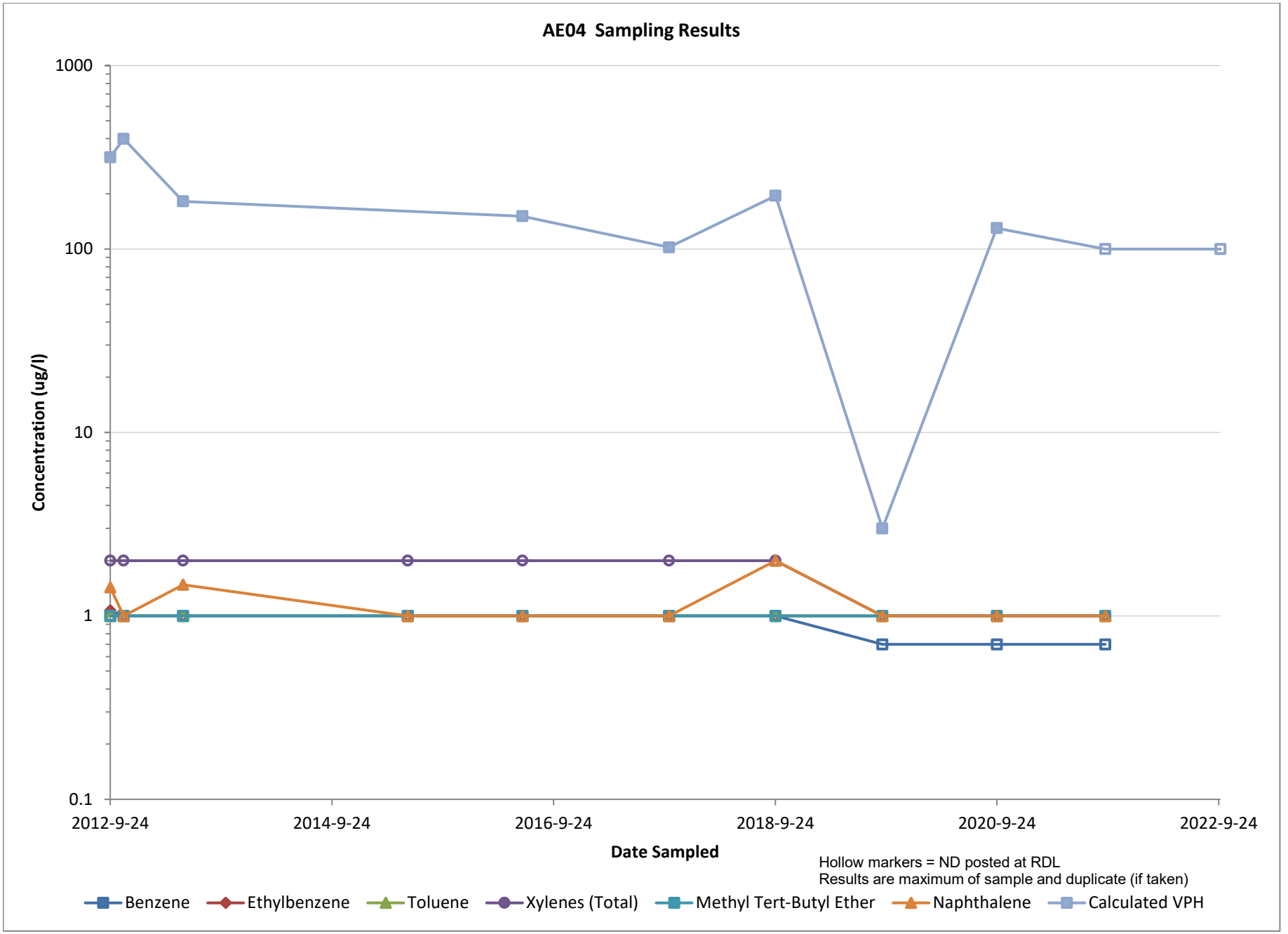

STM-8R1 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2016-6-28
2017-6-28
2018-6-29
2019-6-29
2020-6-28
2021-6-28
2022-6-29
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

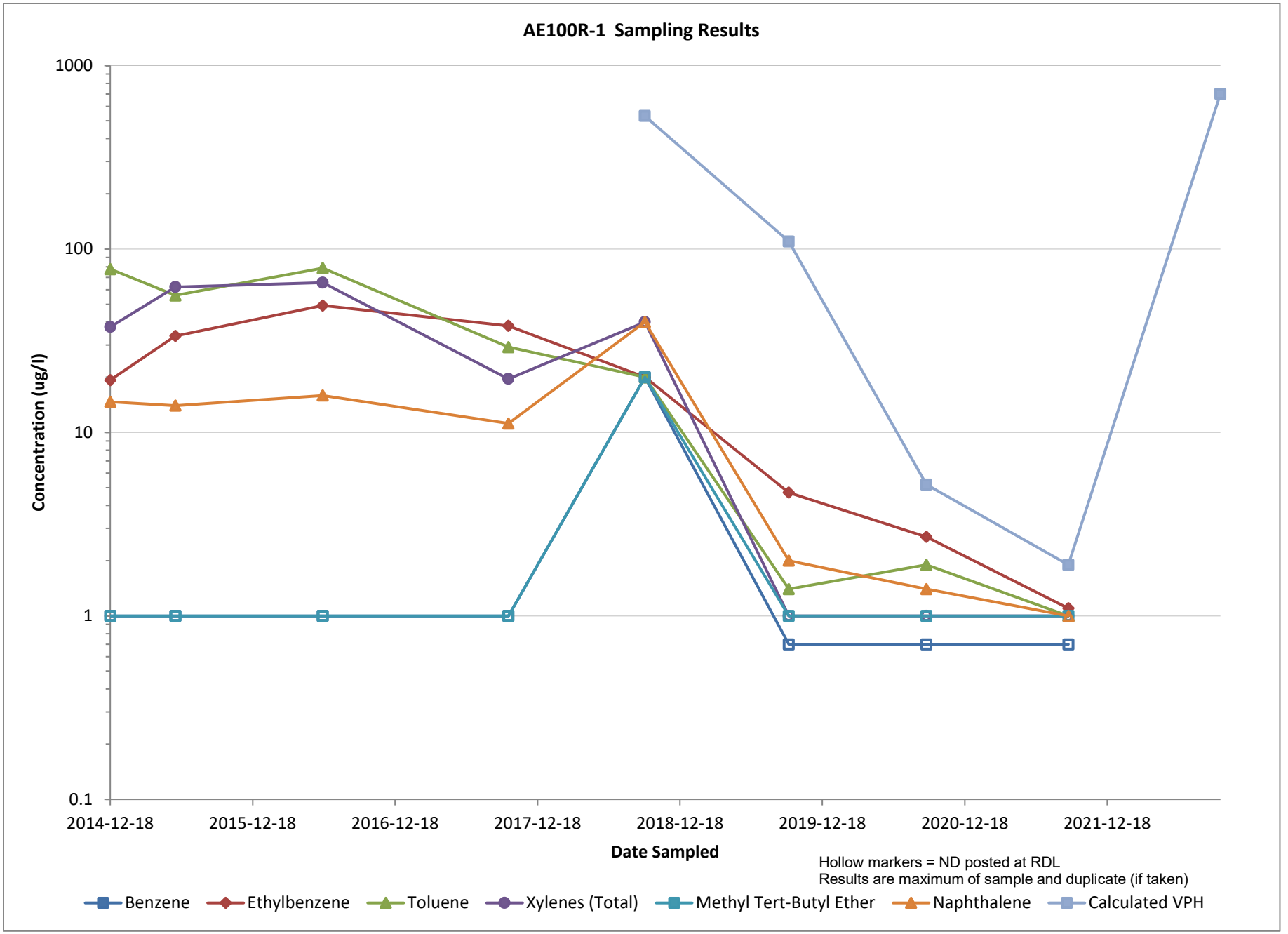

TRC-102 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2009-12-7
2011-12-7
2013-12-7
2015-12-7
2017-12-7
2019-12-7
2021-12-7
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

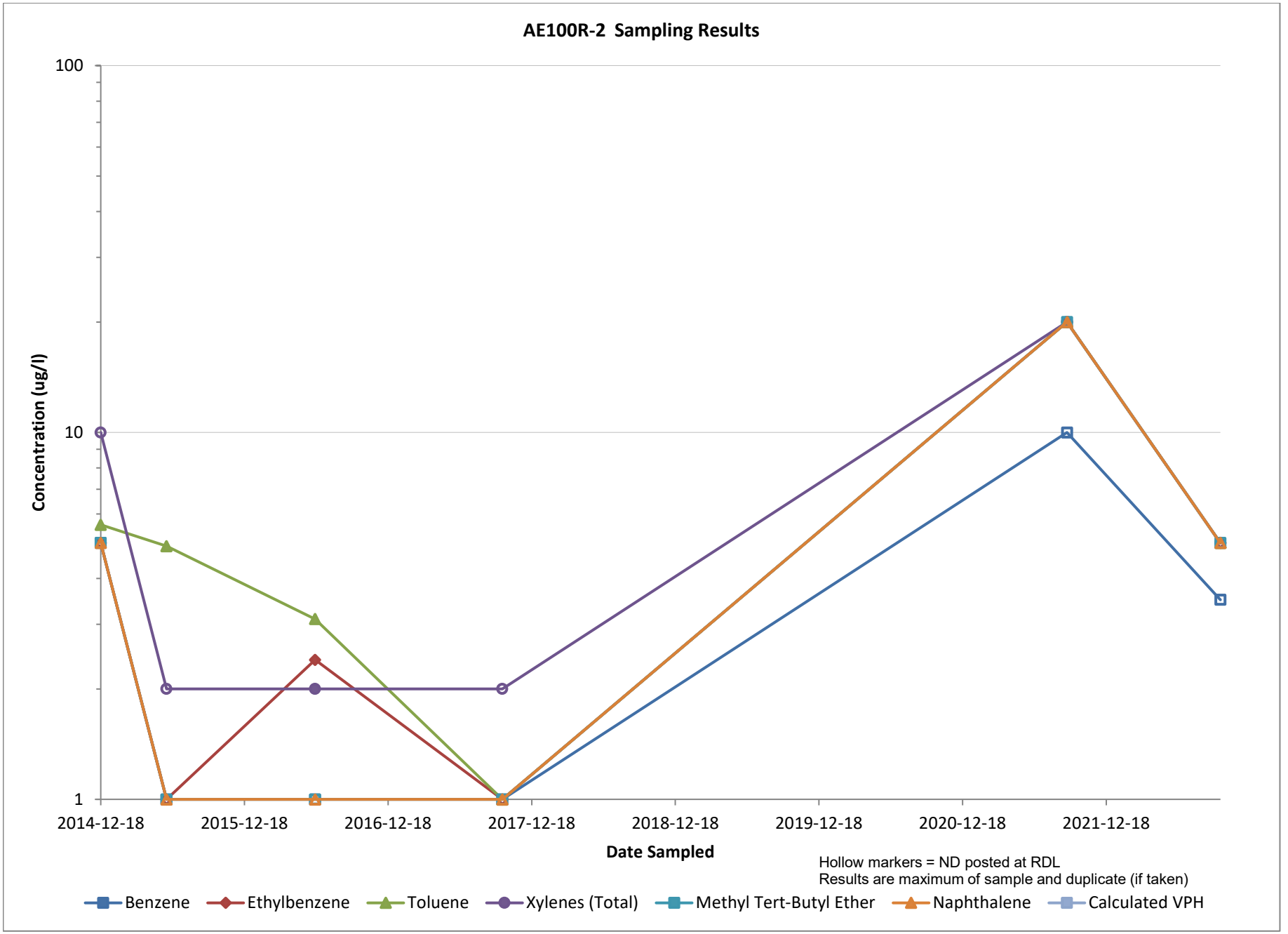

TRC-301R-4 Sampling Results
Arsenic (Diss)
100
10
1
Concentration (ug/l)
2015-6-4
2016-6-3
2017-6-3
2018-6-4
2019-6-4
2020-6-3
2021-6-3
2022-6-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)

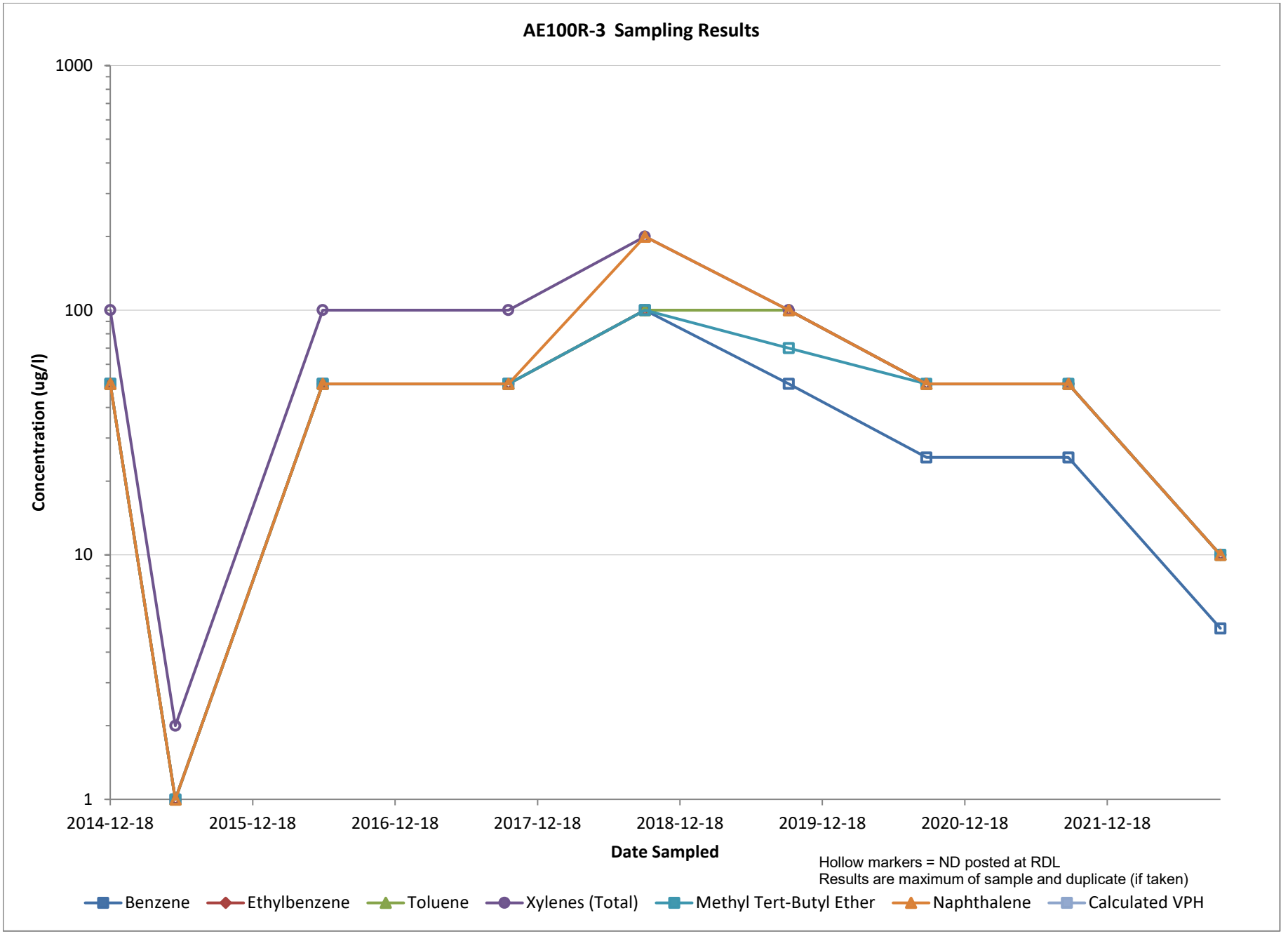
PETROLEUM

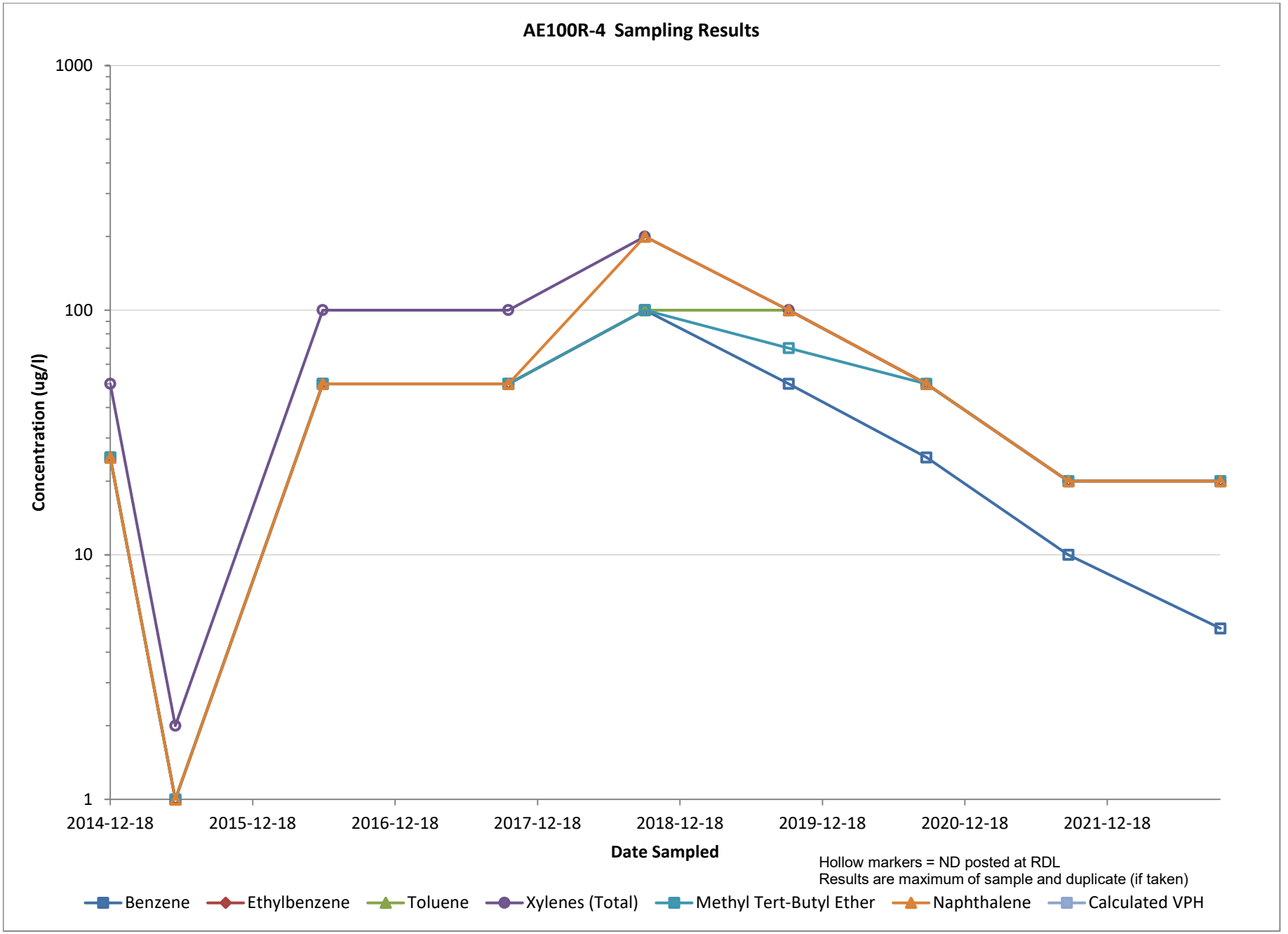

AE03 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
2022-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

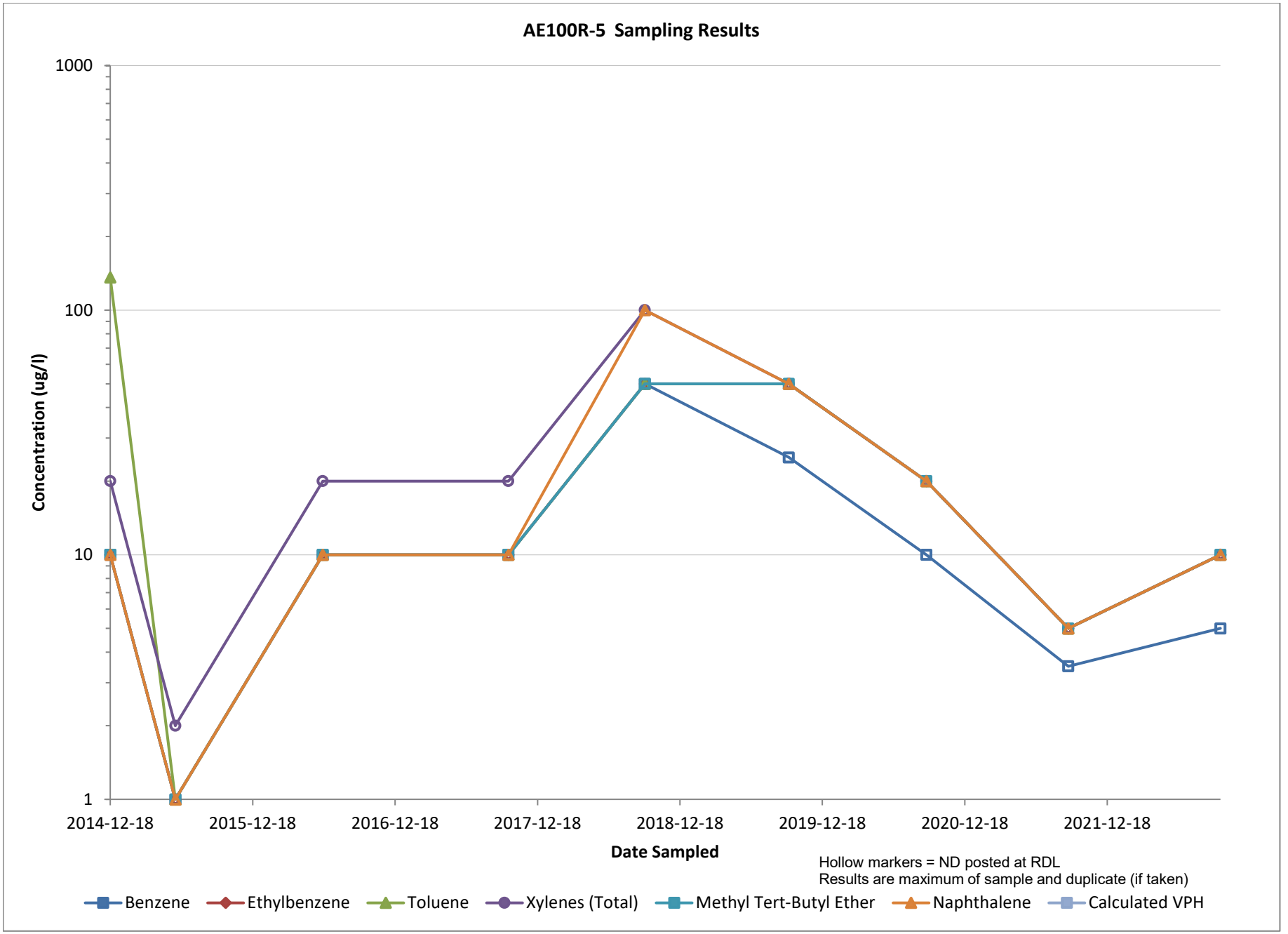

AE04 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2012-9-24
2014-9-24
2016-9-24
2018-9-24
2020-9-24
2022-9-24
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

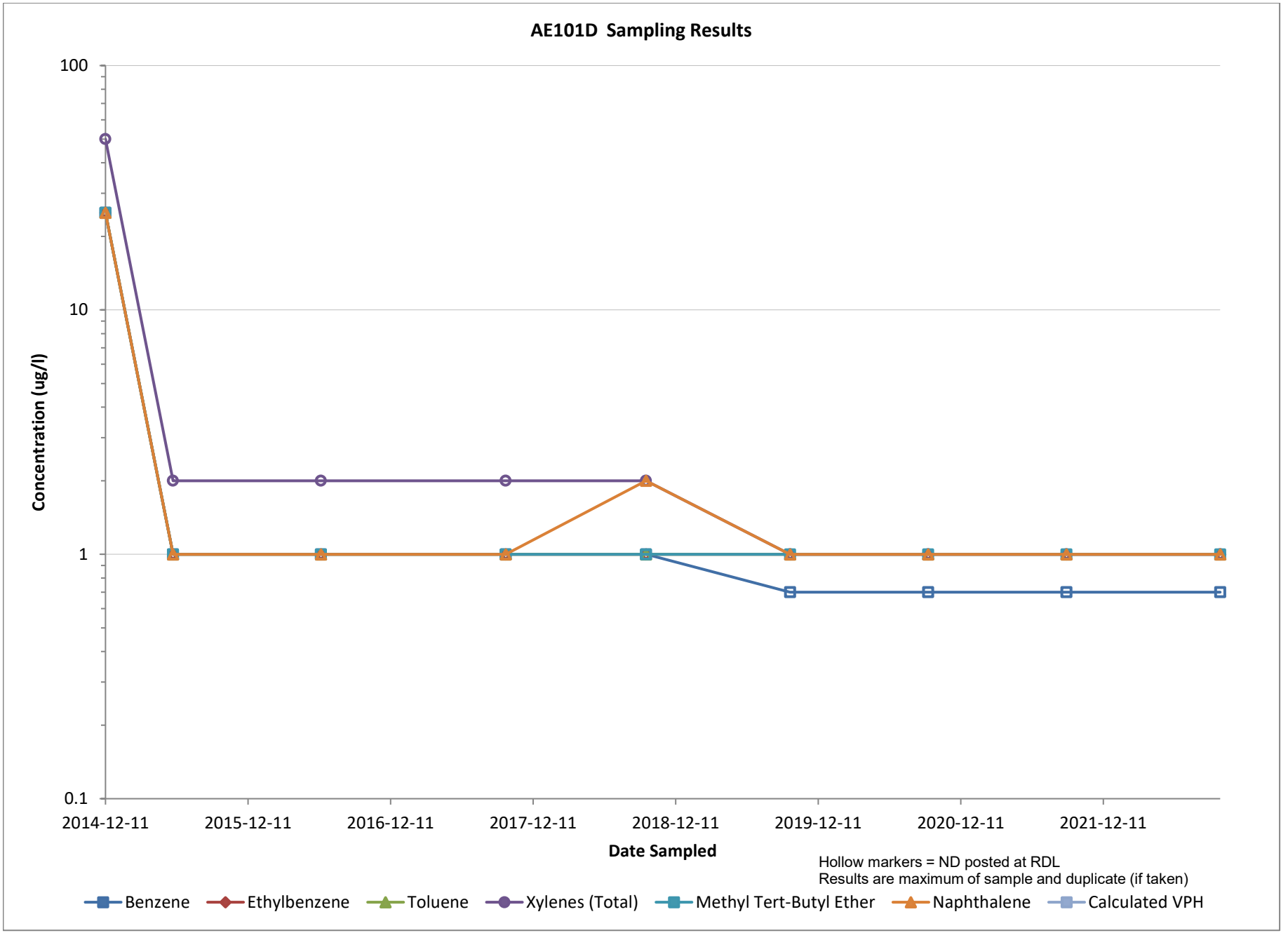

AE100R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

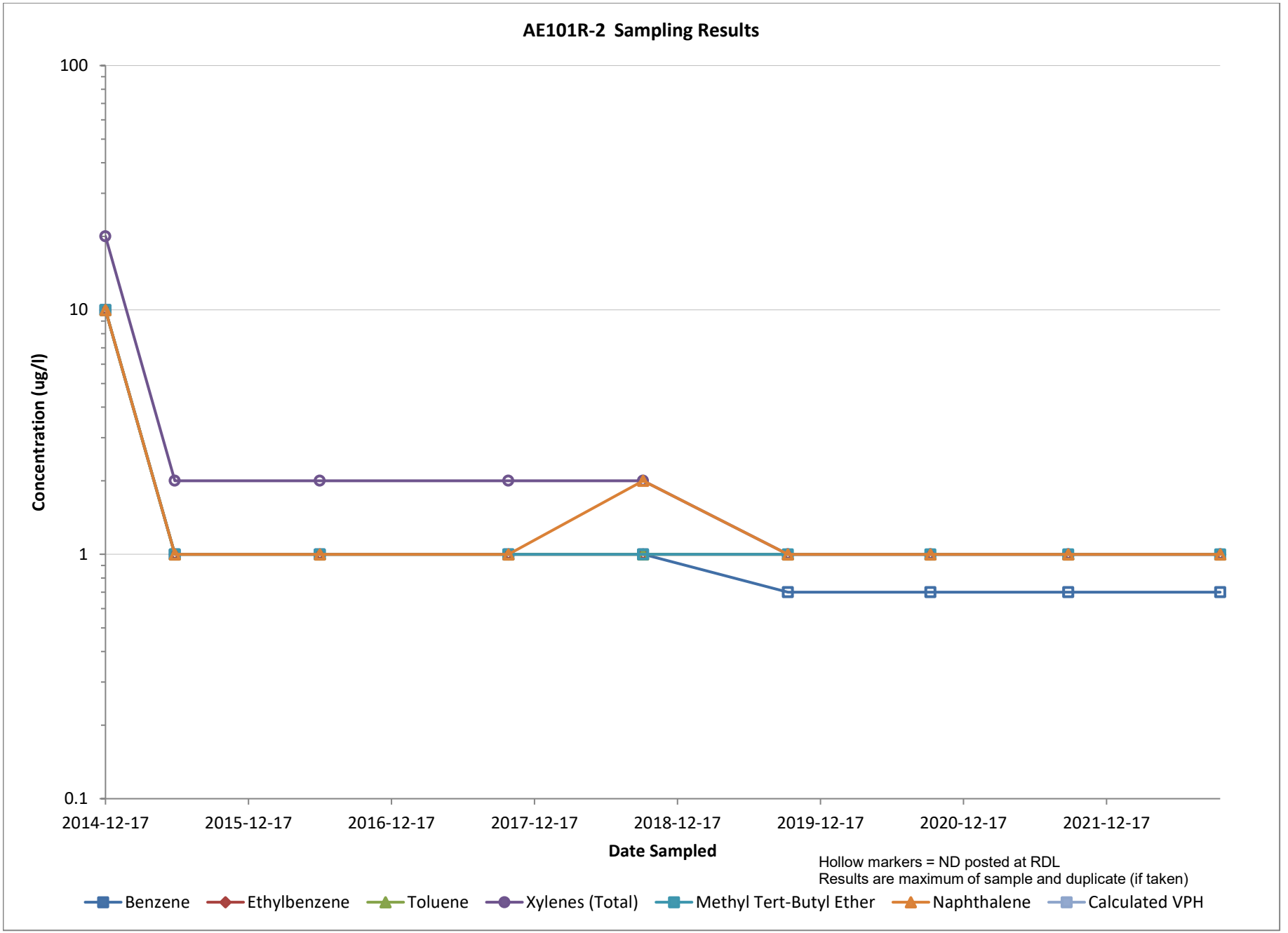

AE100R-2 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

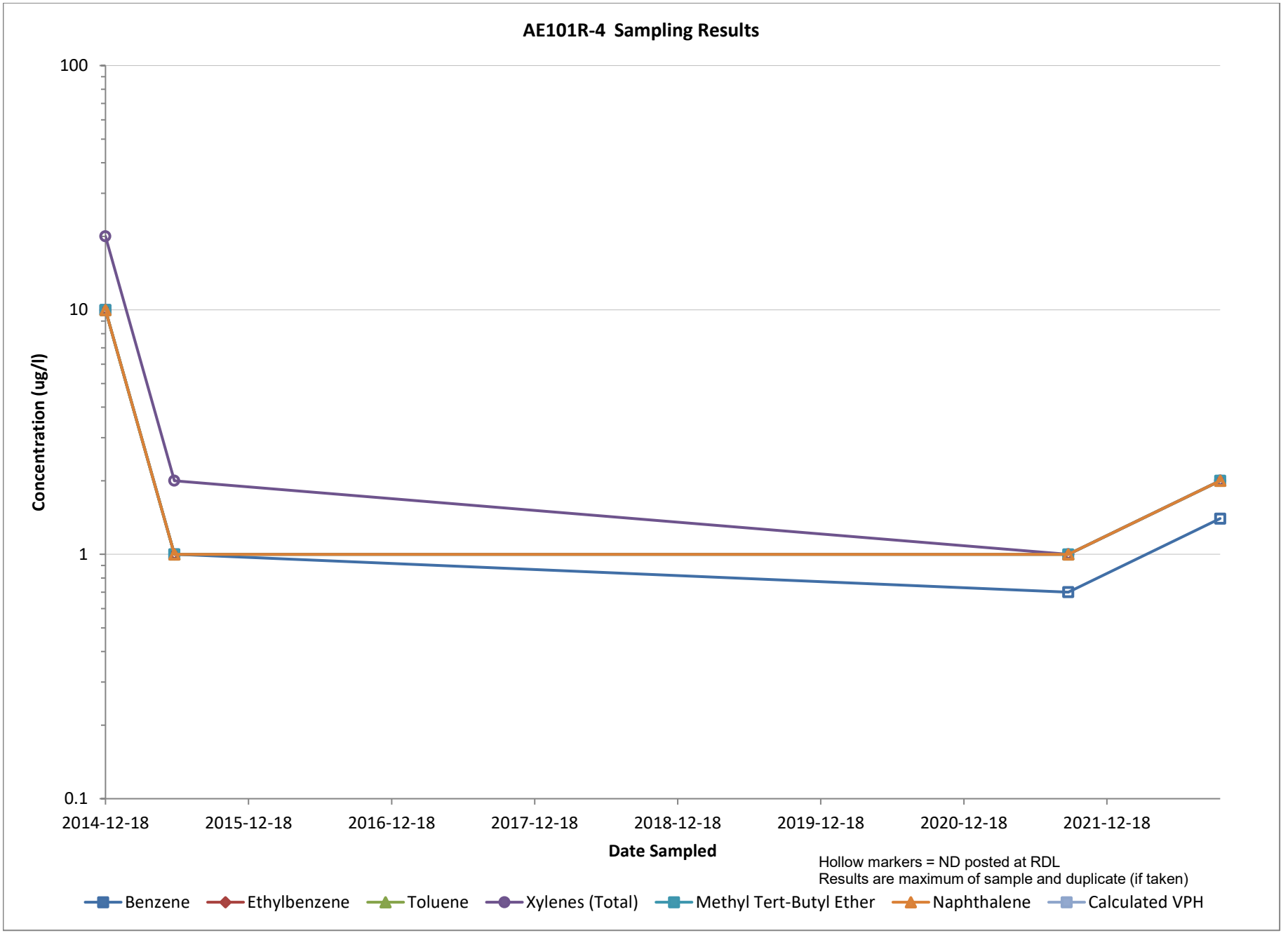

AE100R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

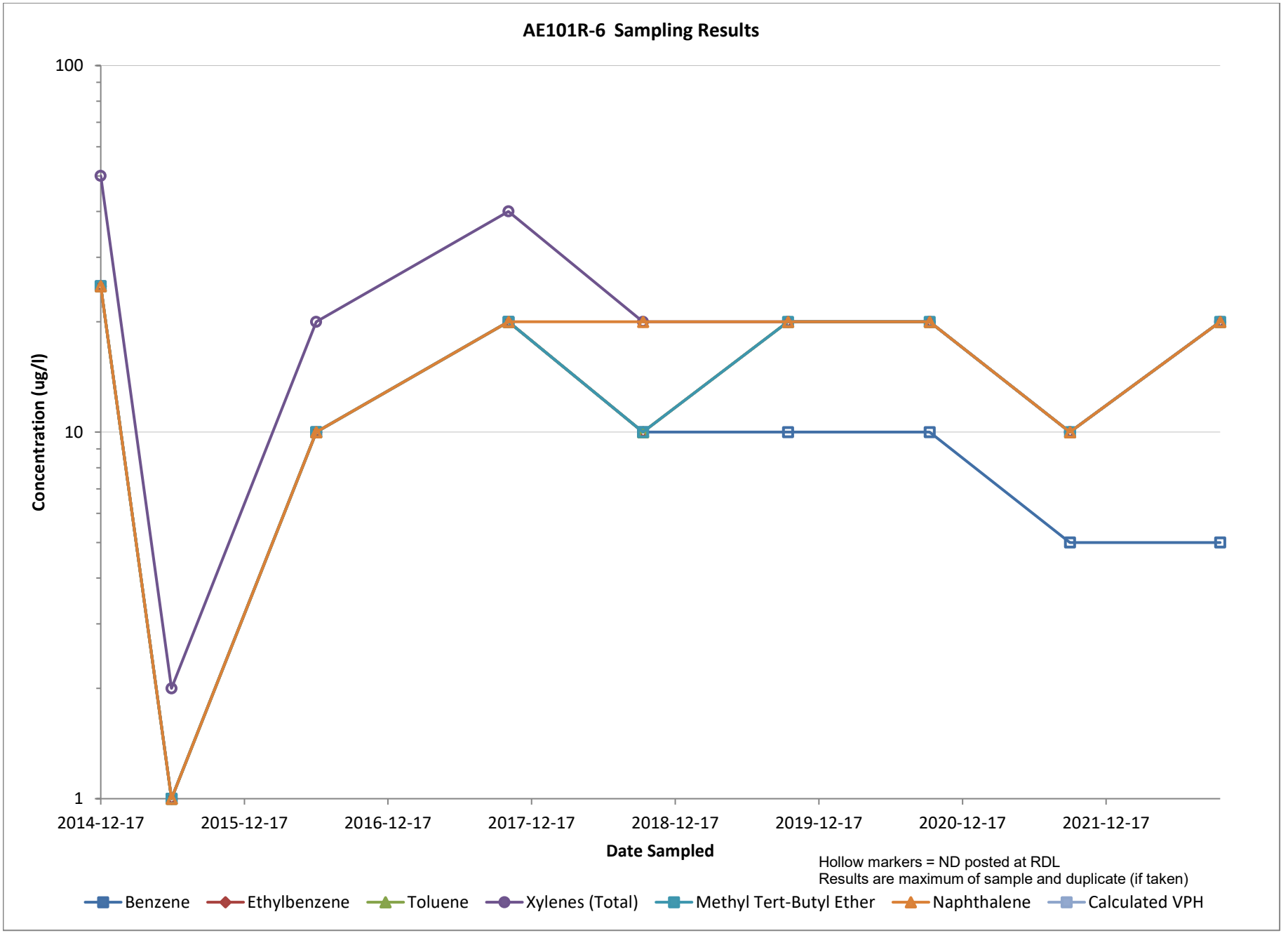

AE100R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

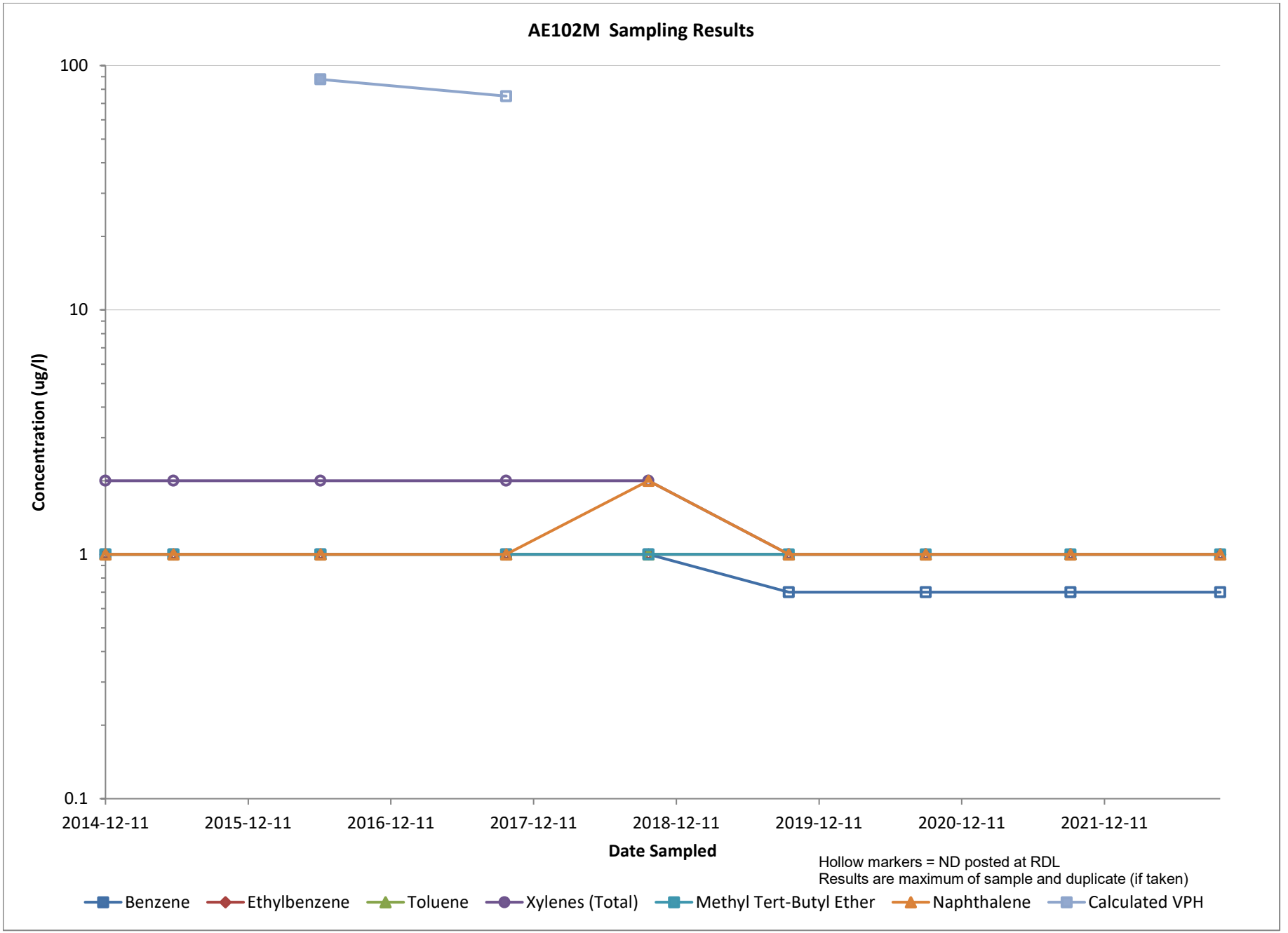

AE100R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

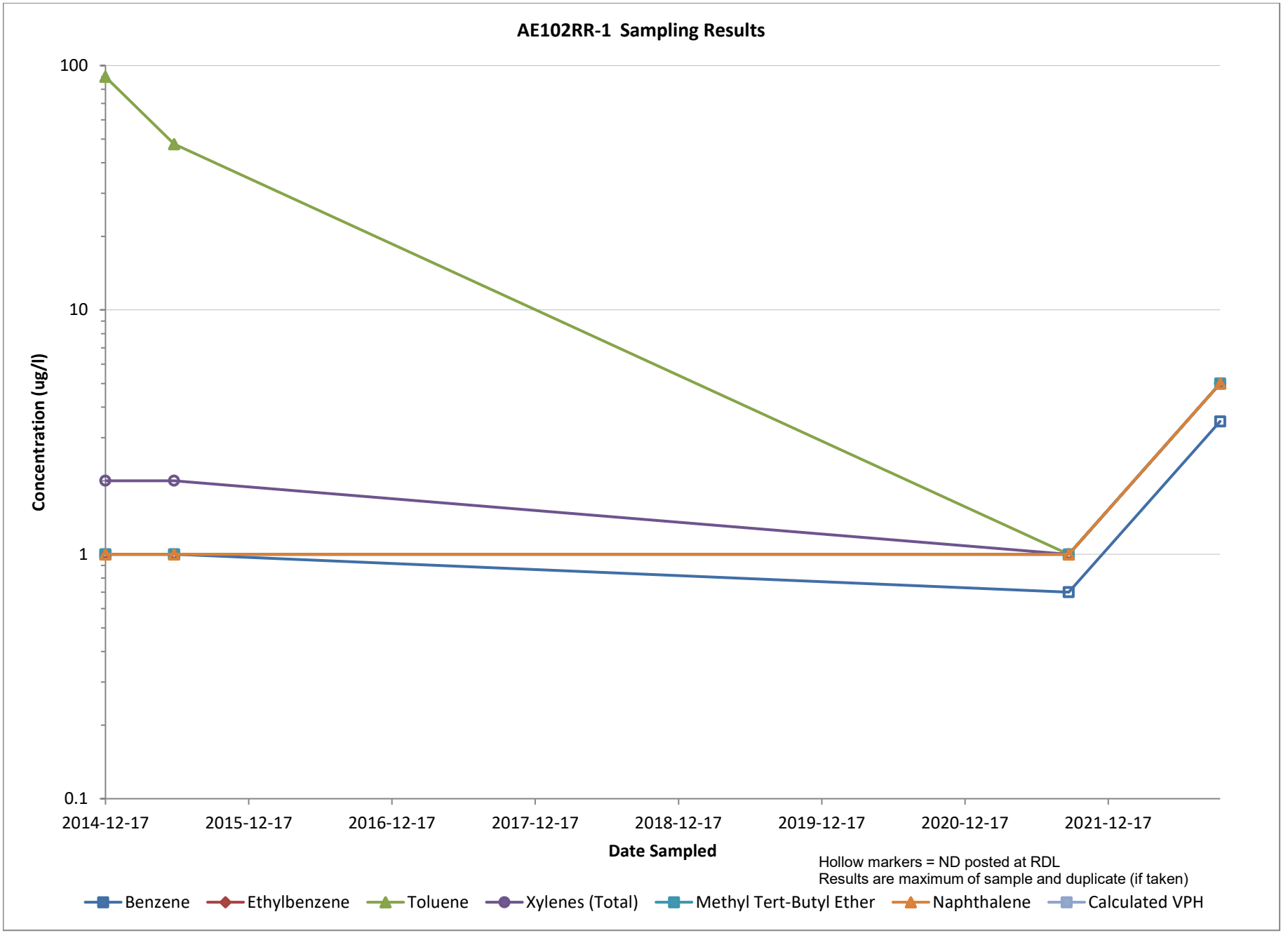

AE101D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

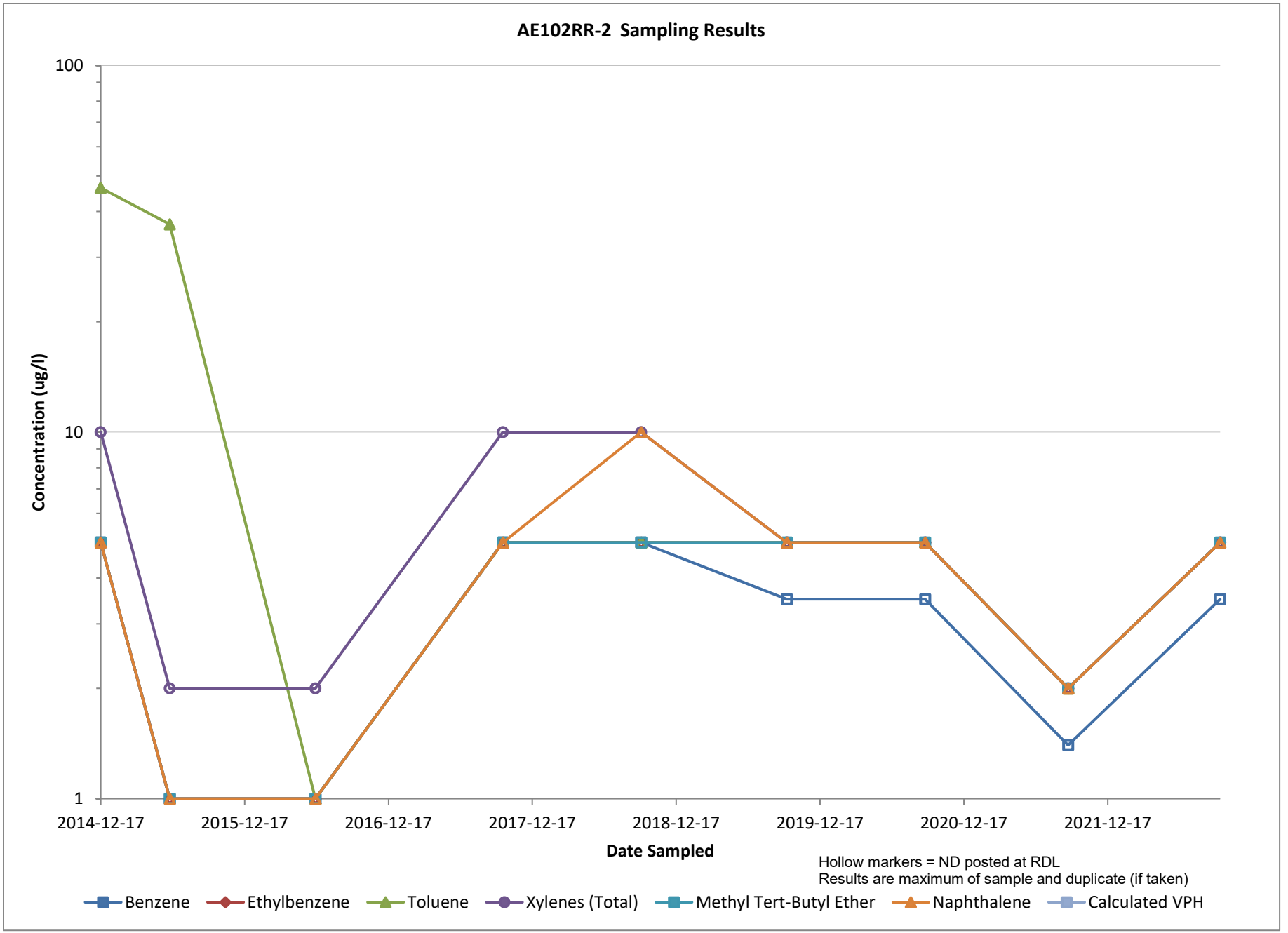

AE101R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

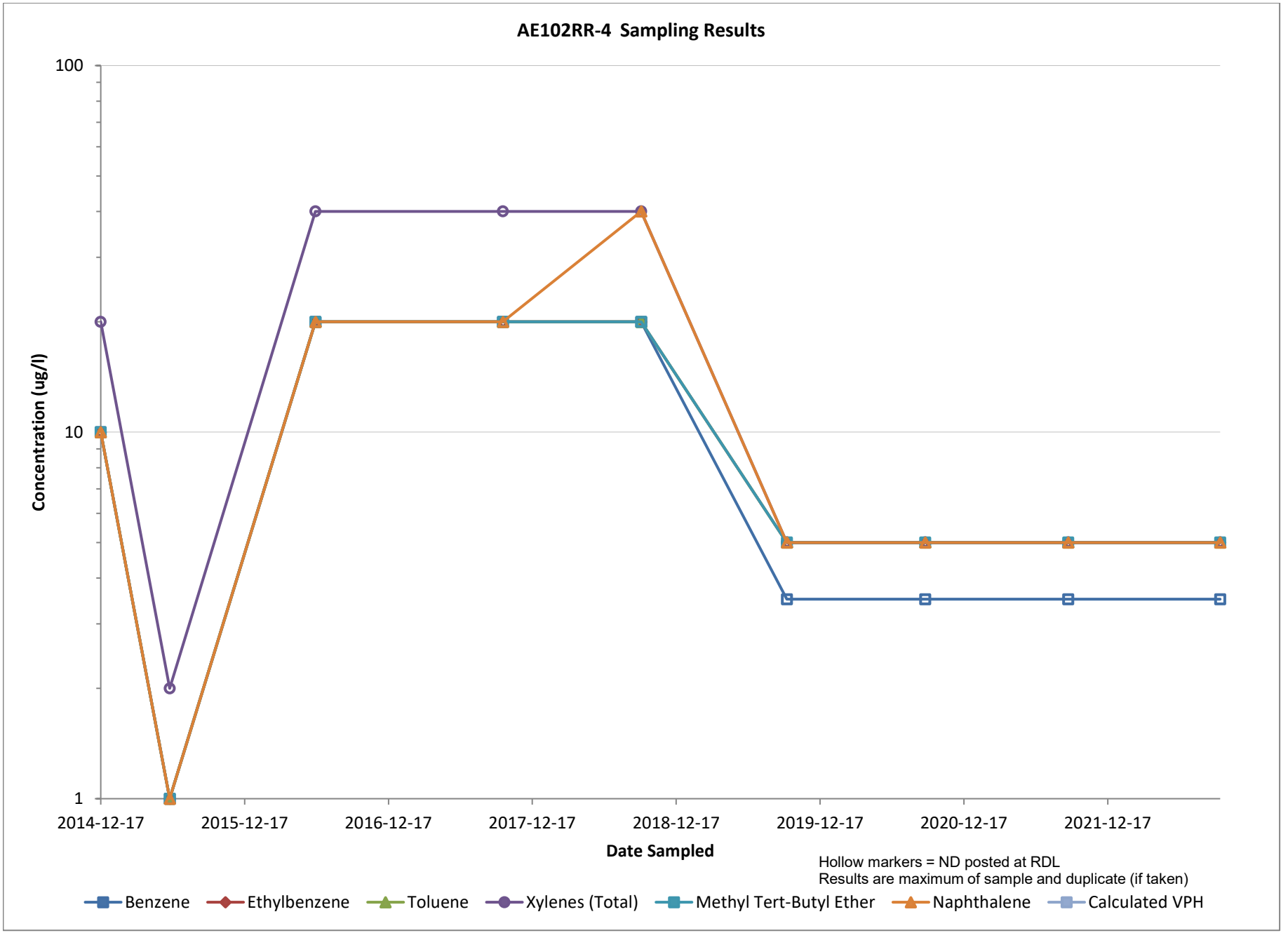

AE101R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

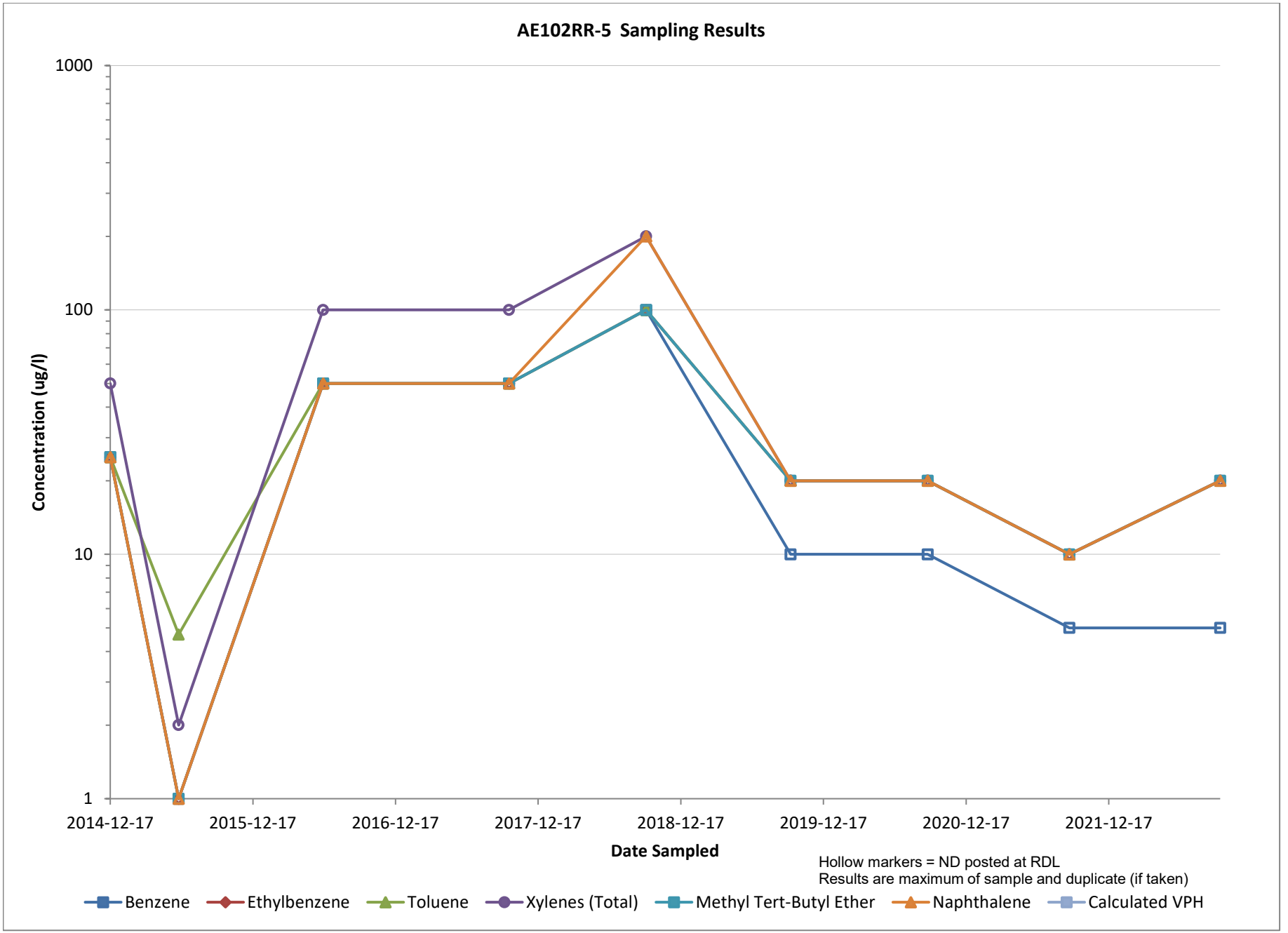

AE101R-6 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

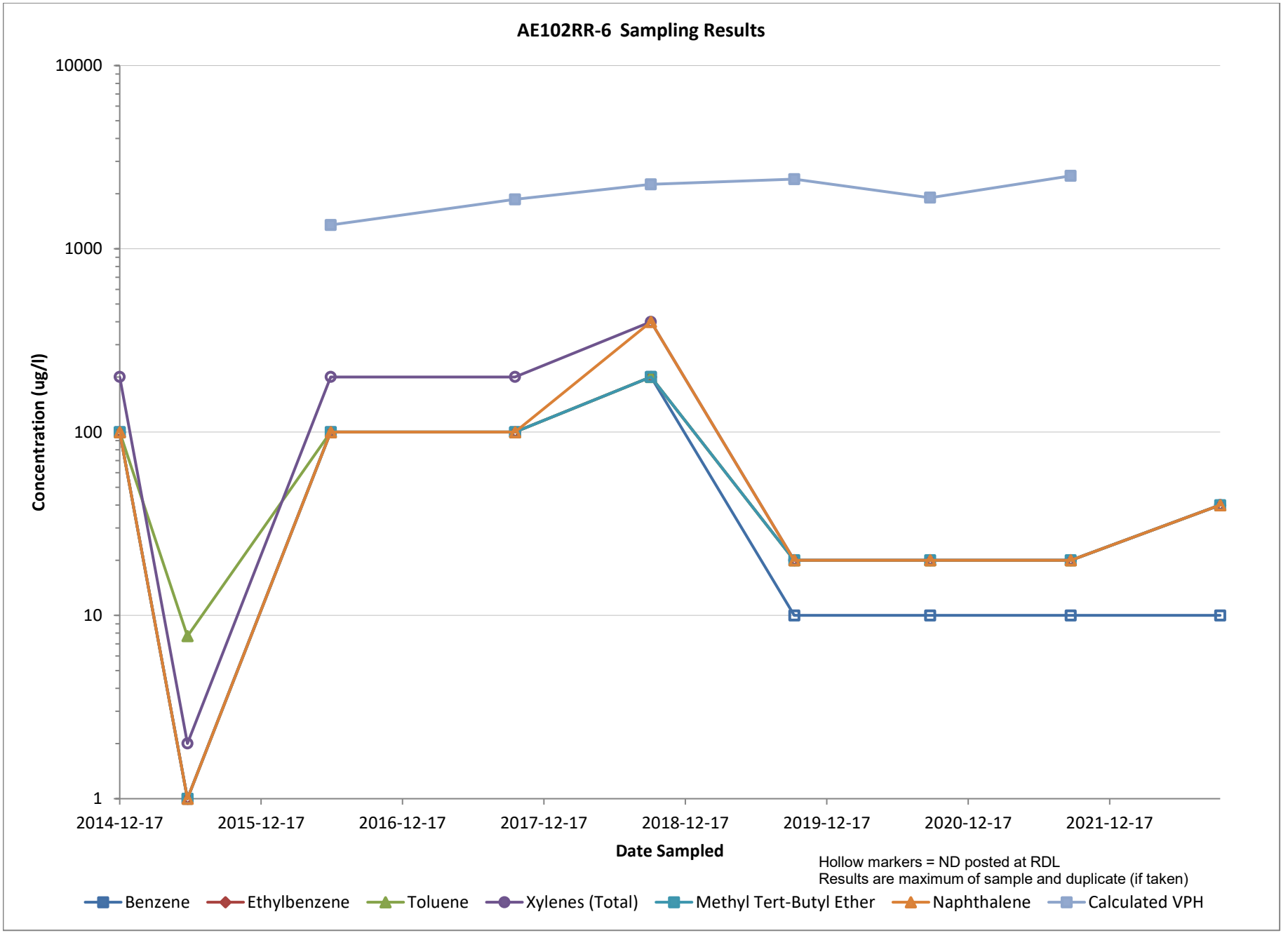

AE102M Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

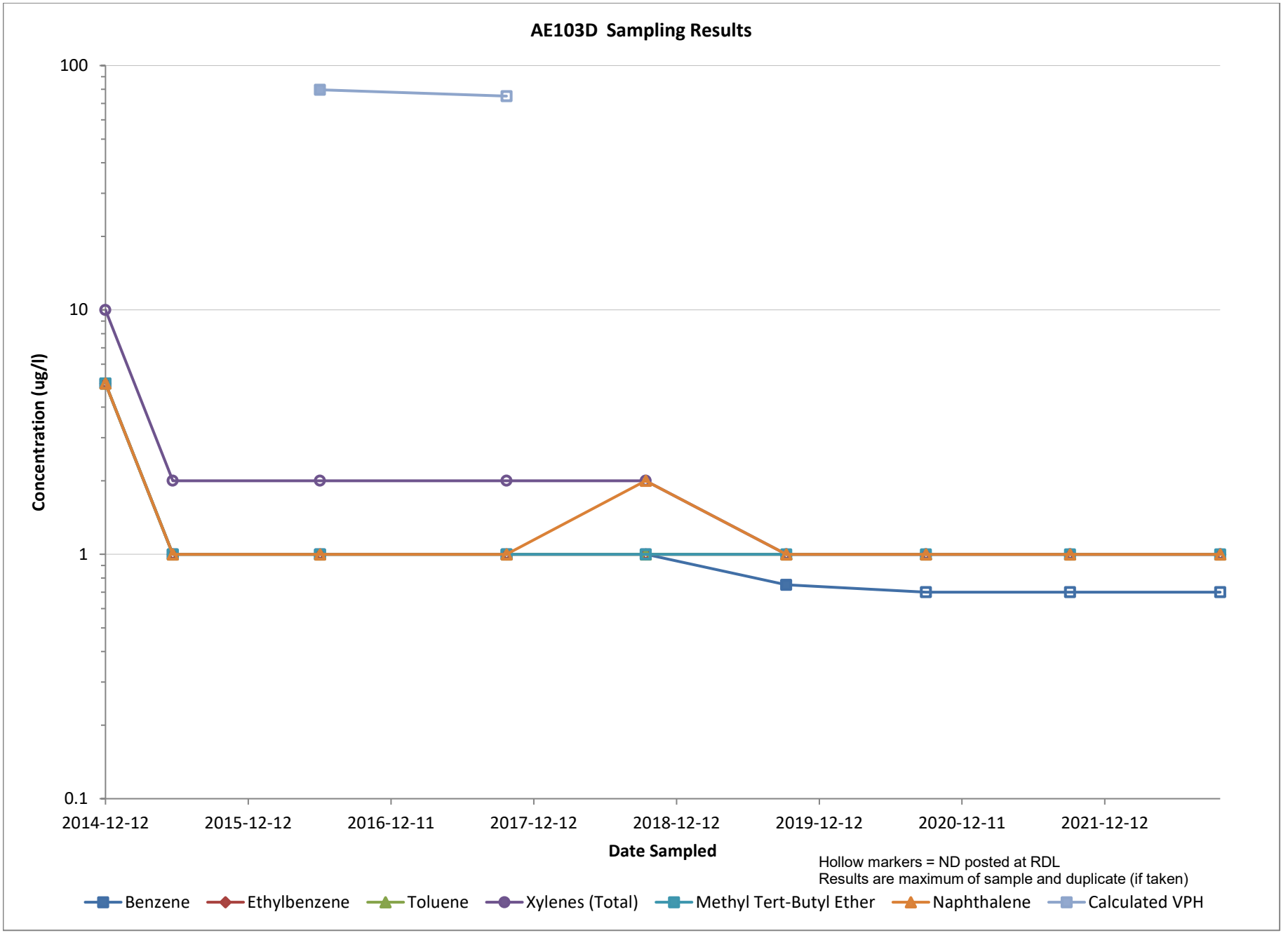

AE102RR-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

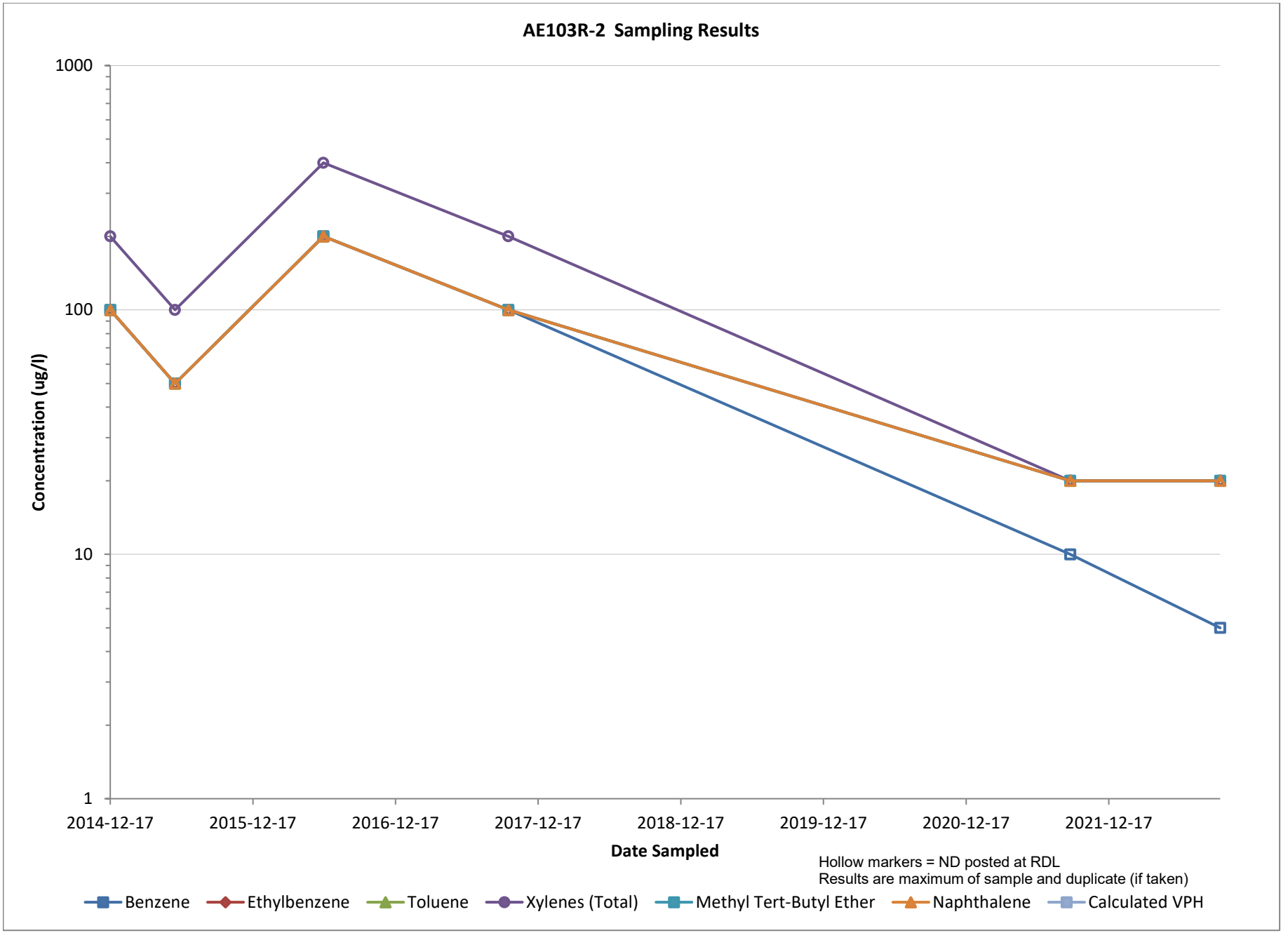

AE102RR-2 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

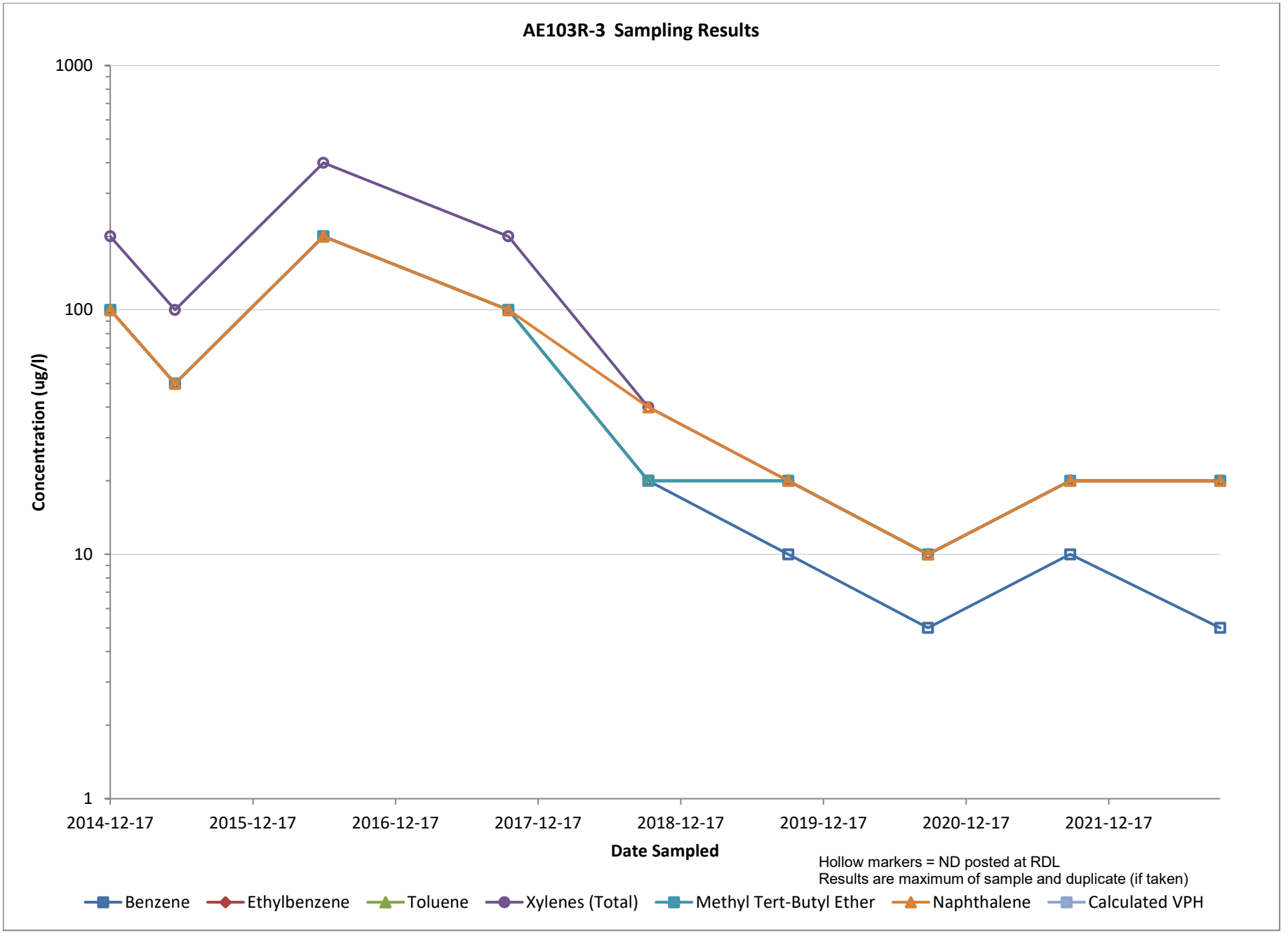

AE102RR-4 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

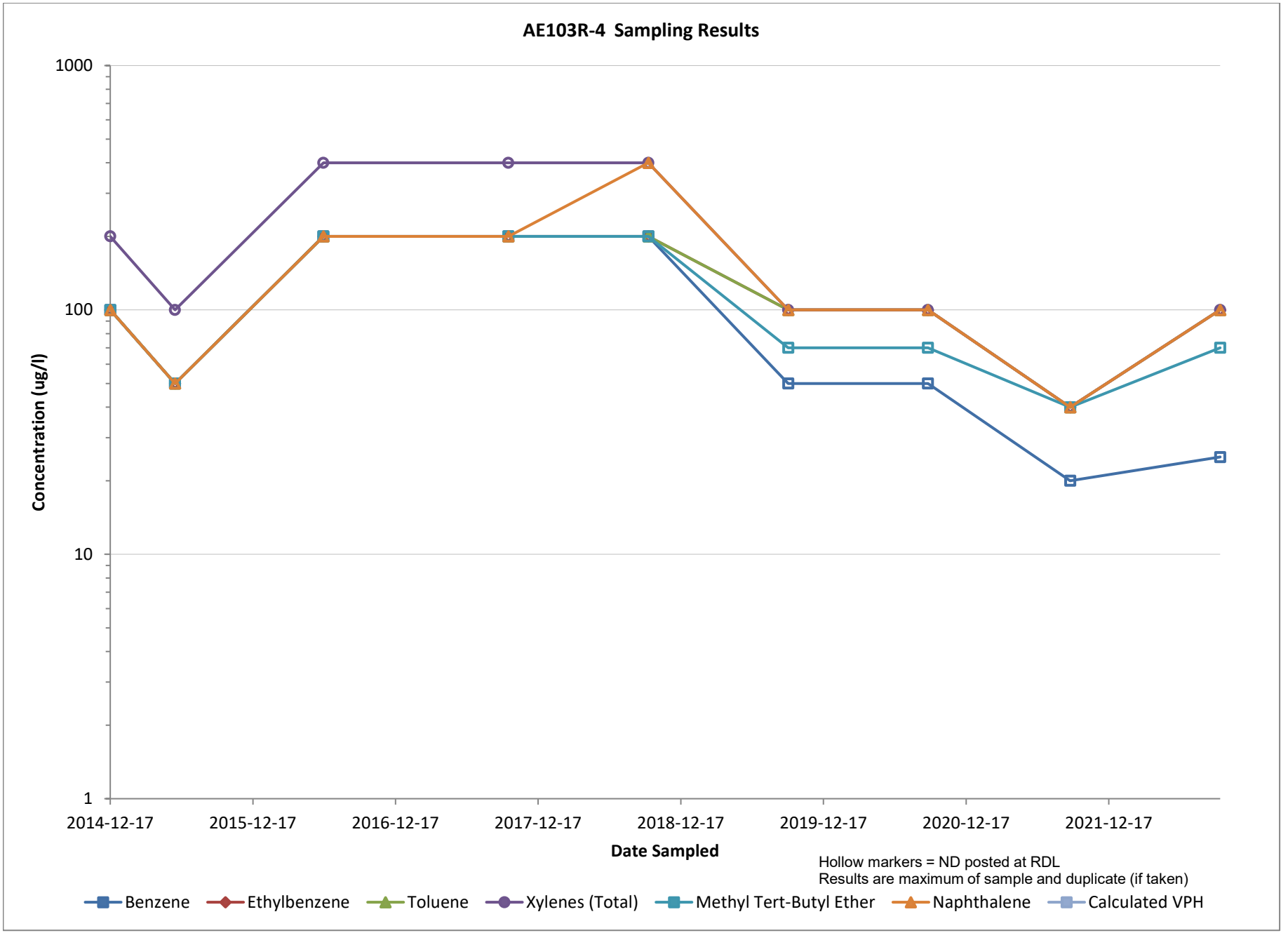

AE102RR-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

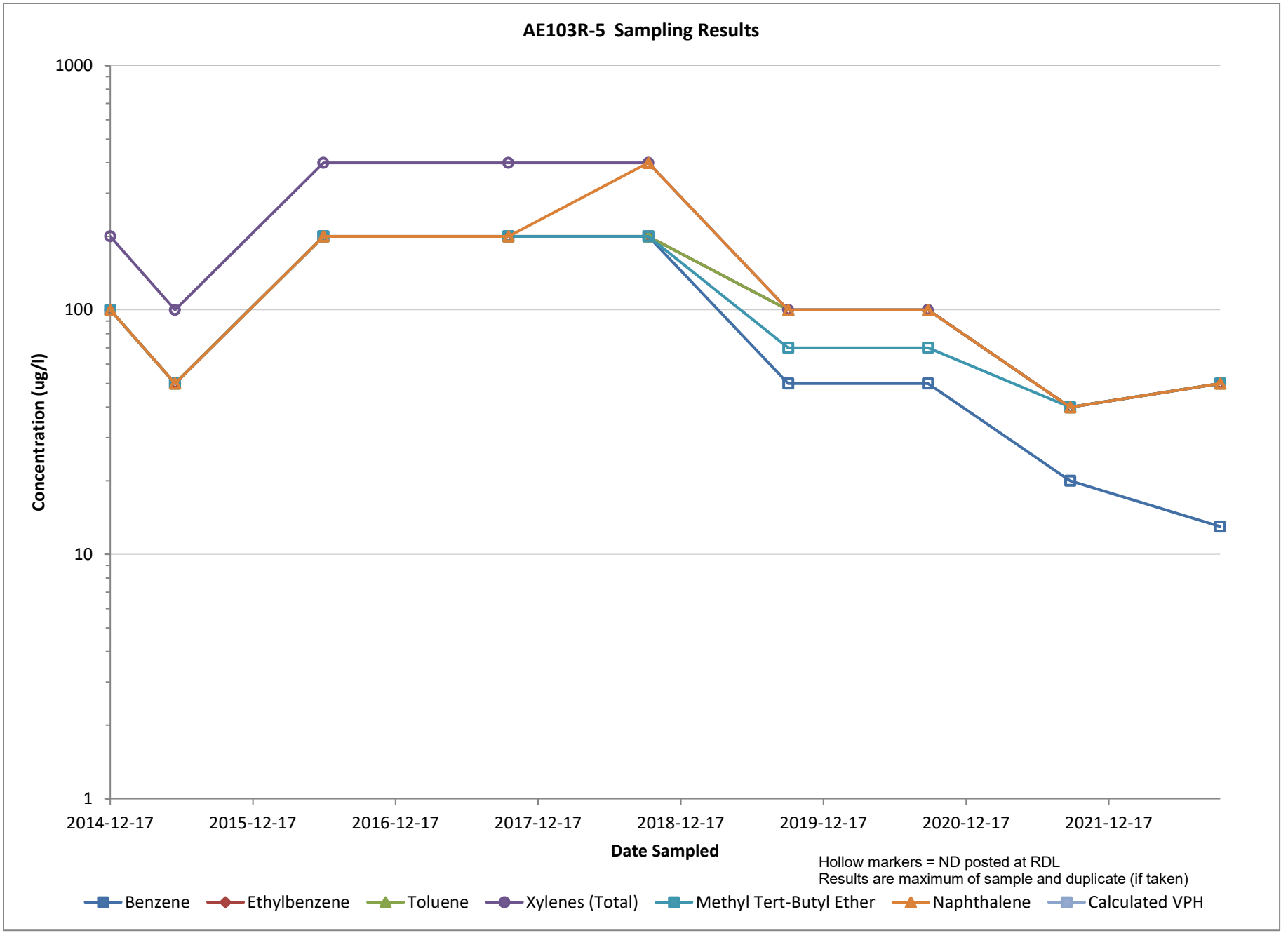

AE102RR-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

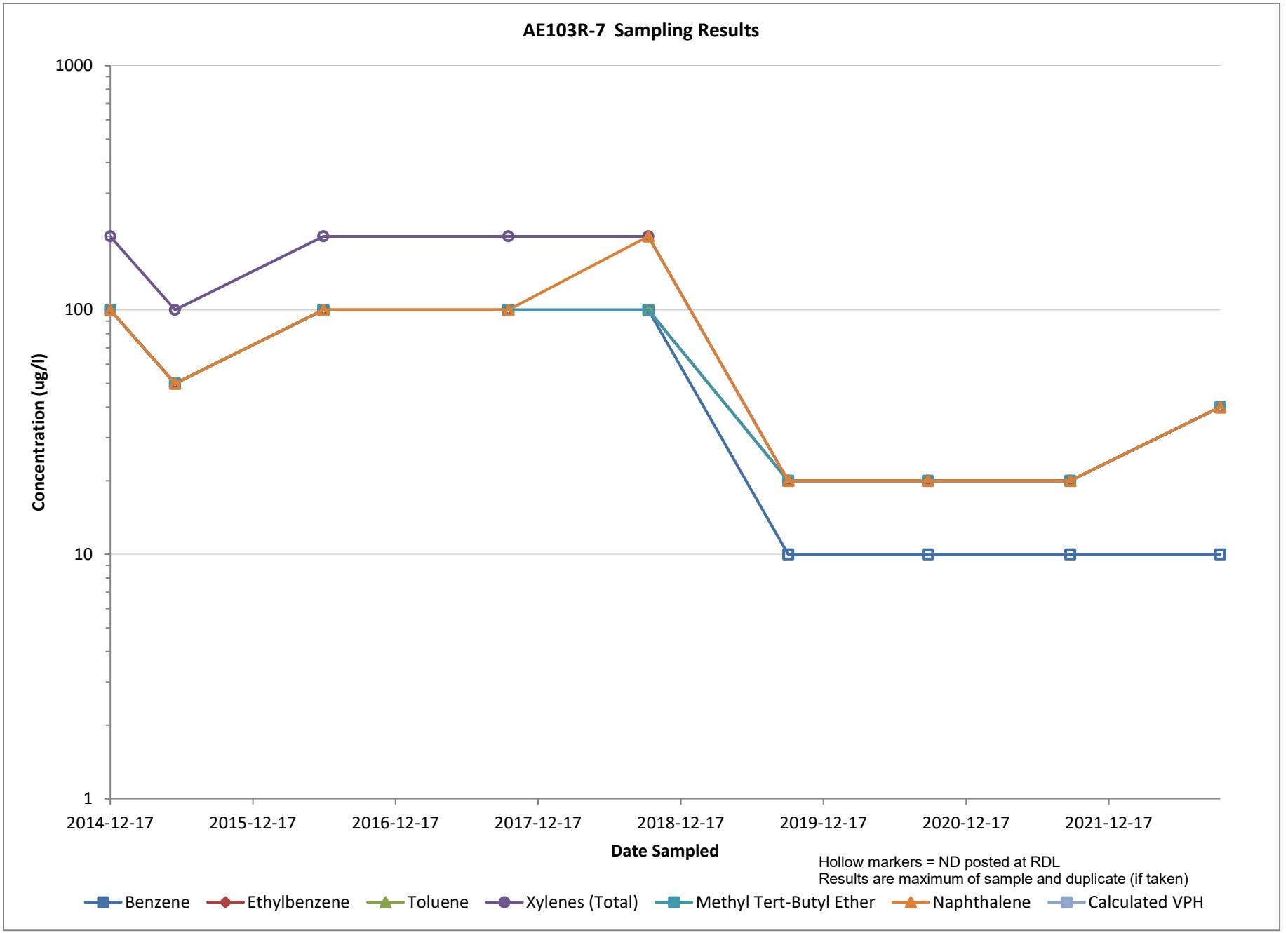

AE103D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
2021-12-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

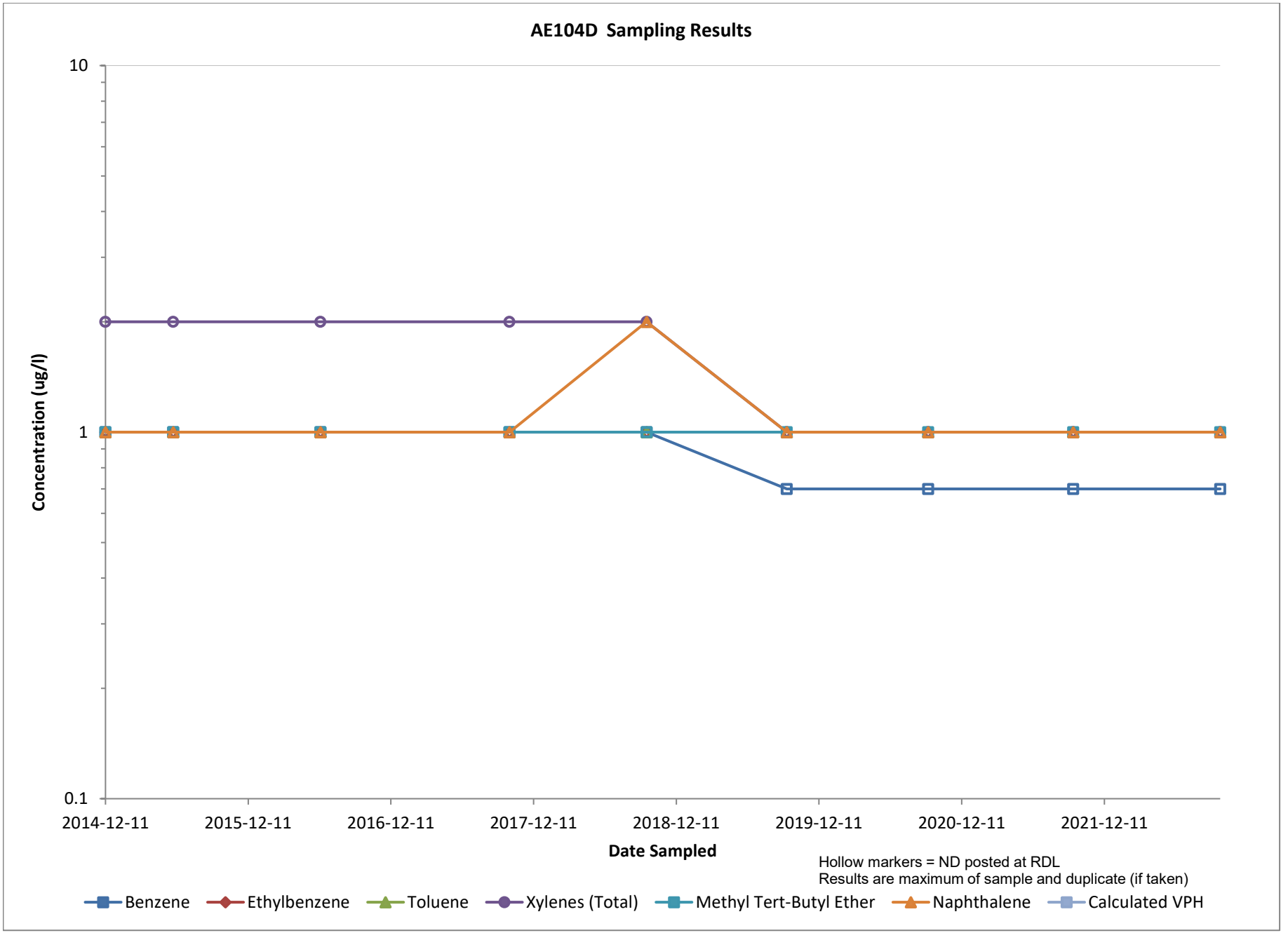

AE103R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

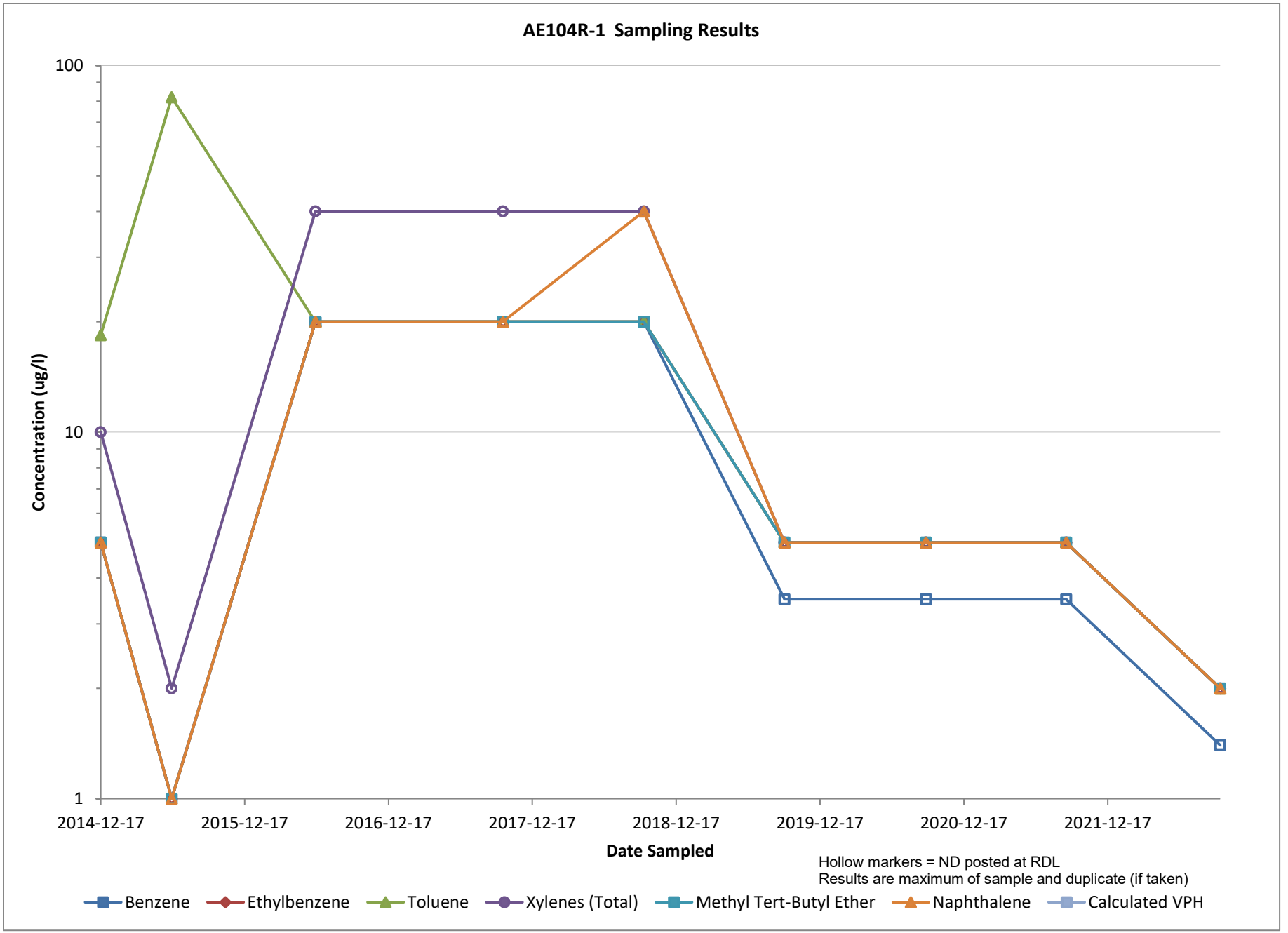

AE103R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

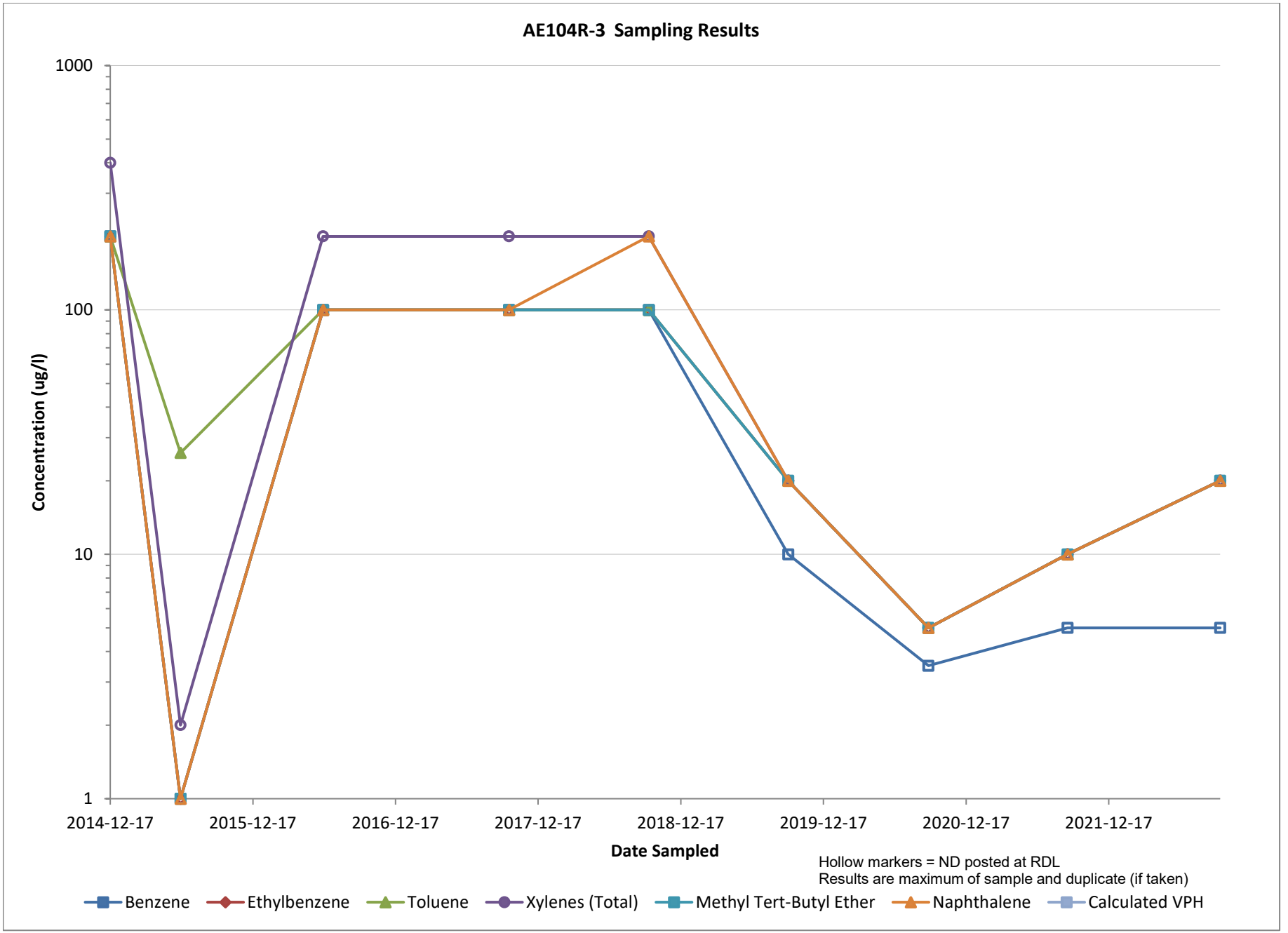

AE103R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

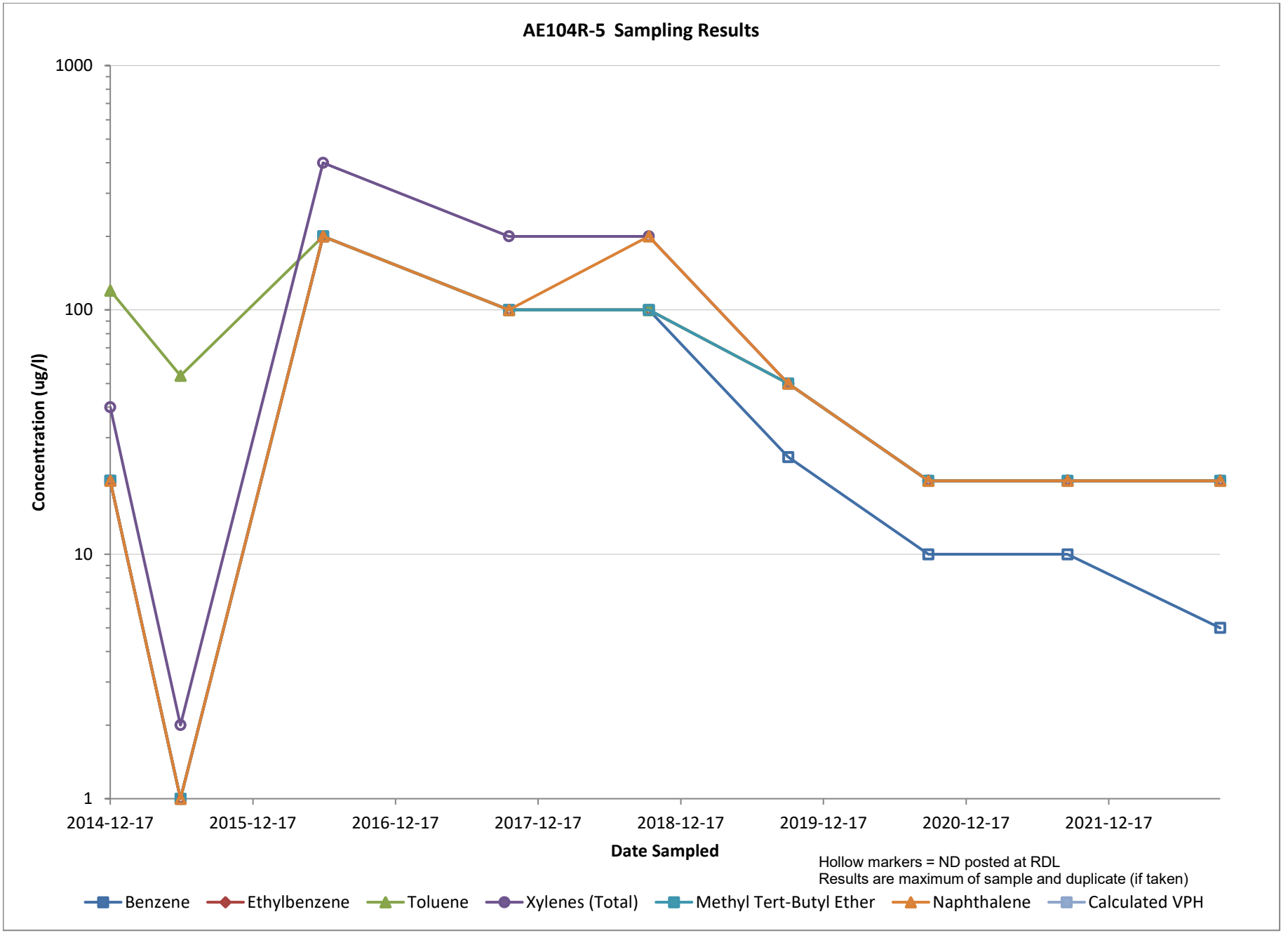

AE103R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

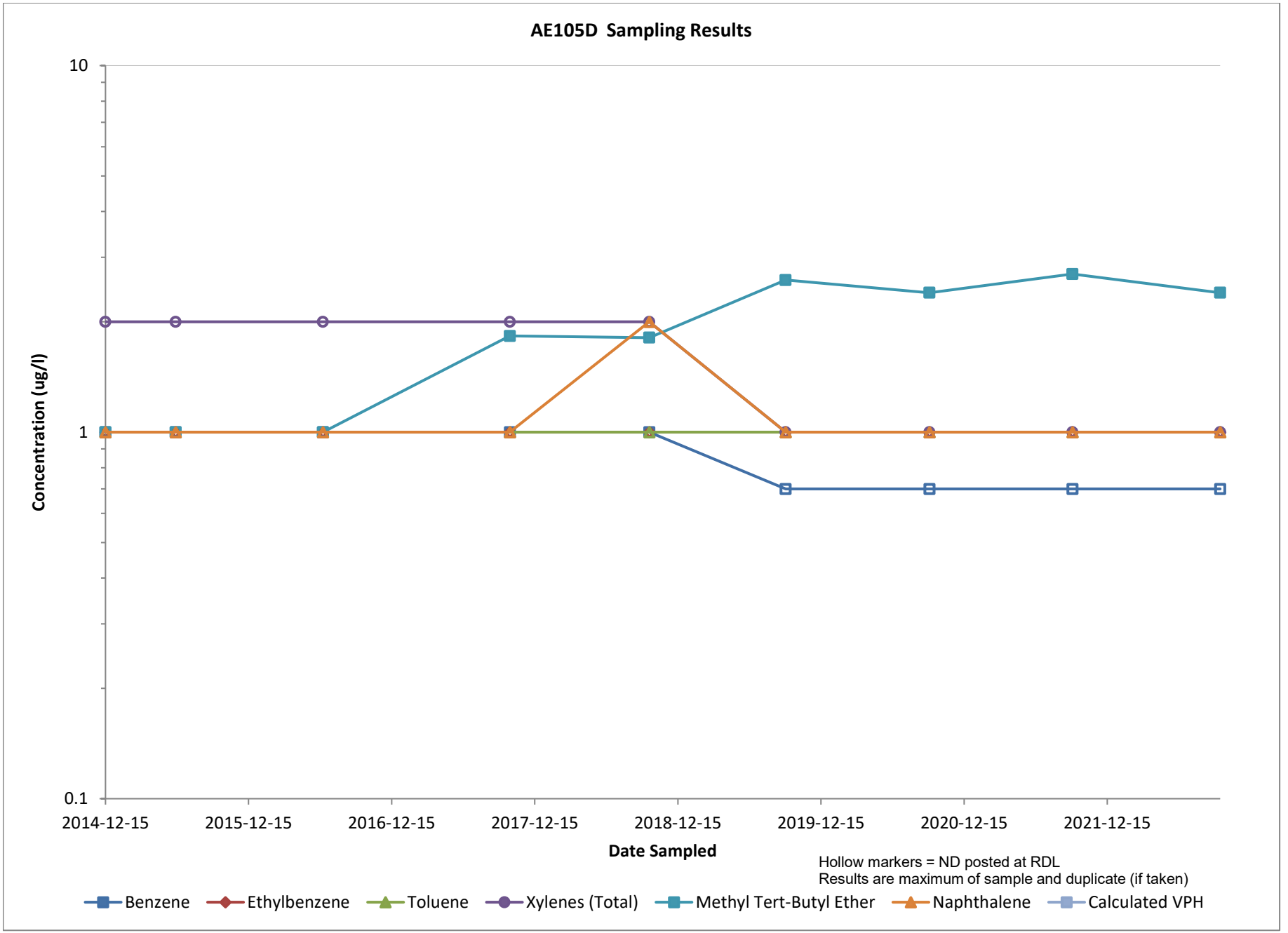

AE103R-7 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

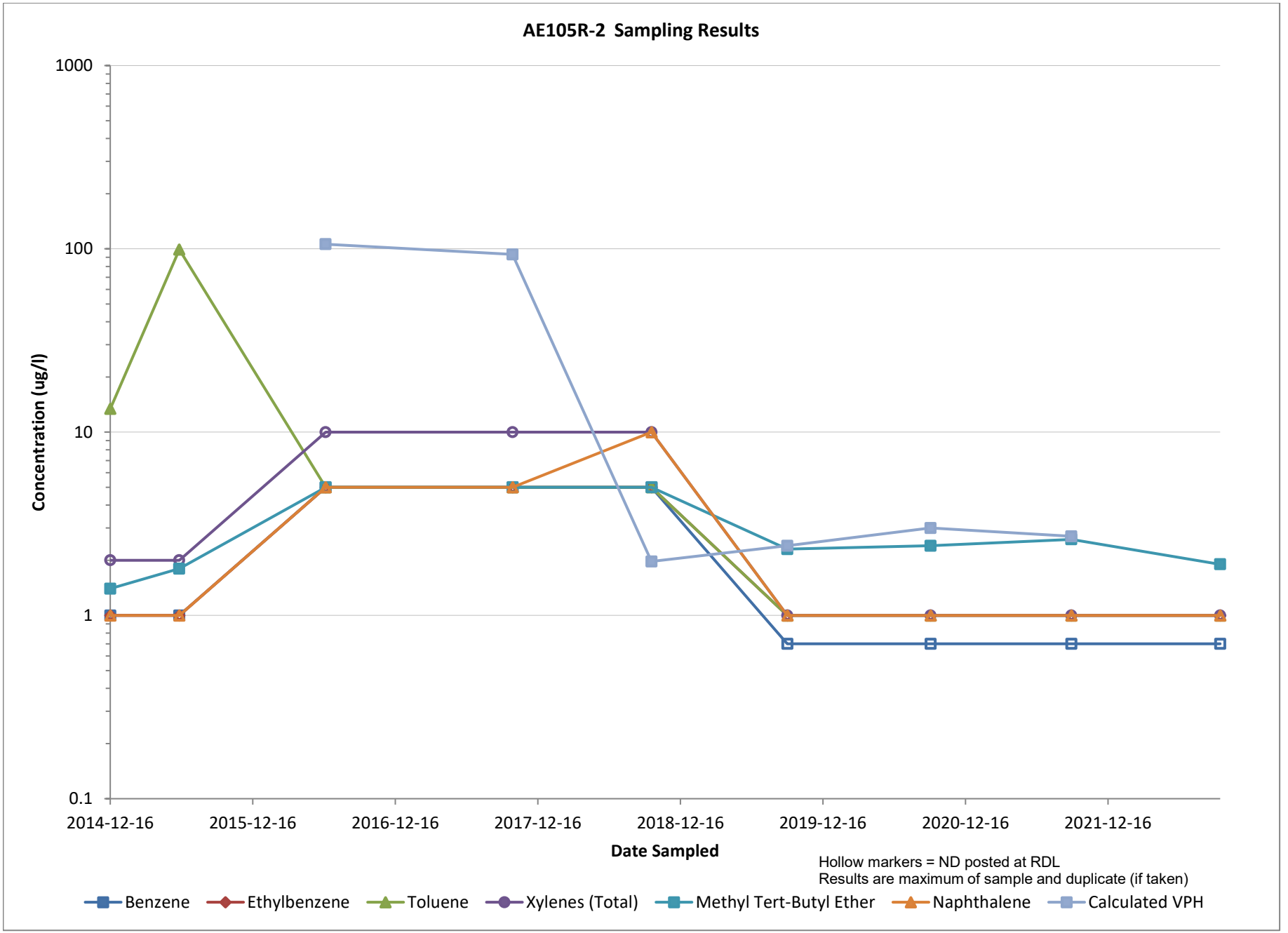

AE104D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

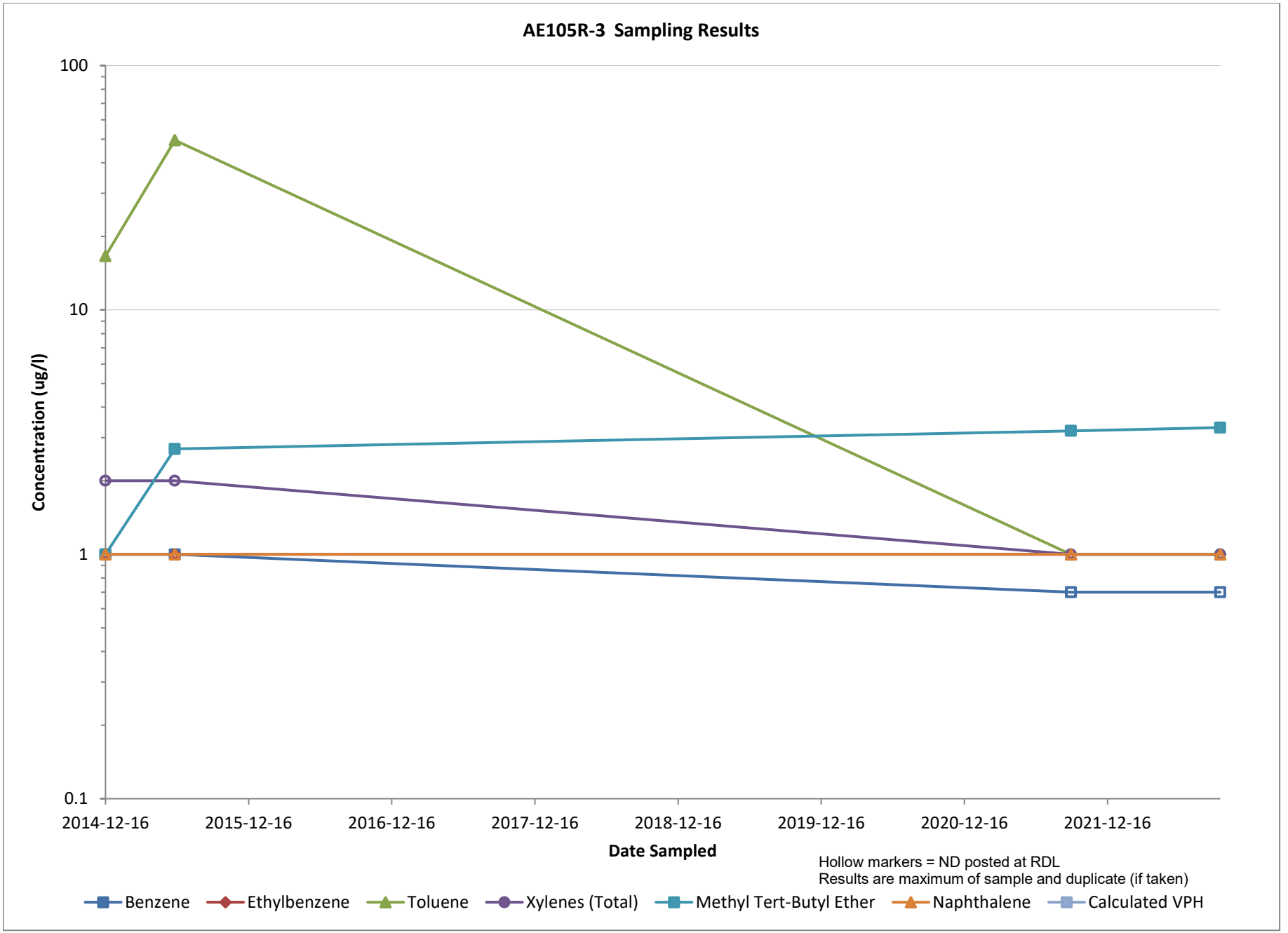

AE104R-1 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

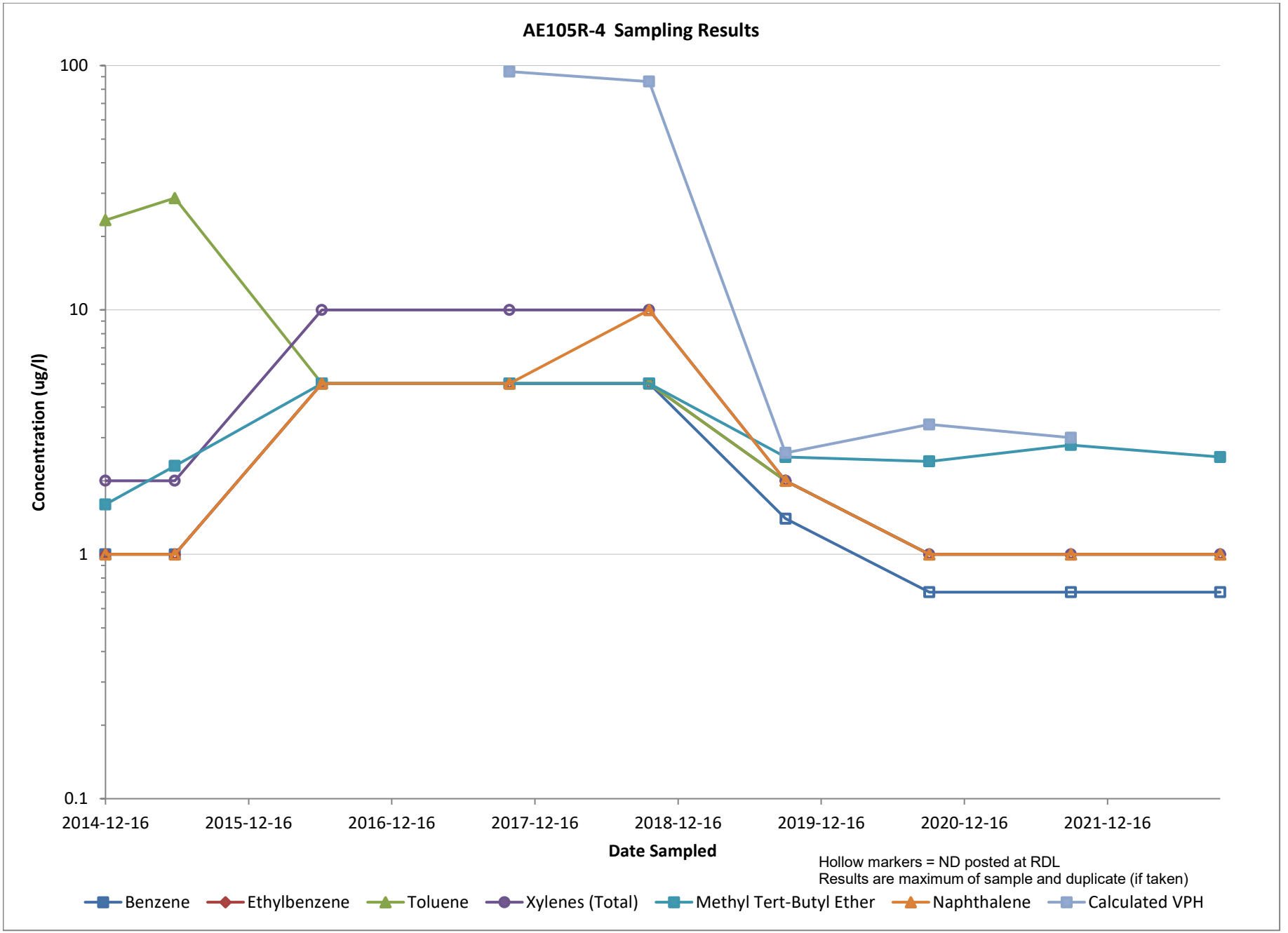

AE104R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

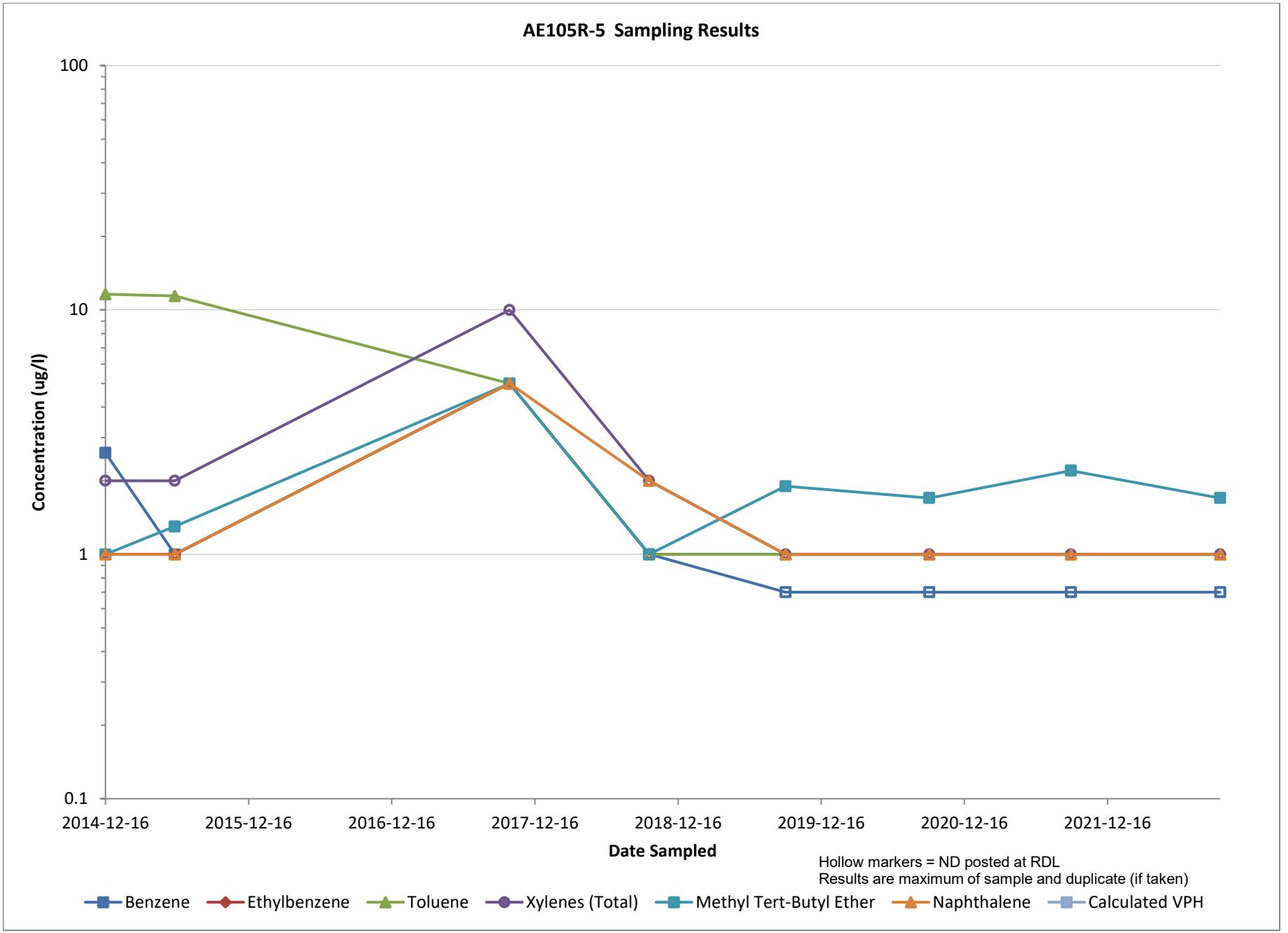

AE104R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

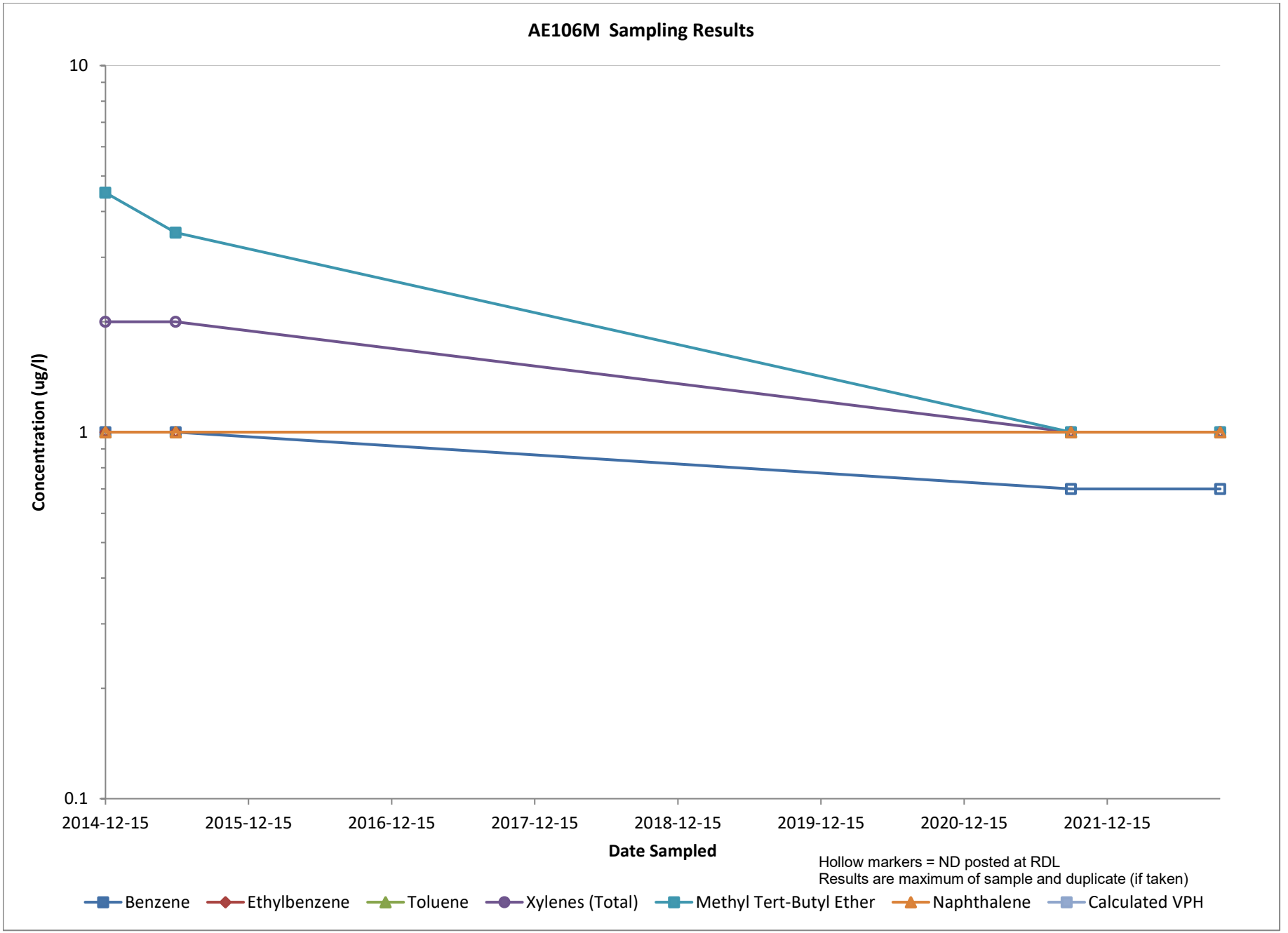

AE105D Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
2021-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

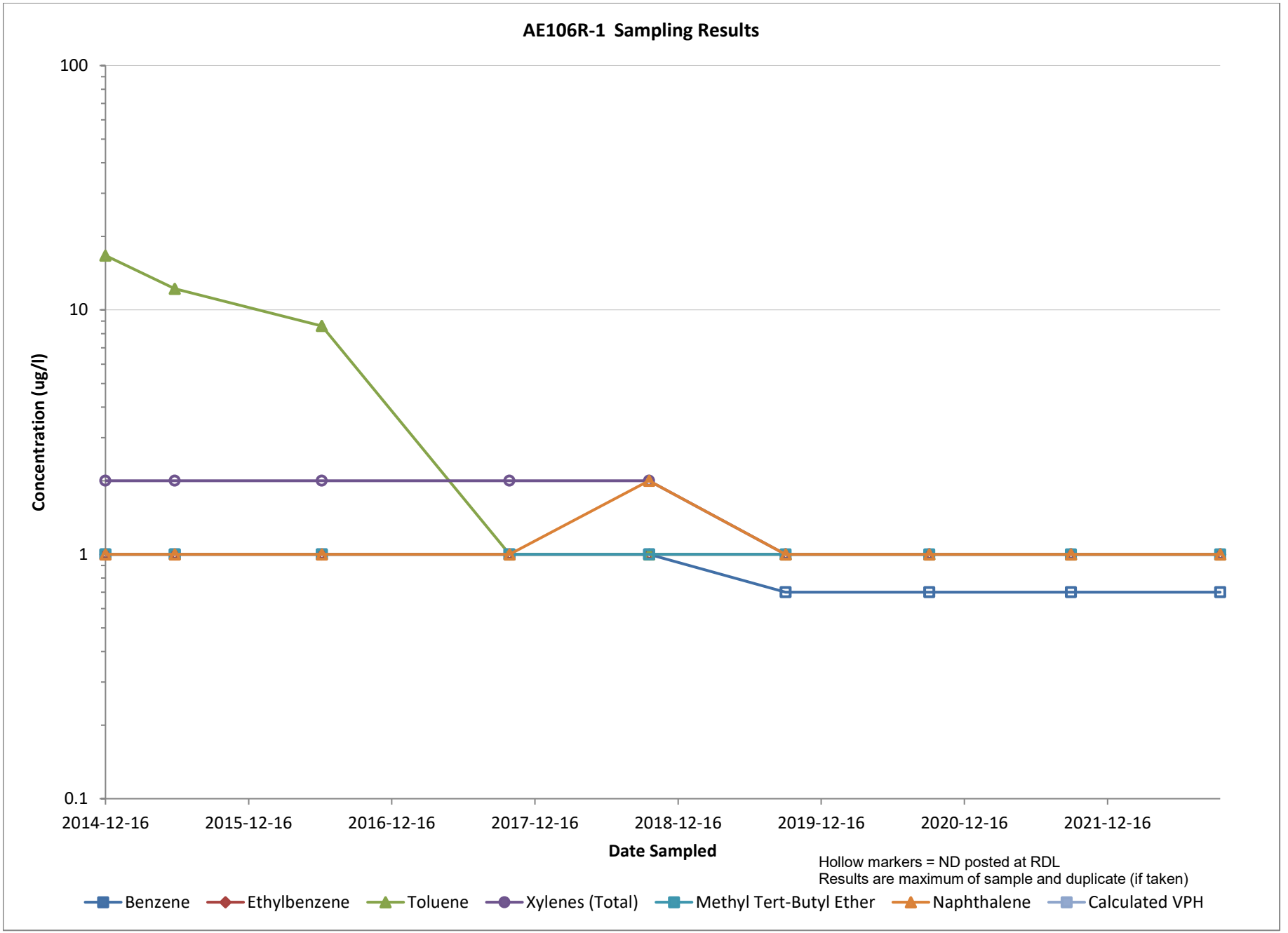

AE105R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

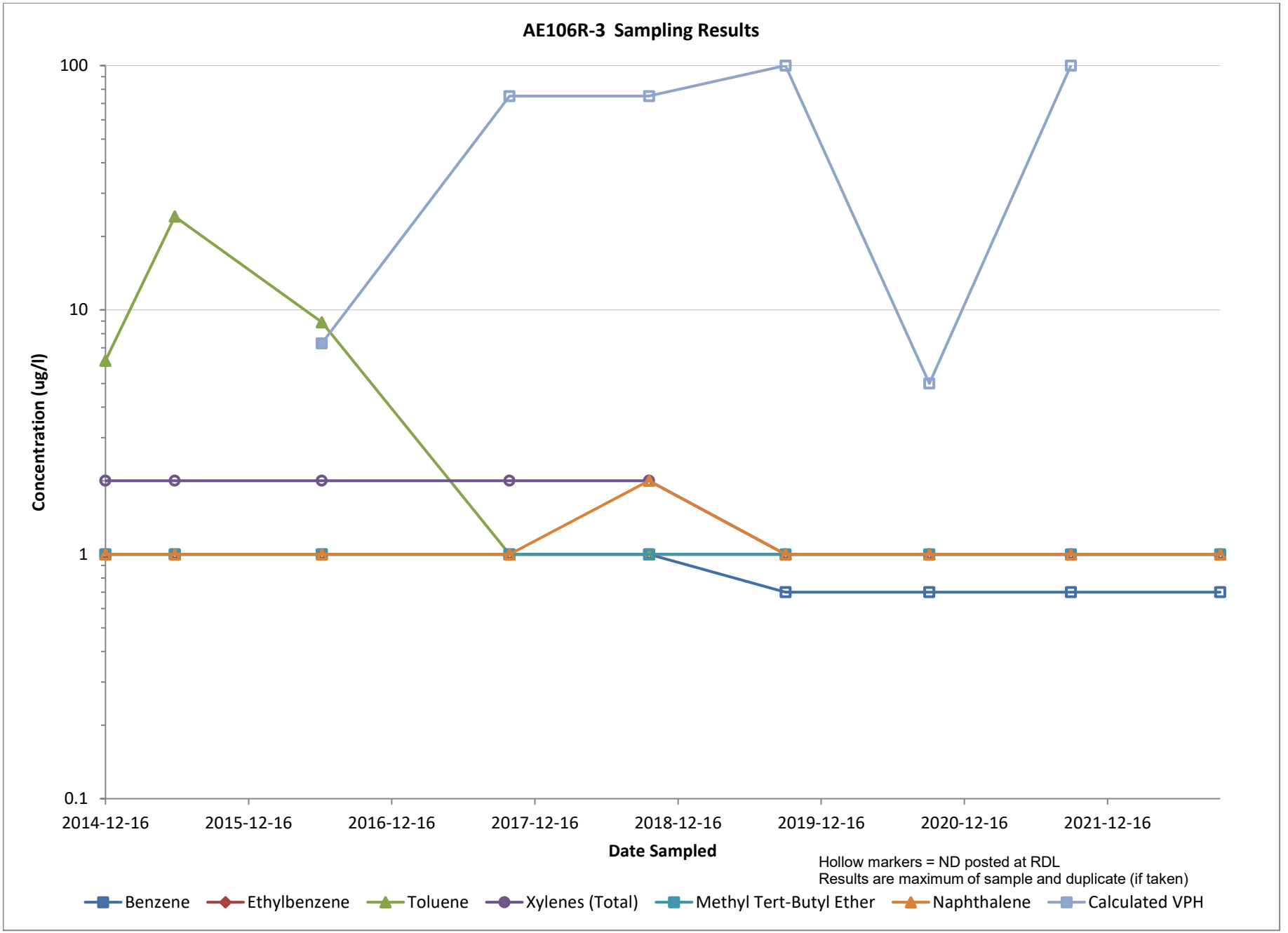

AE105R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

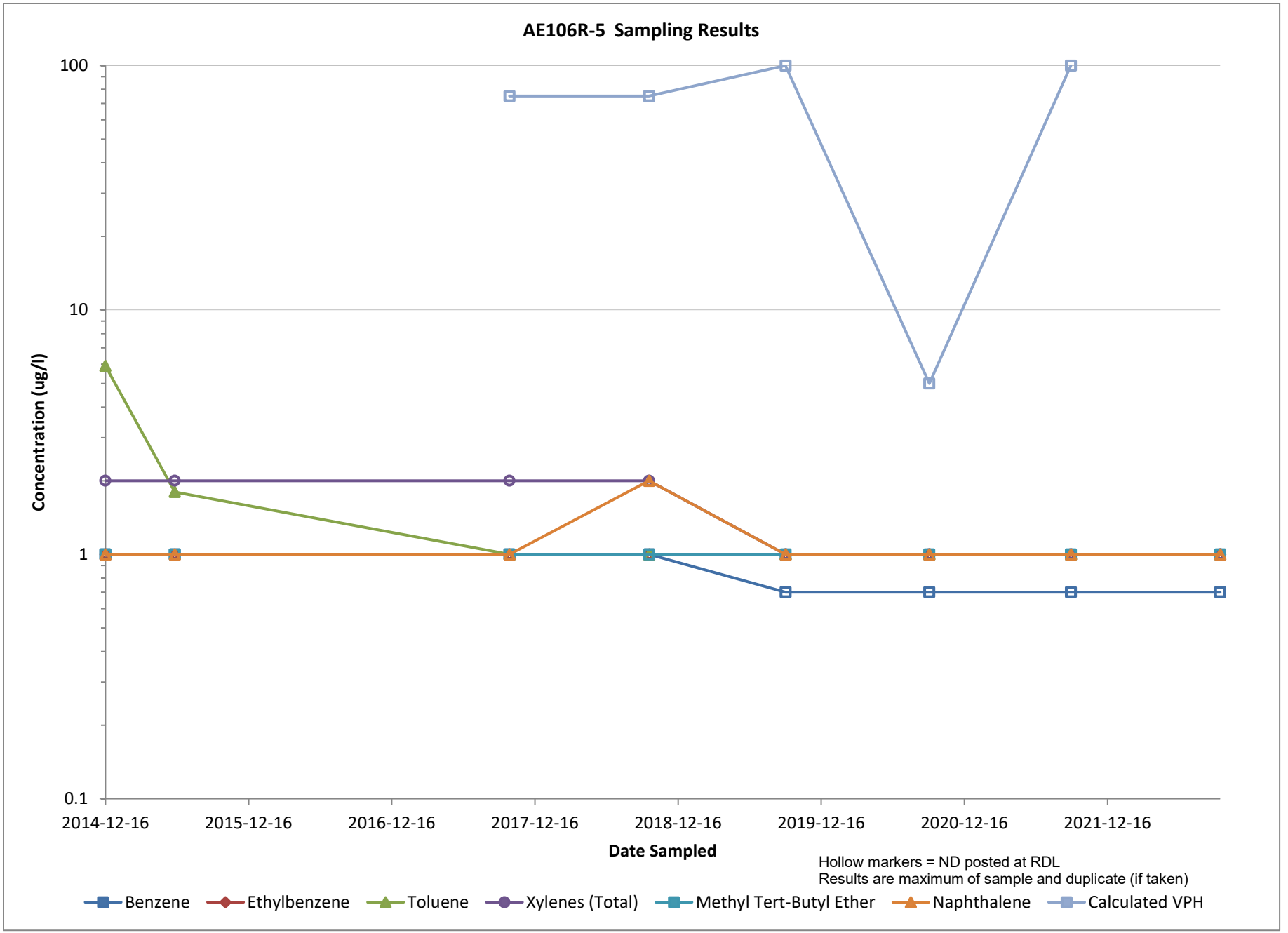

AE105R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

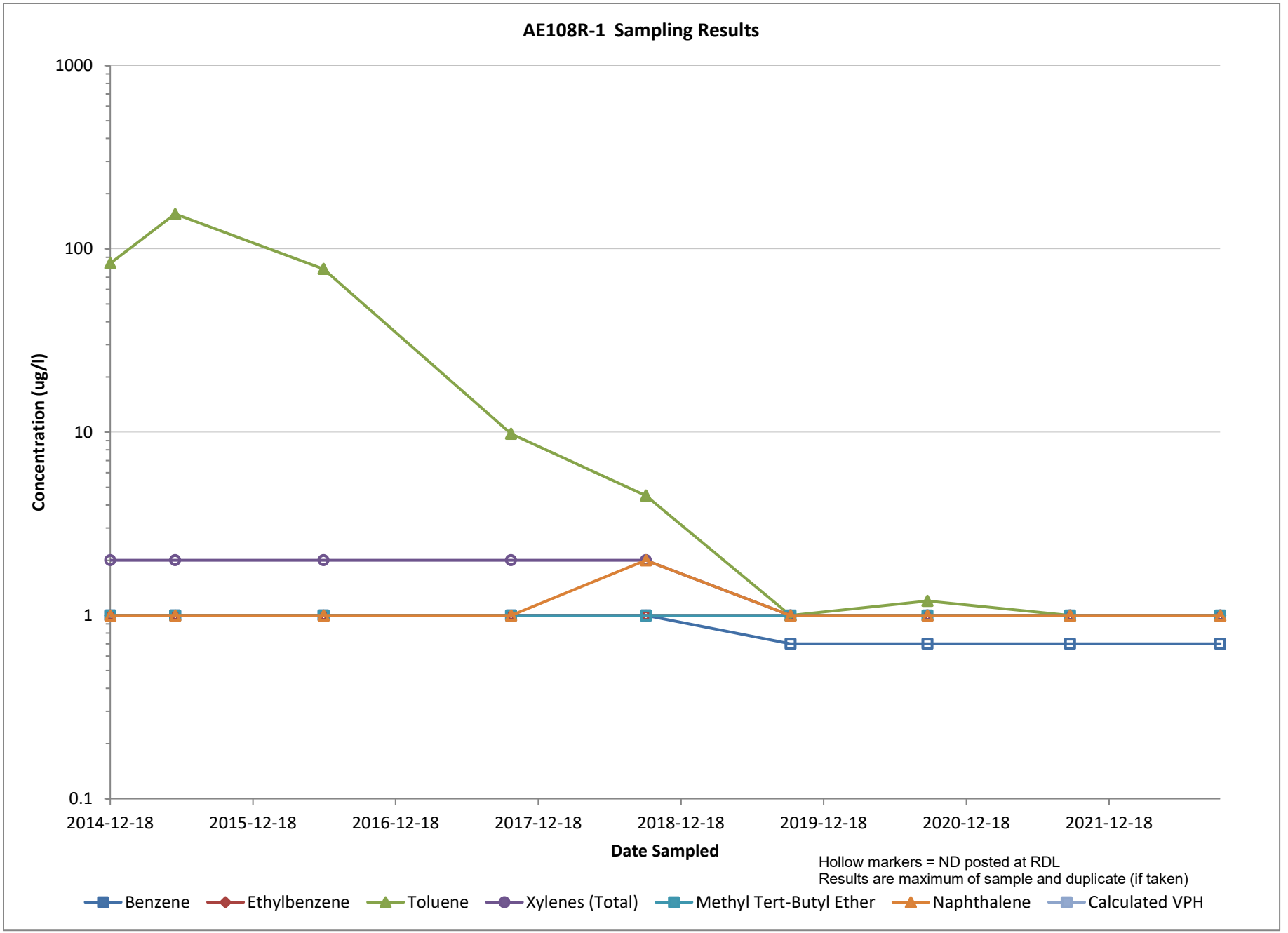

AE105R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

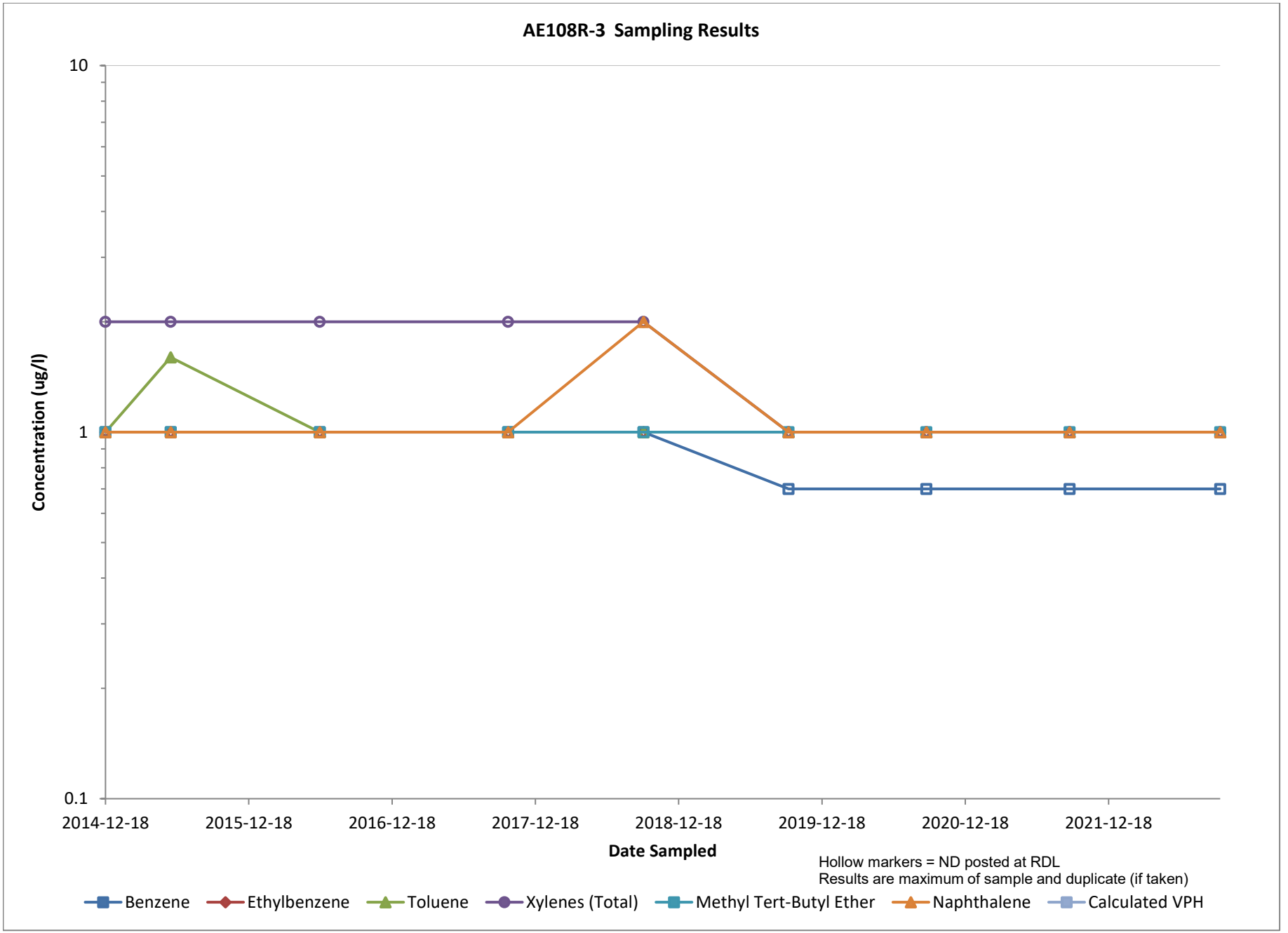

AE106M Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
2021-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

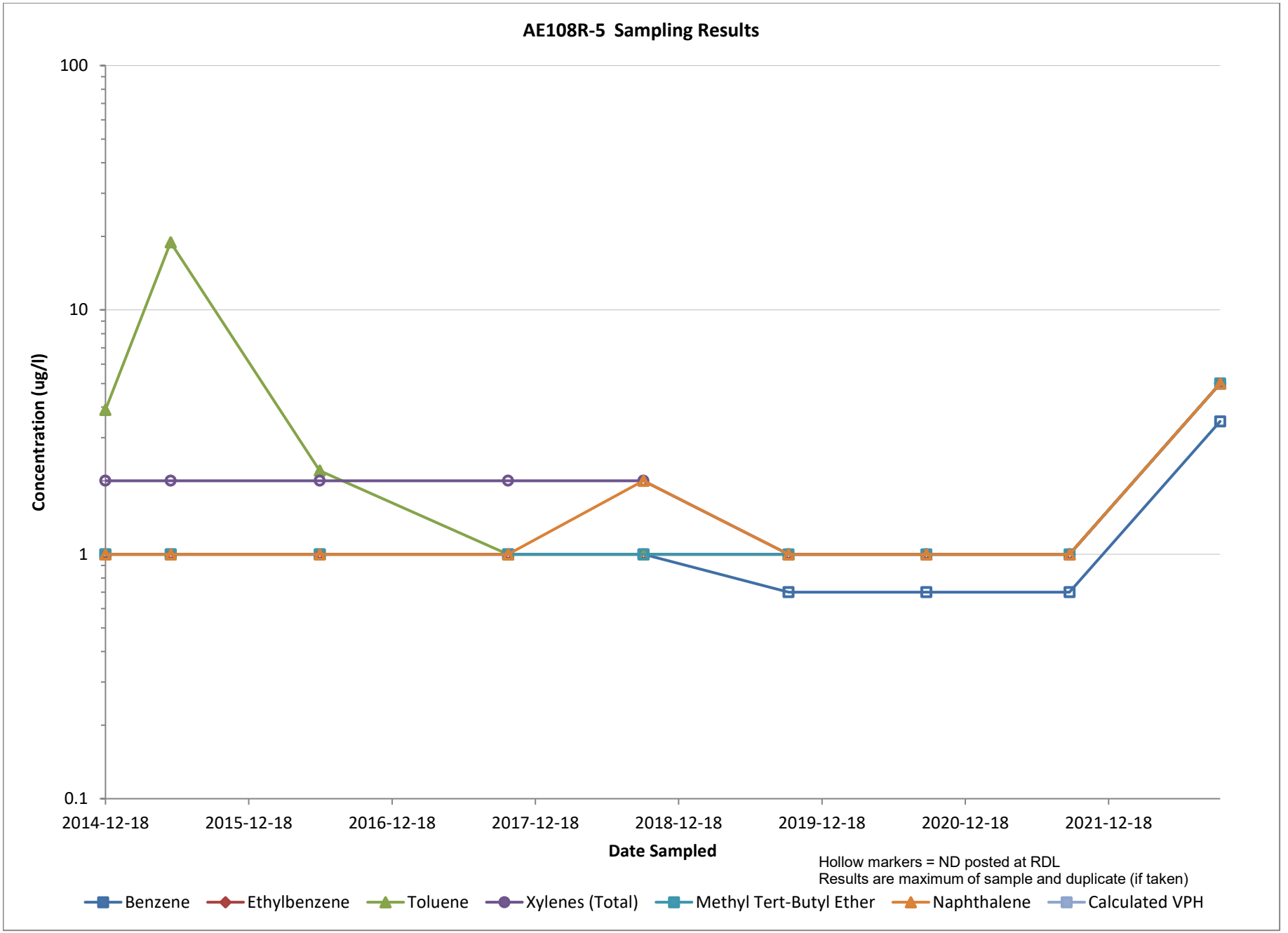

AE106R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

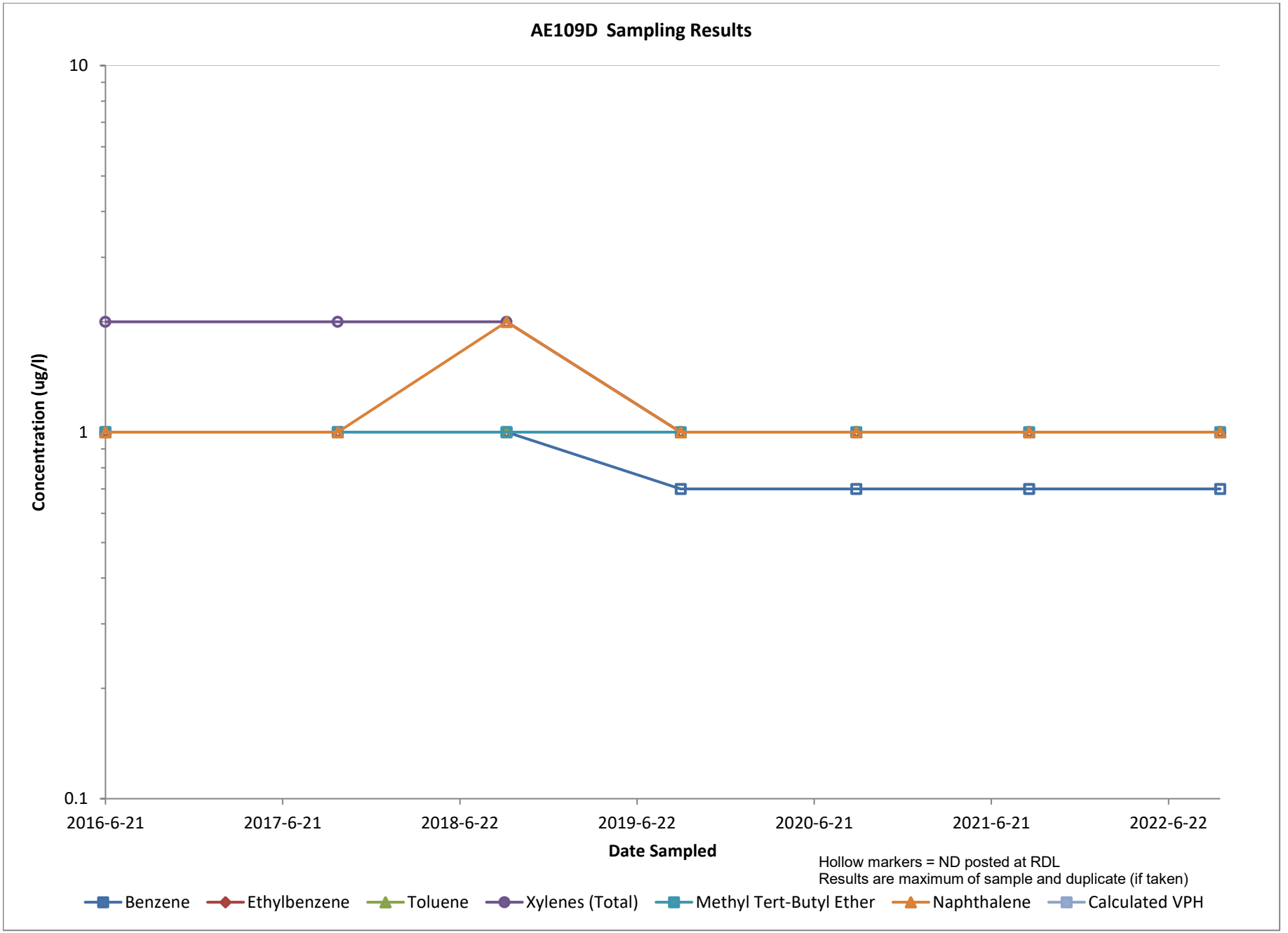

AE106R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

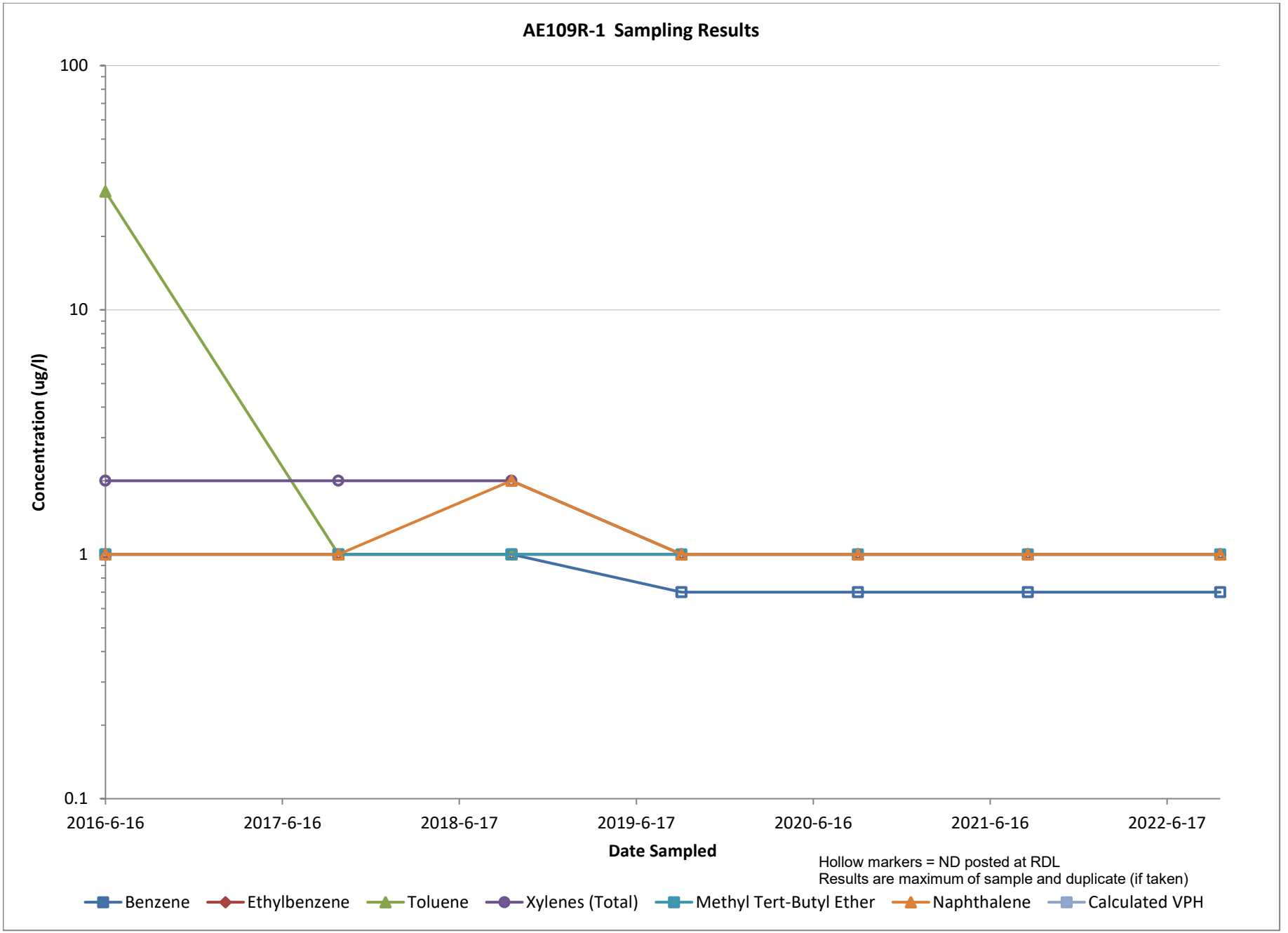

AE106R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

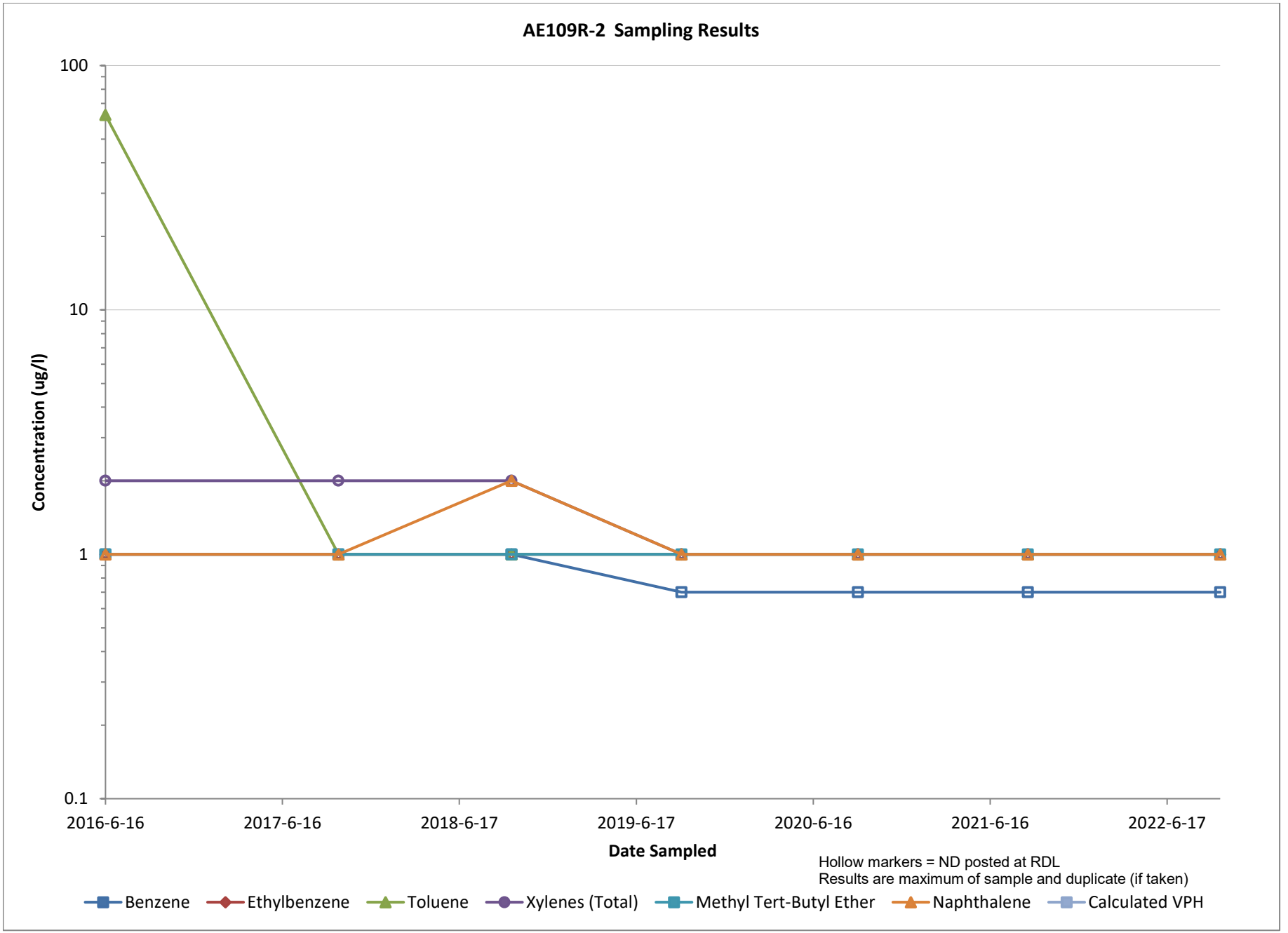

AE108R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

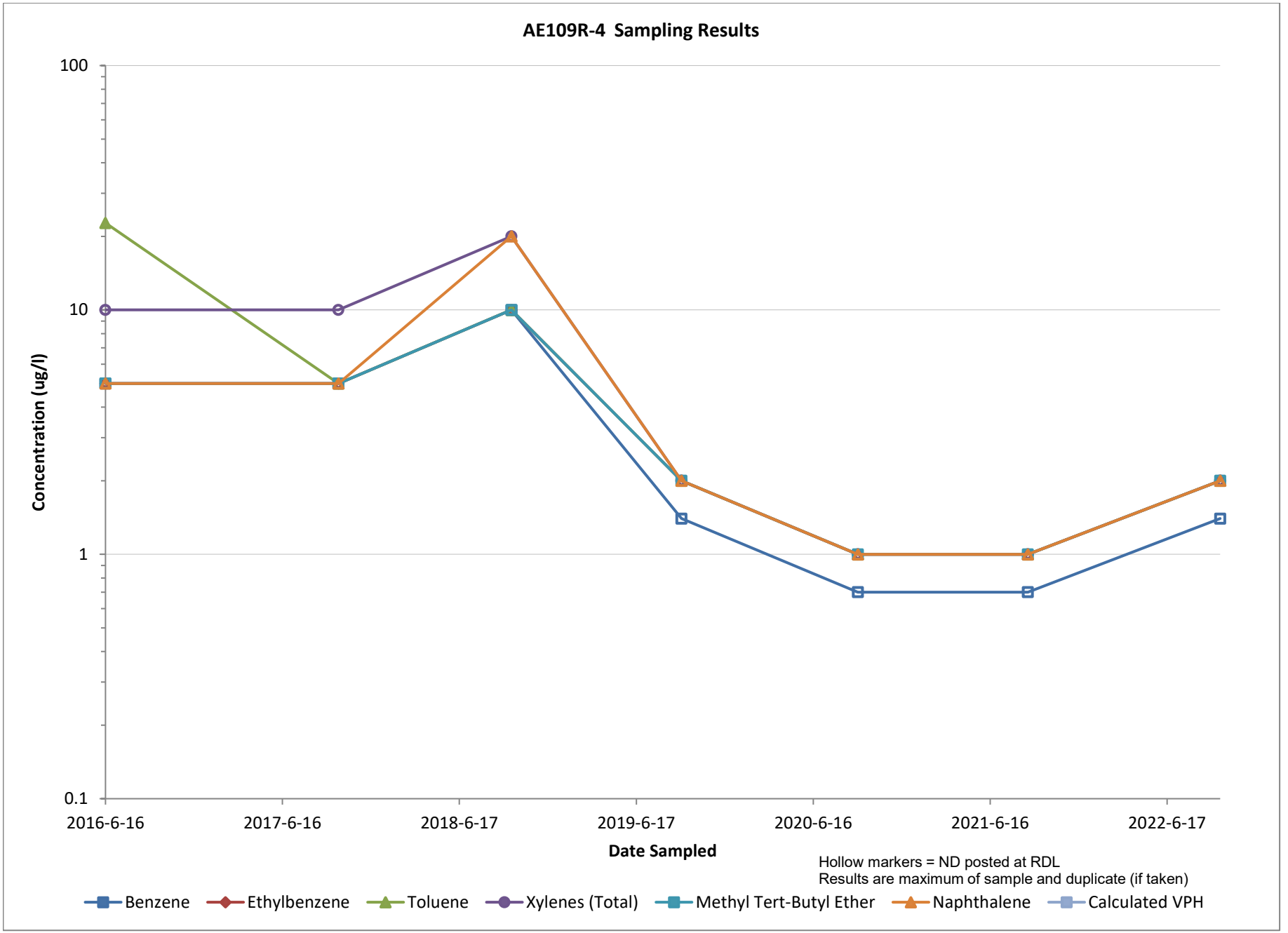

AE108R-3 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

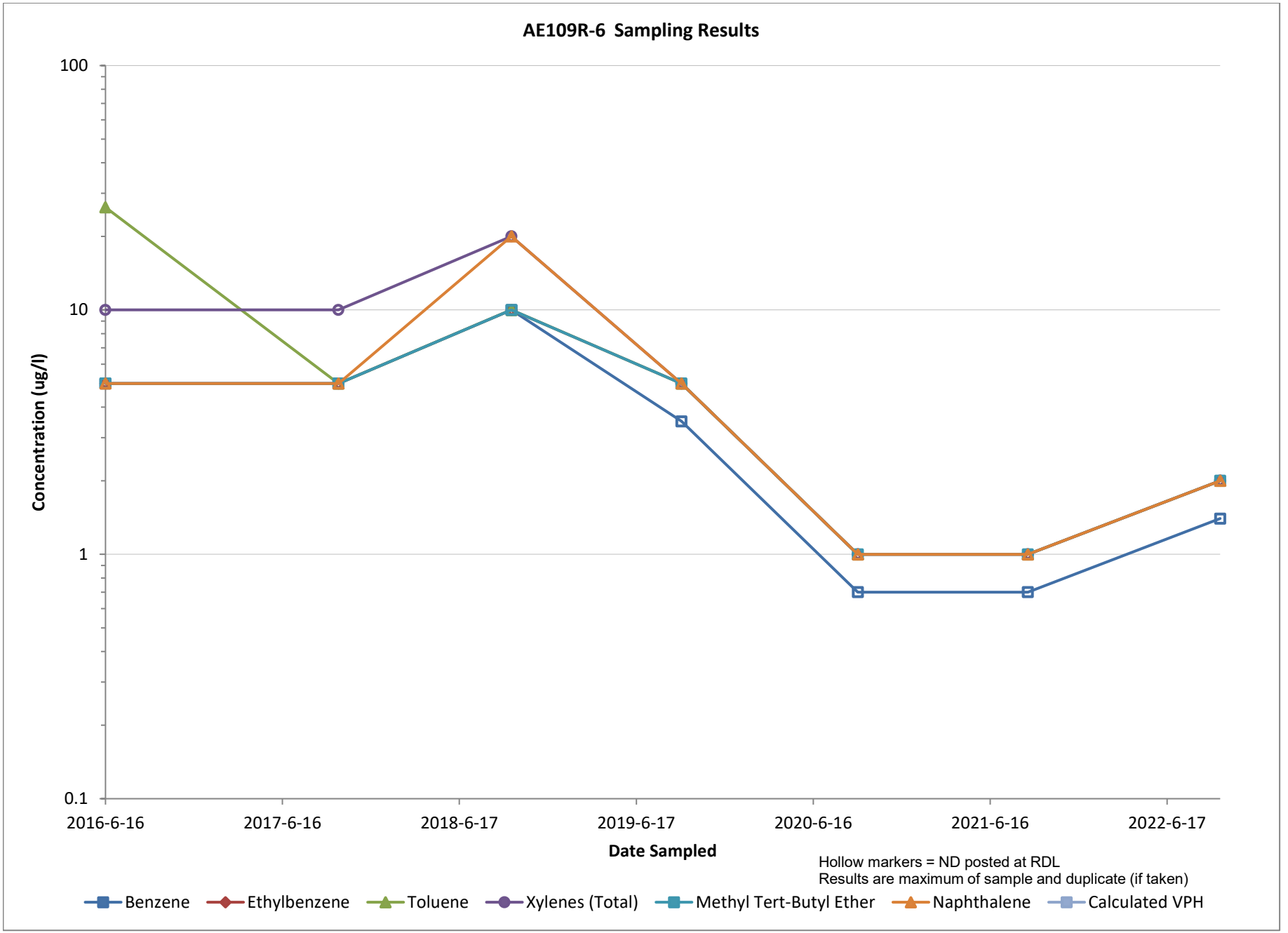

AE108R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

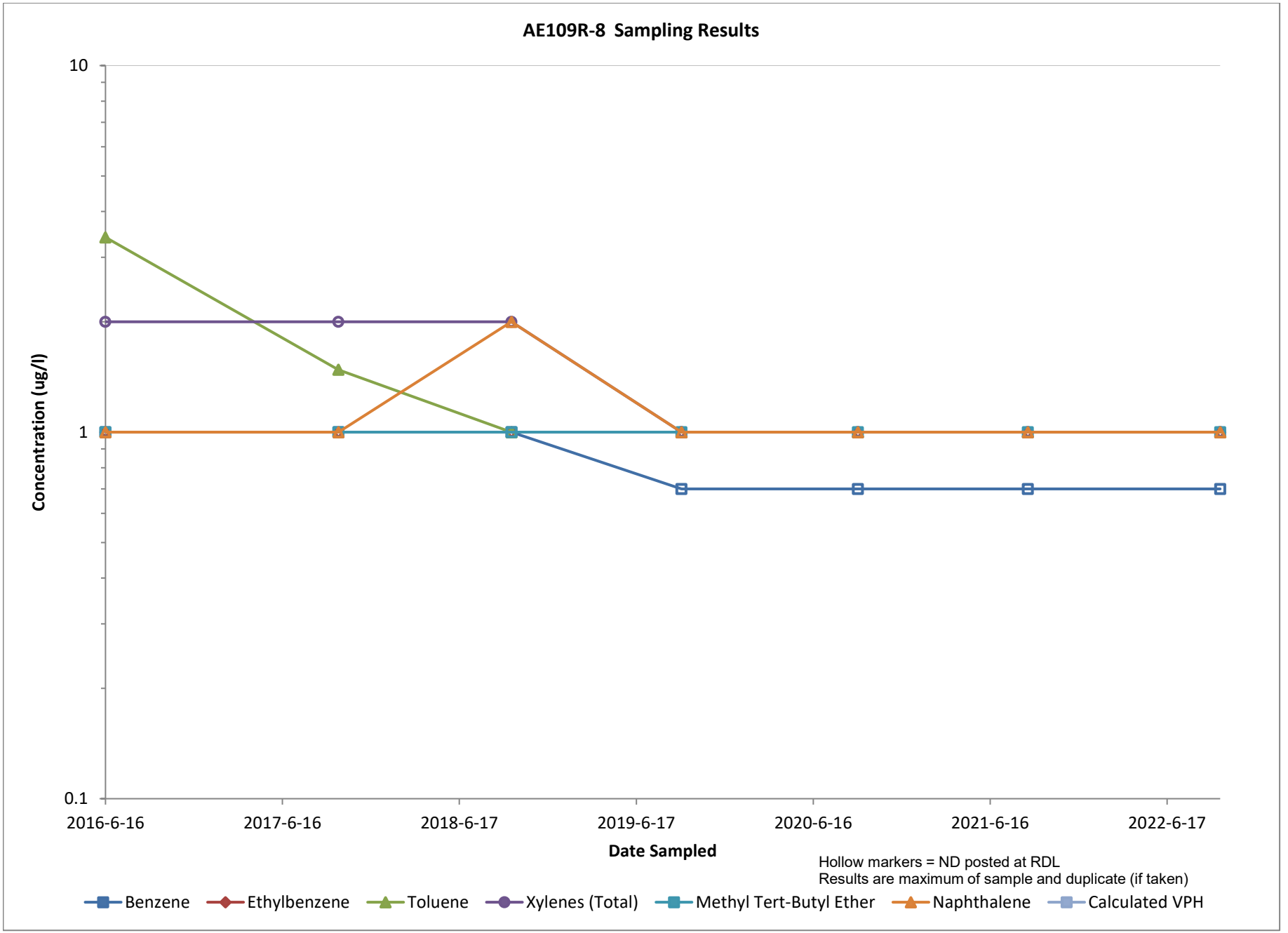

AE109D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-6-21
2017-6-21
2018-6-22
2019-6-22
2020-6-21
2021-6-21
2022-6-22
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

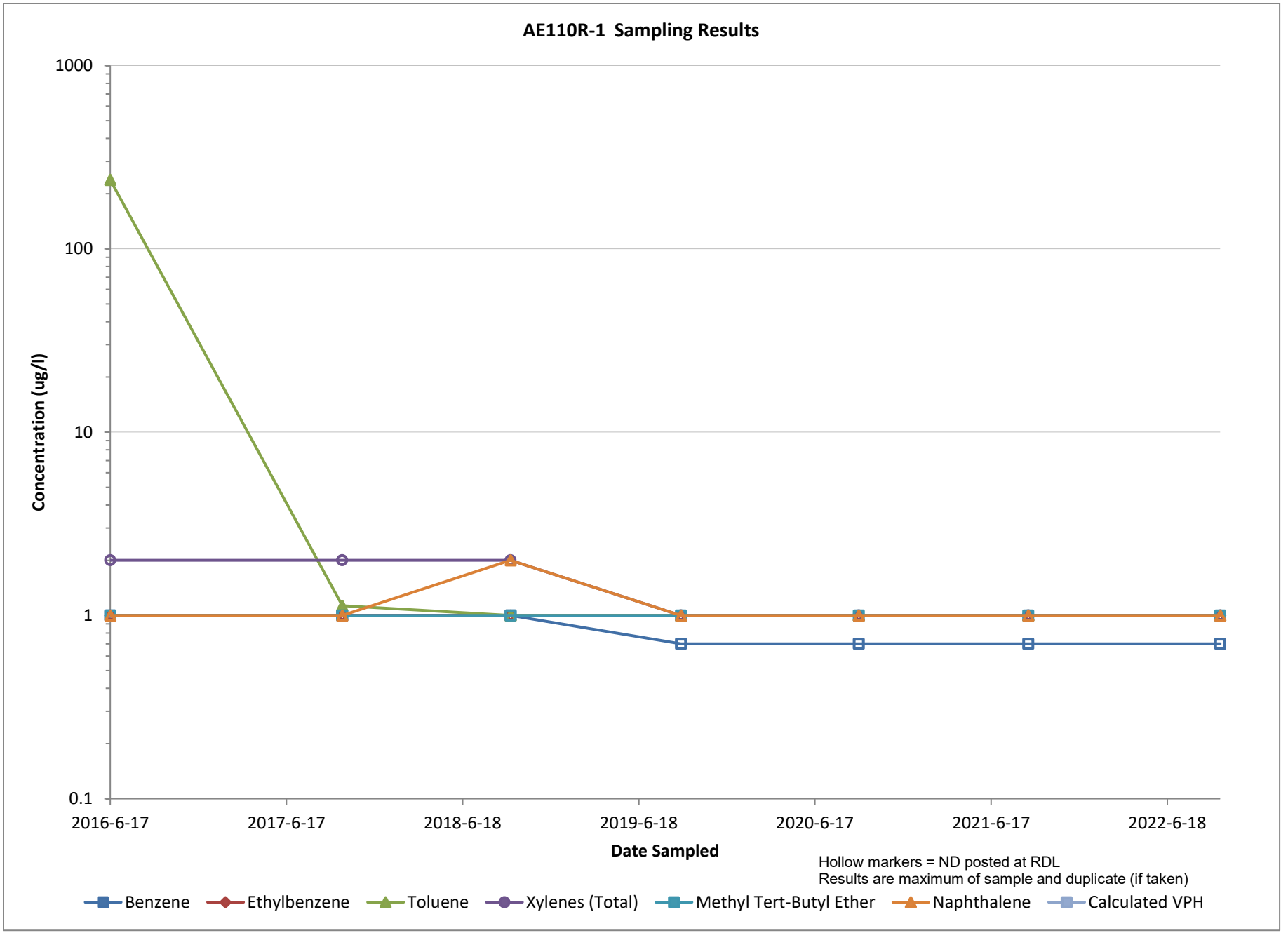

AE109R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

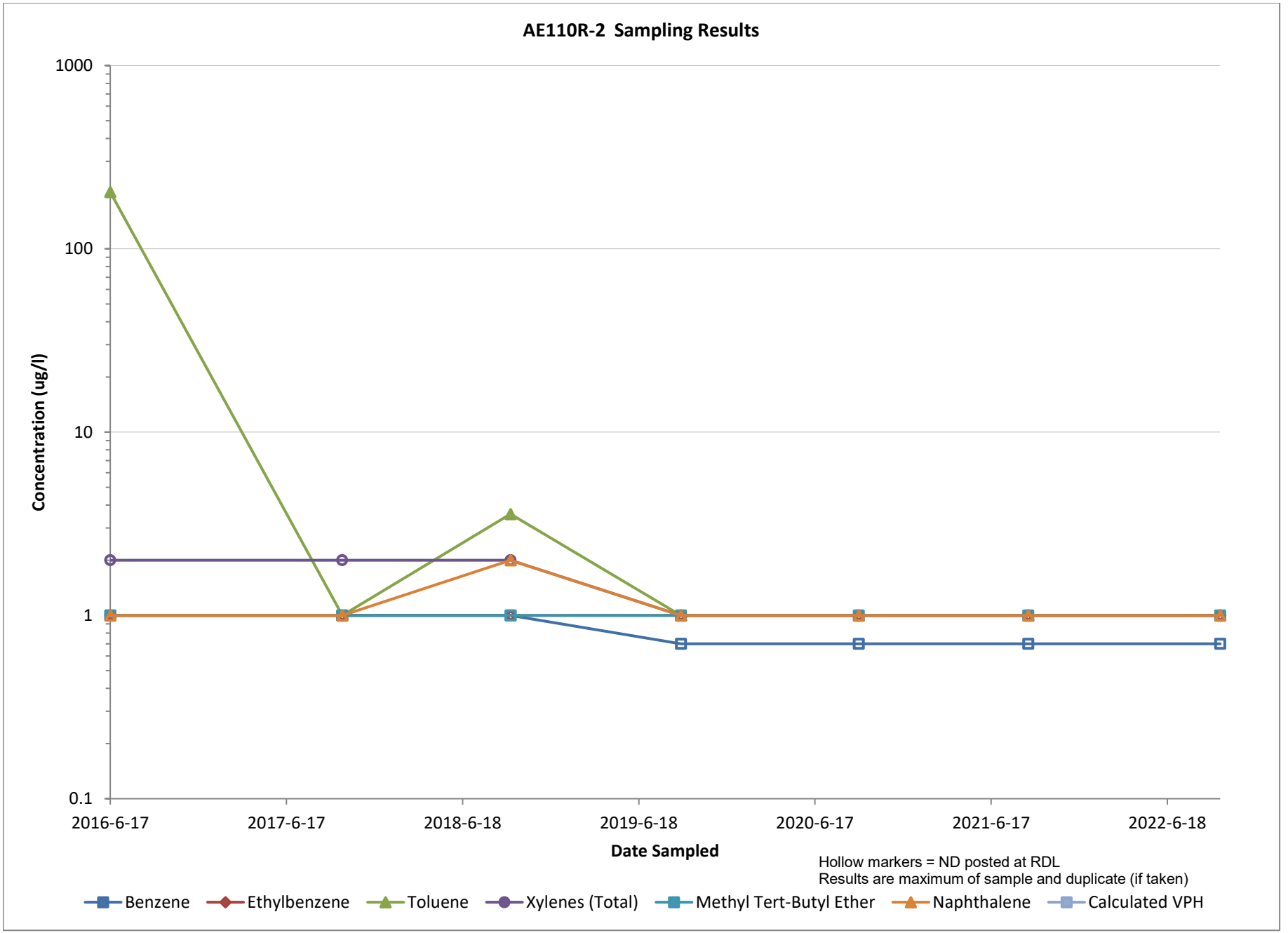

AE109R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

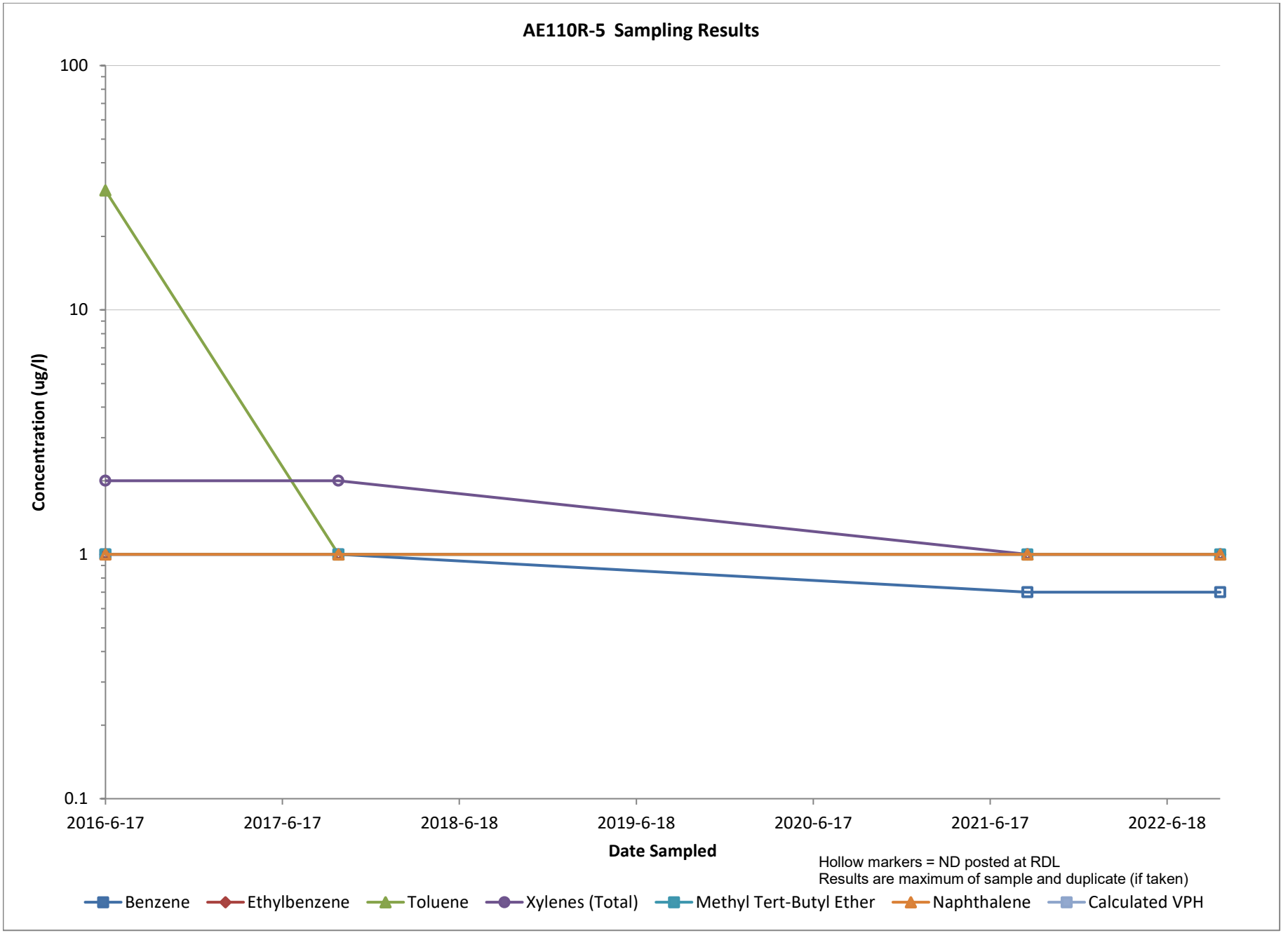

AE109R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

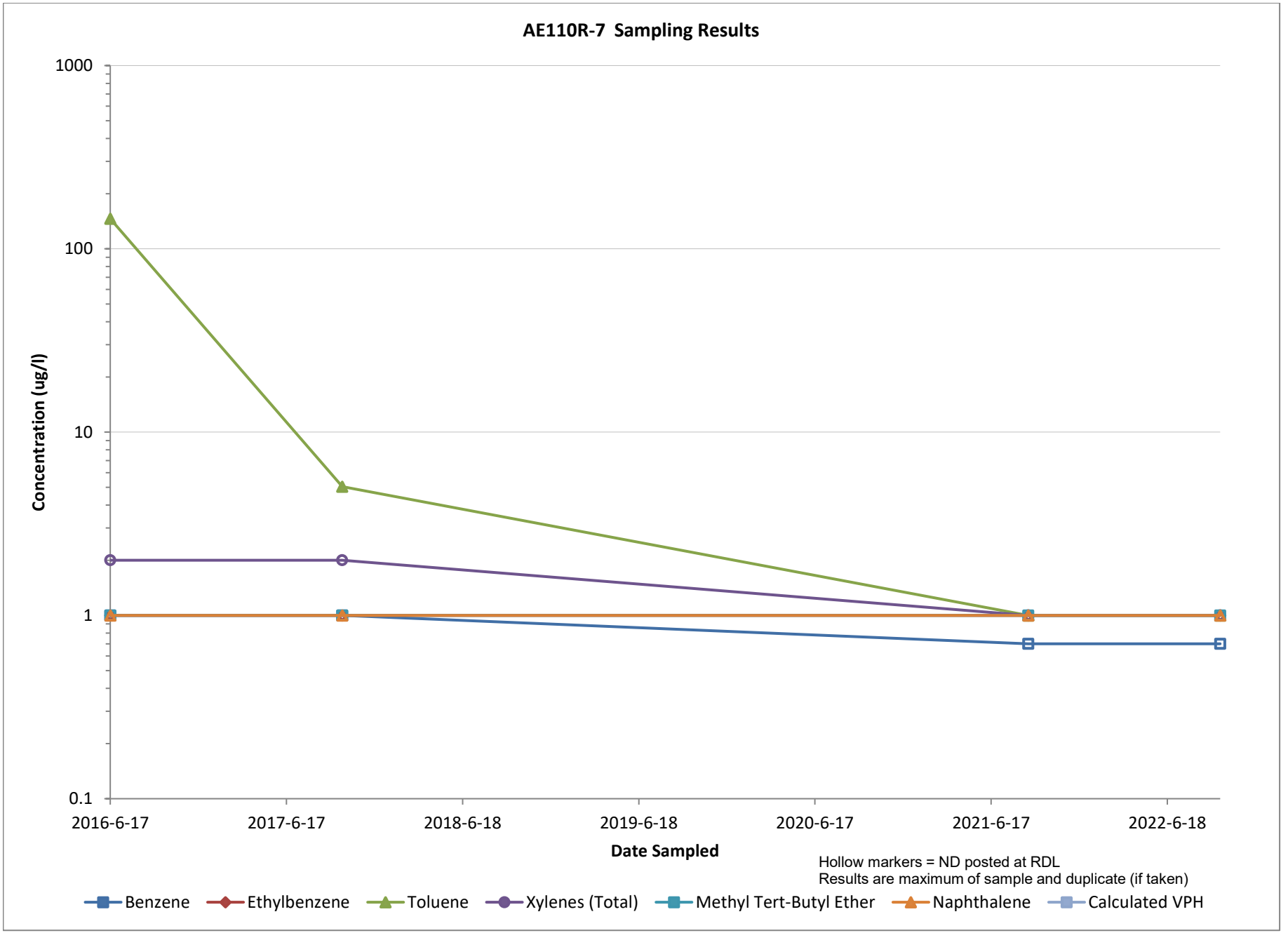

AE109R-6 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

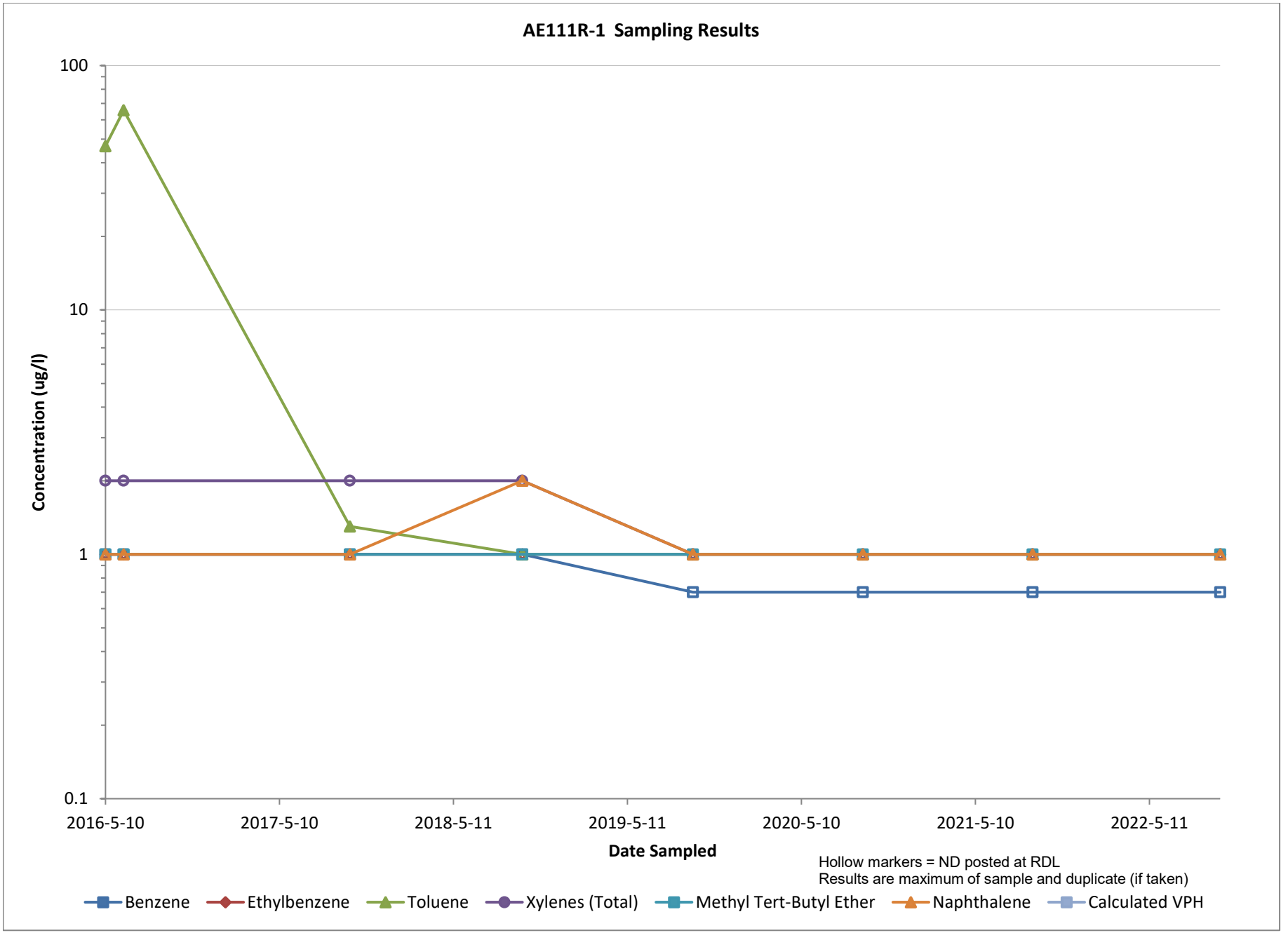

AE109R-8 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

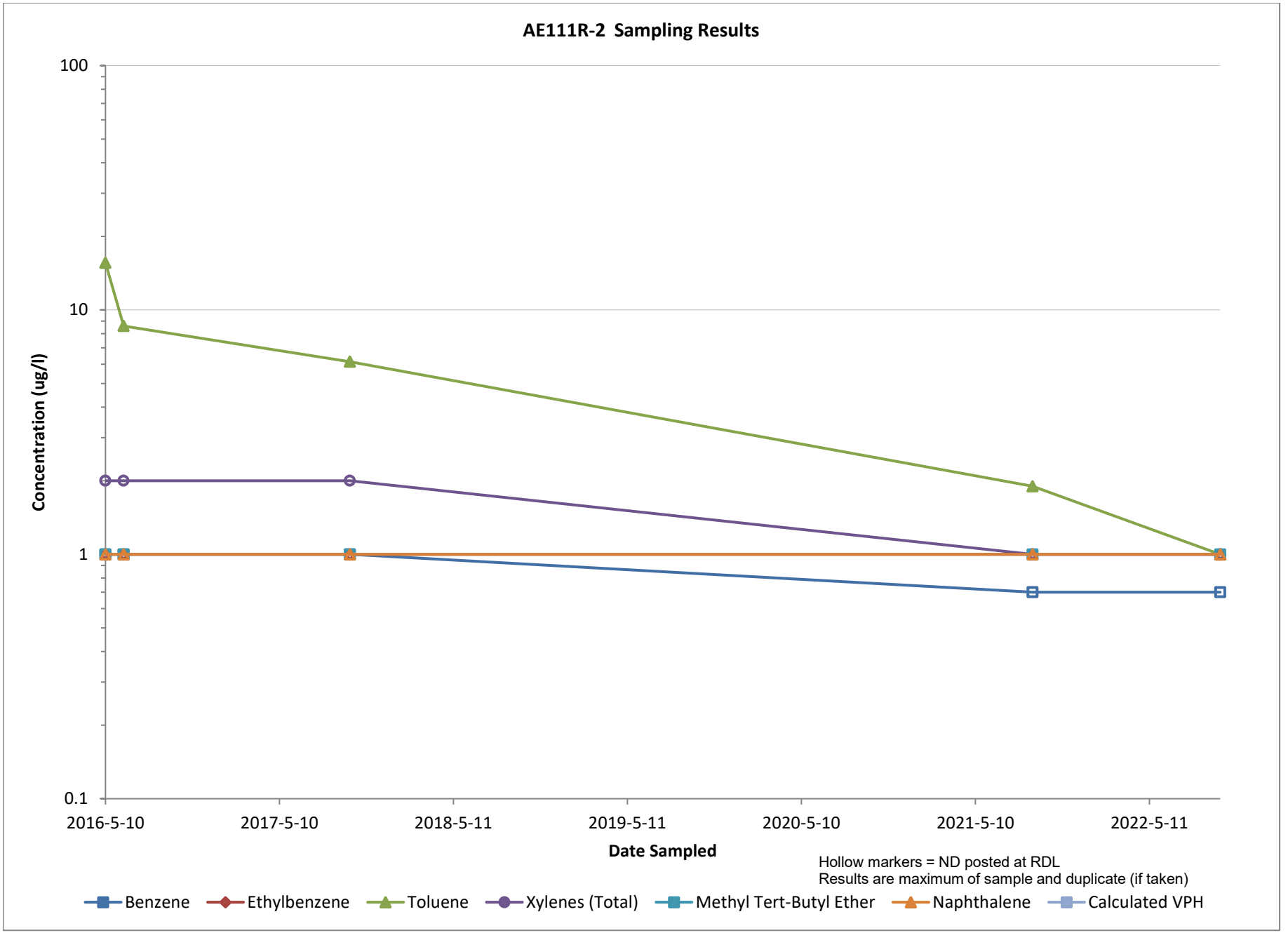

AE110R-1 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

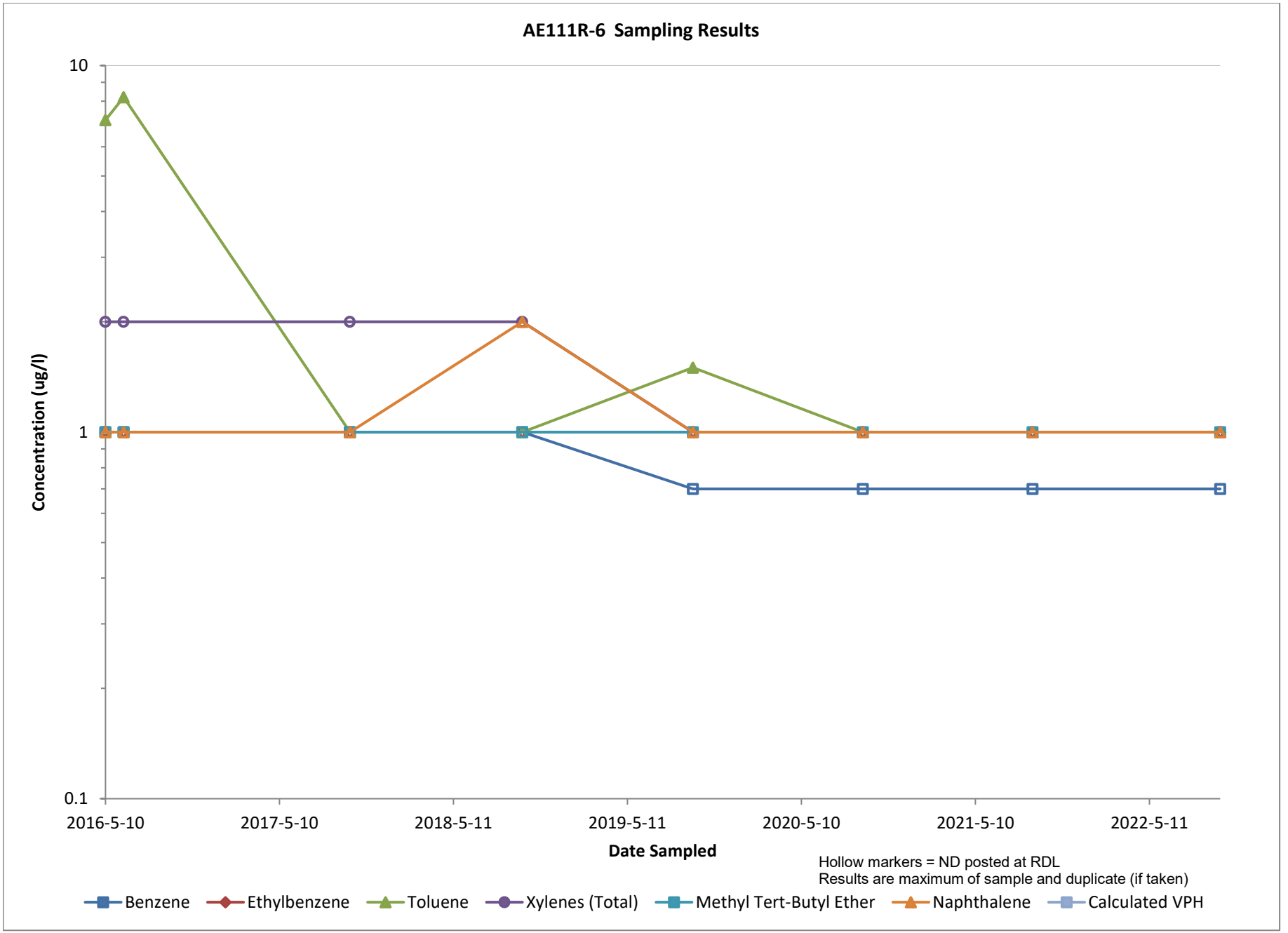

AE110R-2 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

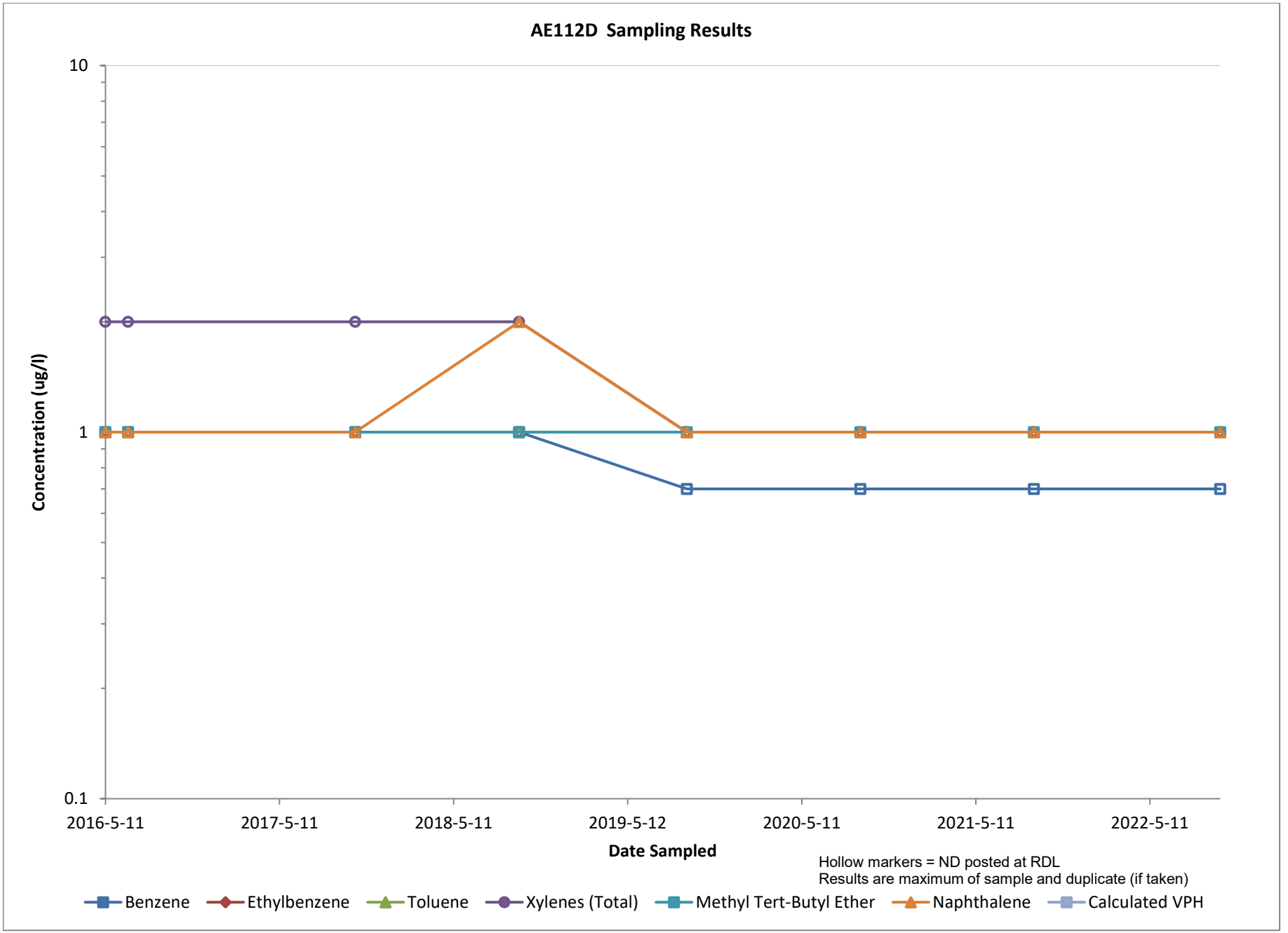

AE110R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

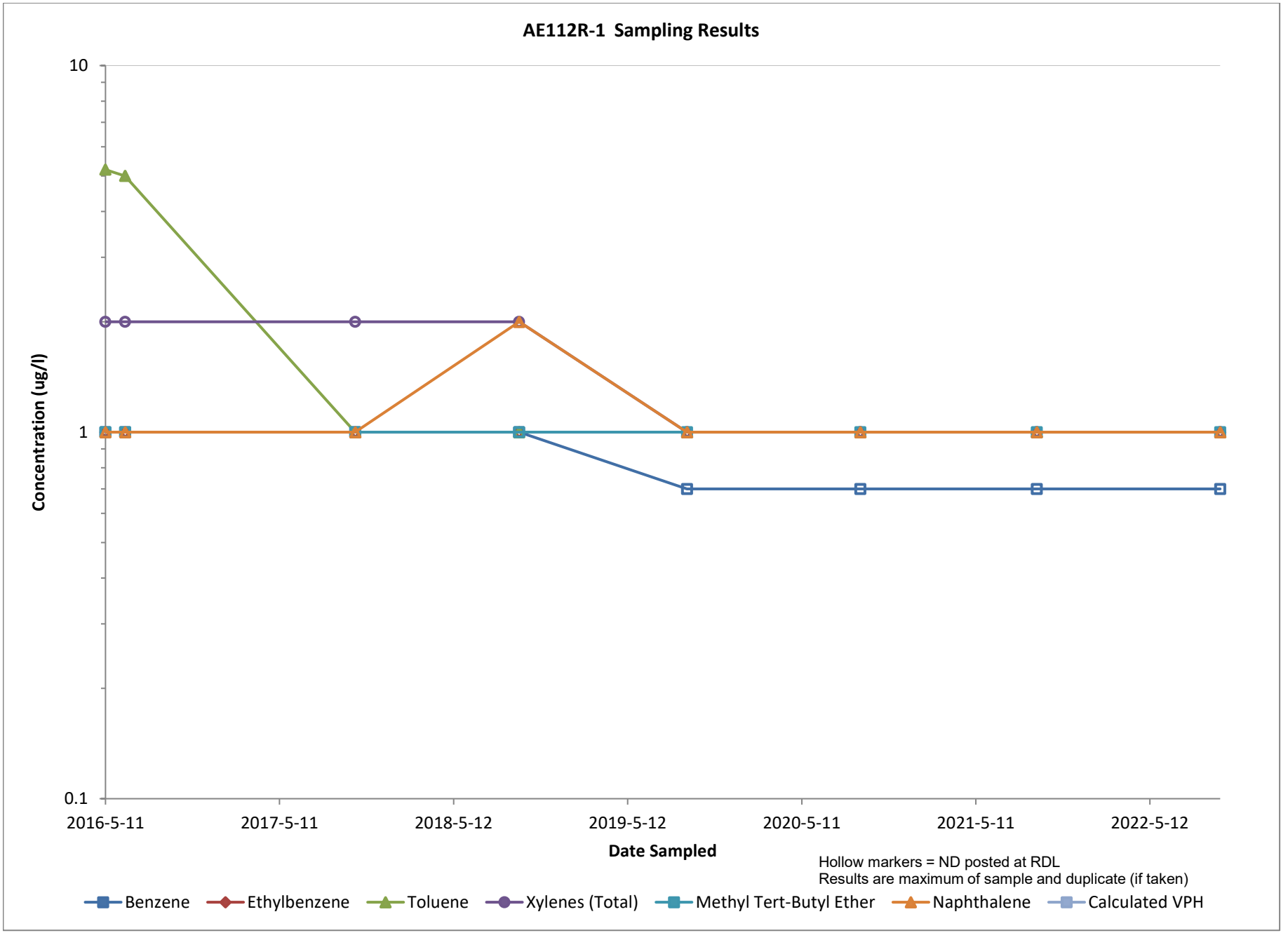

AE110R-7 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

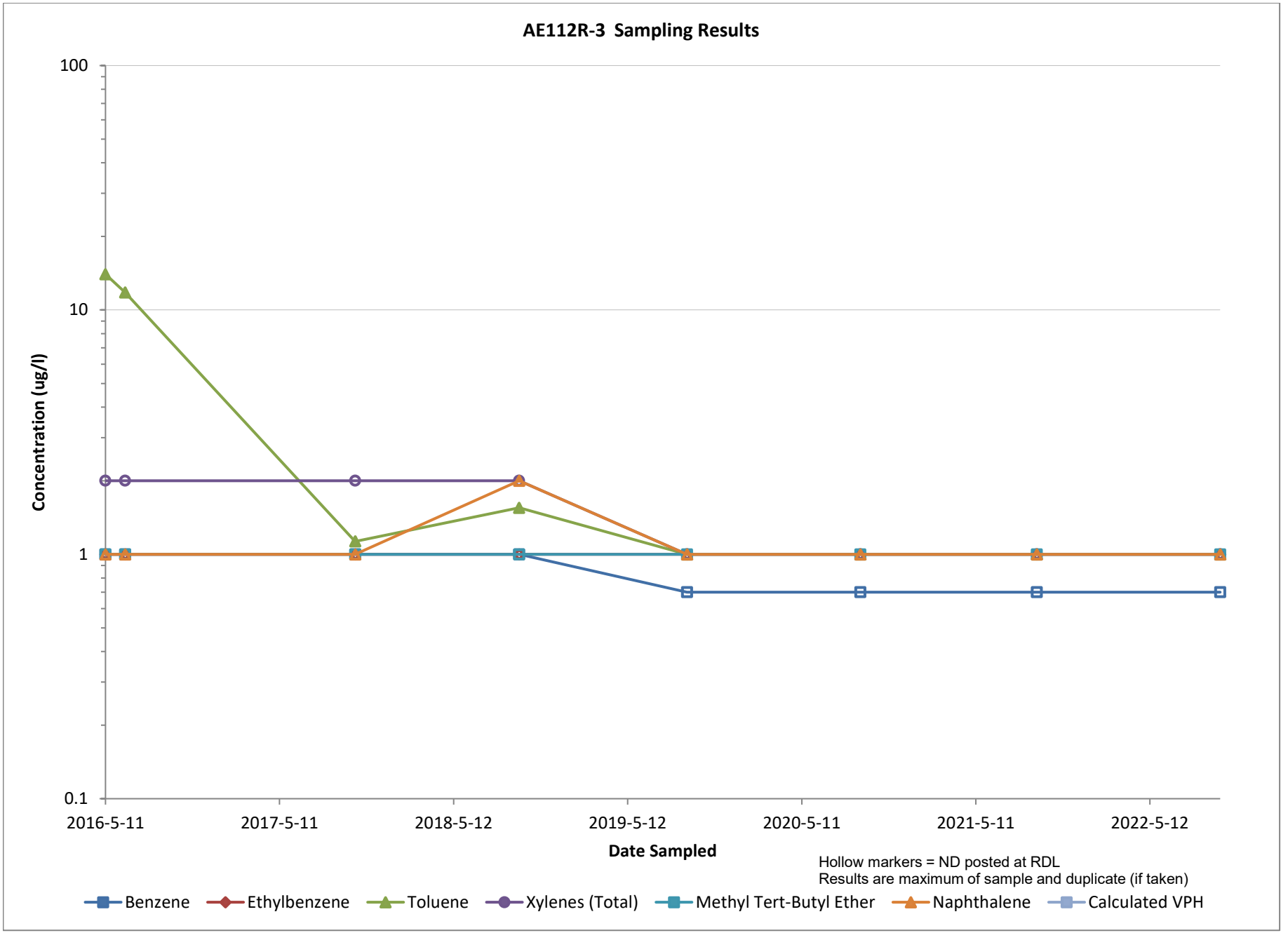

AE111R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

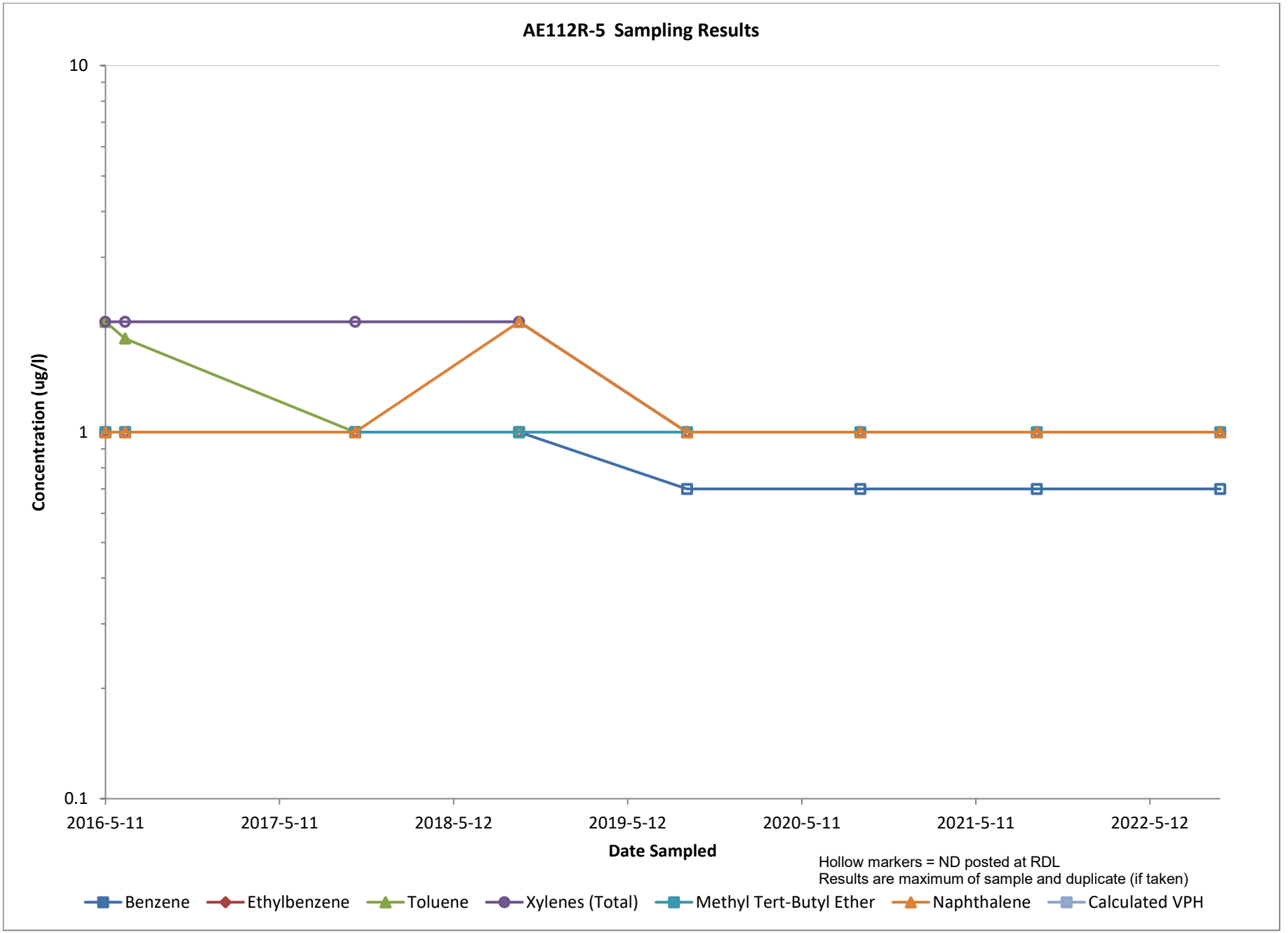

AE111R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

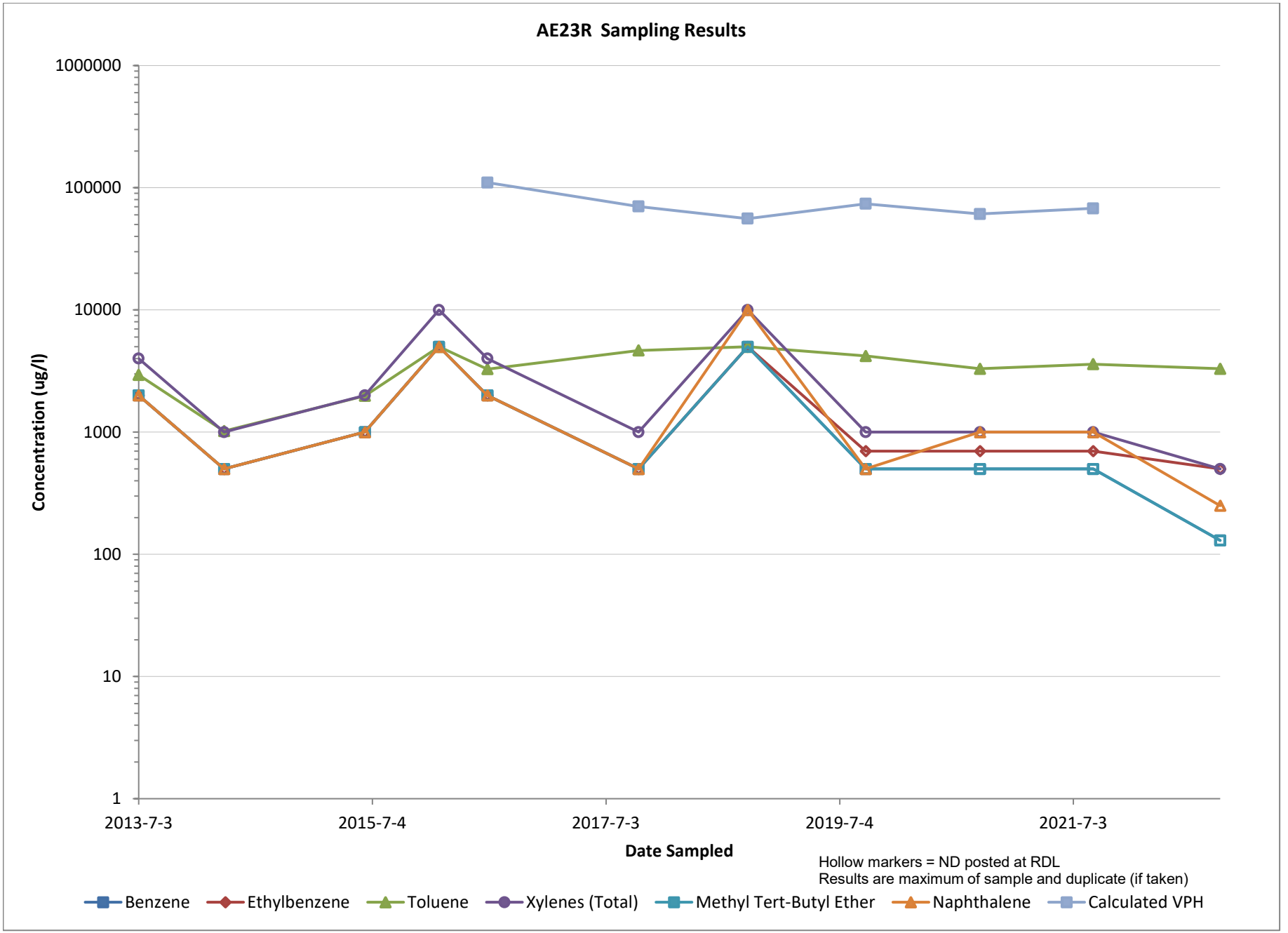

AE111R-6 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

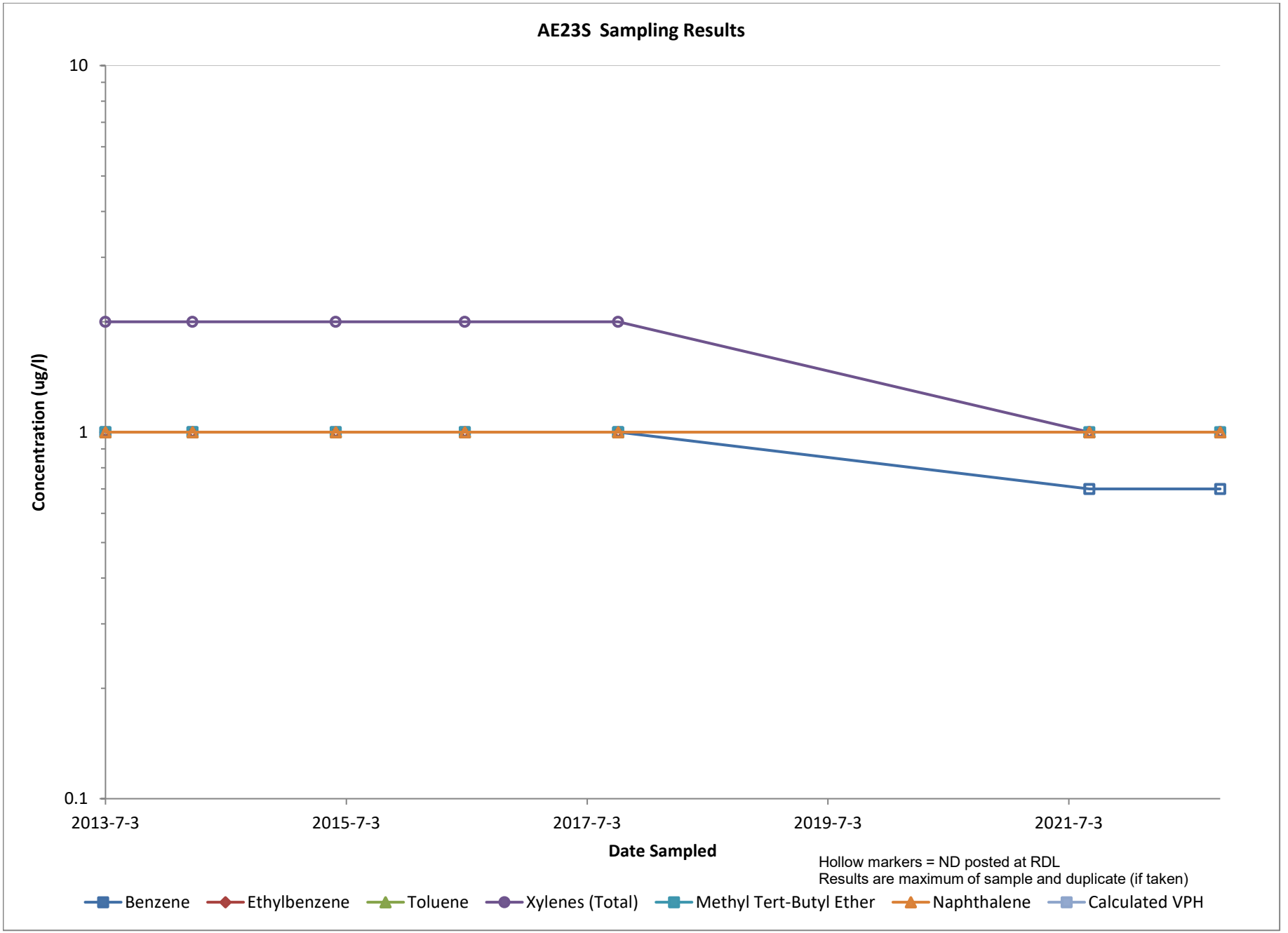

AE112D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-11
2019-5-12
2020-5-11
2021-5-11
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

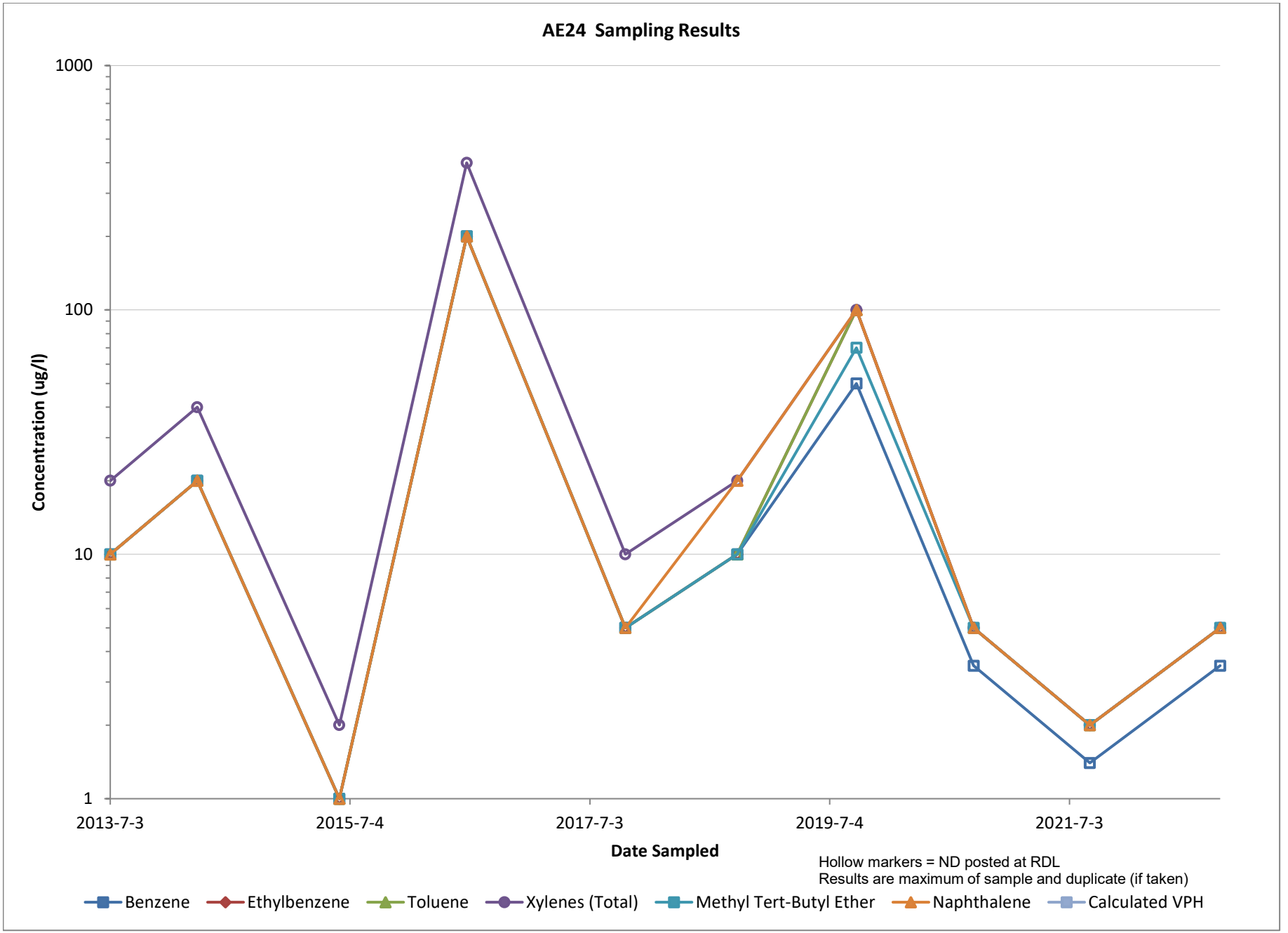

AE112R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
2022-5-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

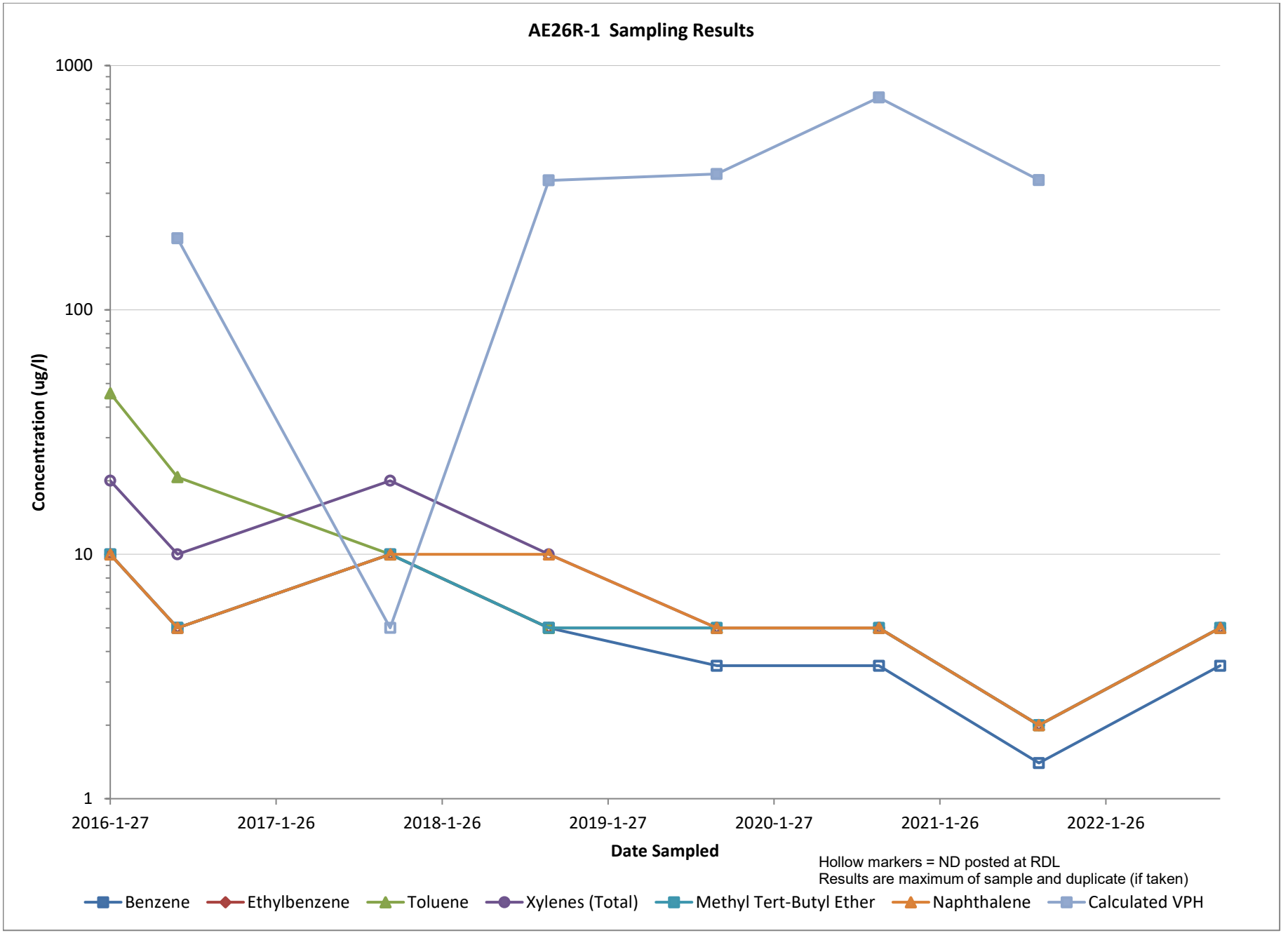

AE112R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
2022-5-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

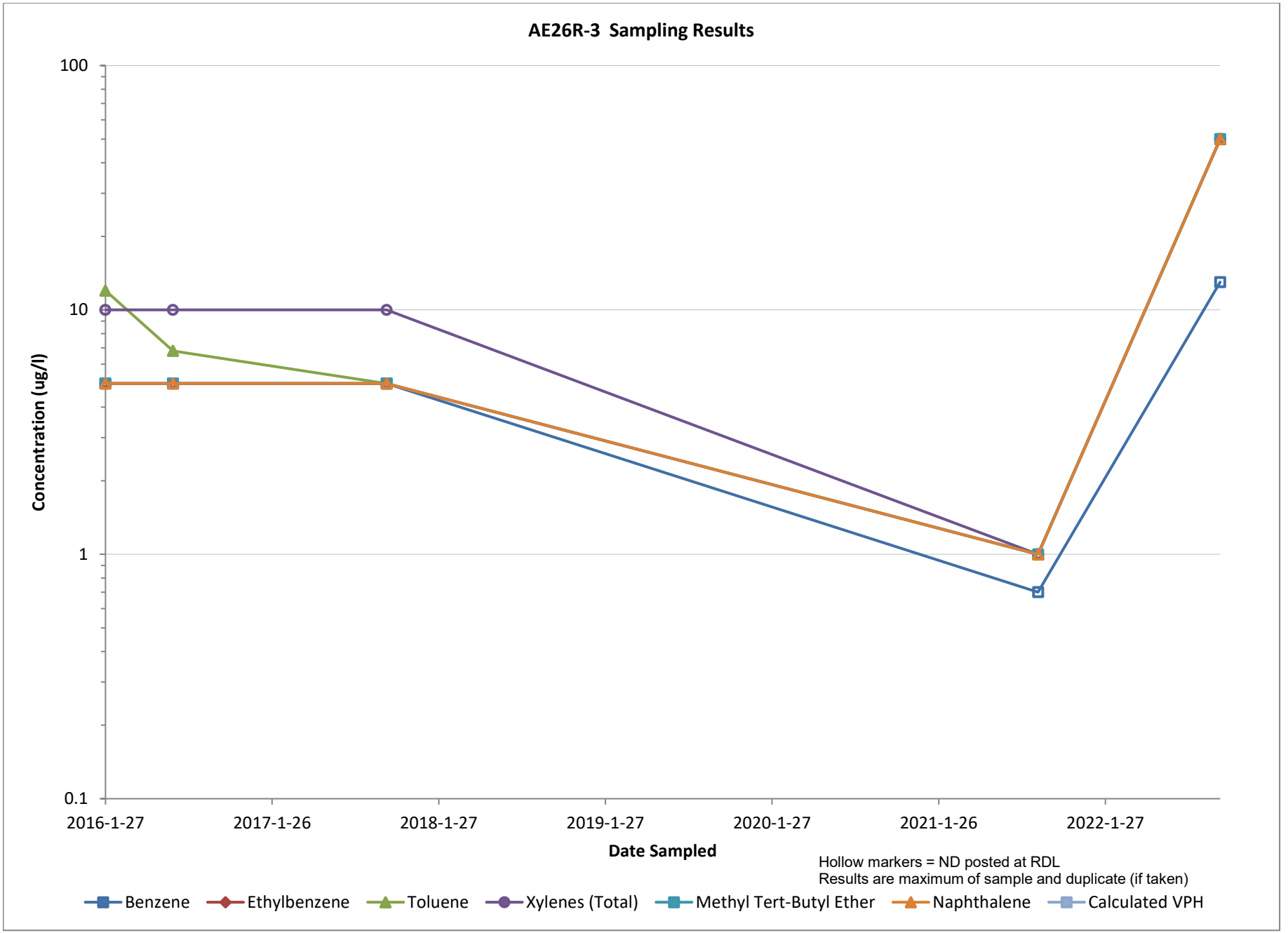

AE112R-5 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
2022-5-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

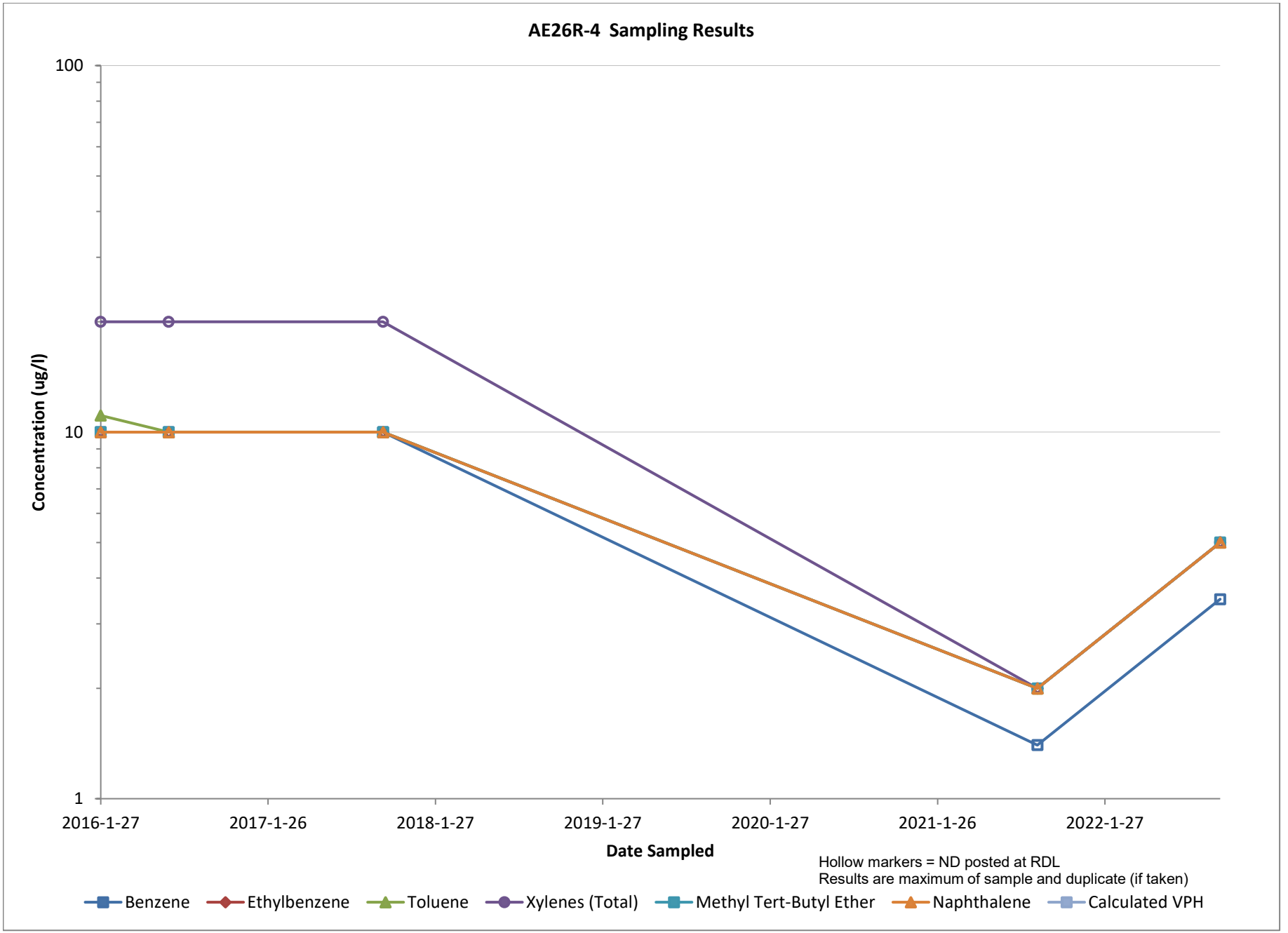

AE23R Sampling Results
1000000
100000
10000
1000
100
10
1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

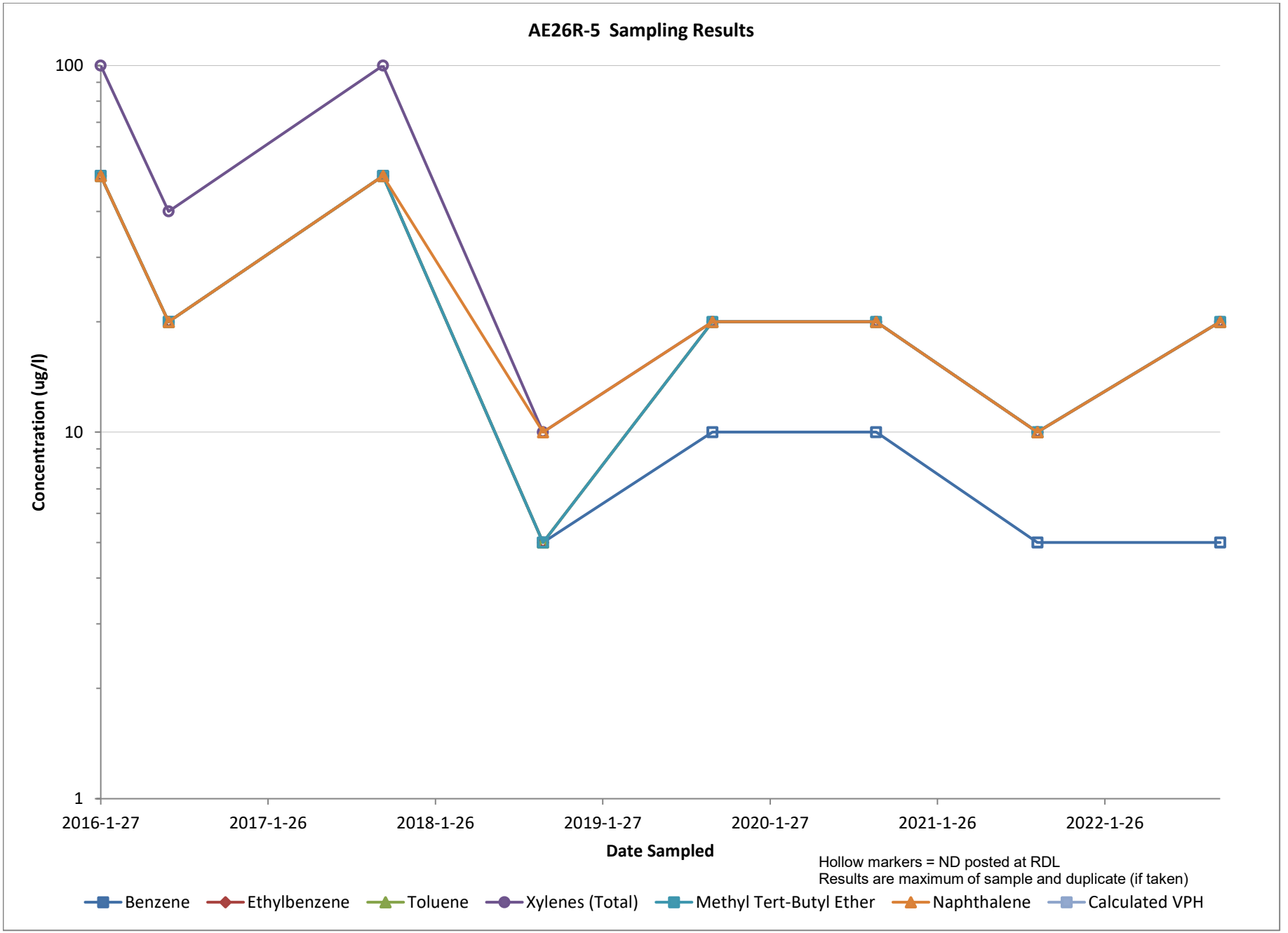

AE23S Sampling Results
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-3
2017-7-3
2019-7-3
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

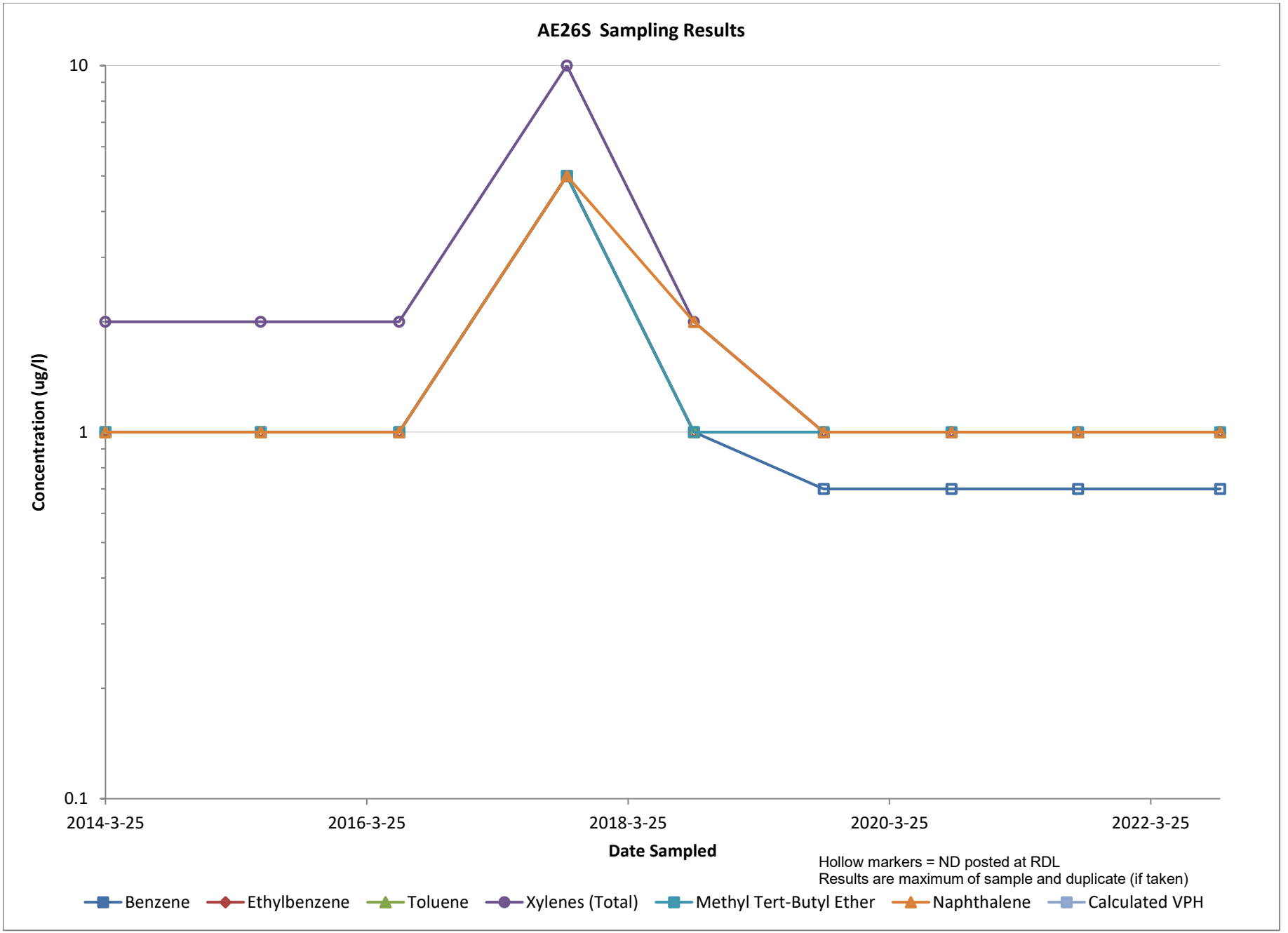

AE24 Sampling Results
1000
100
10
1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

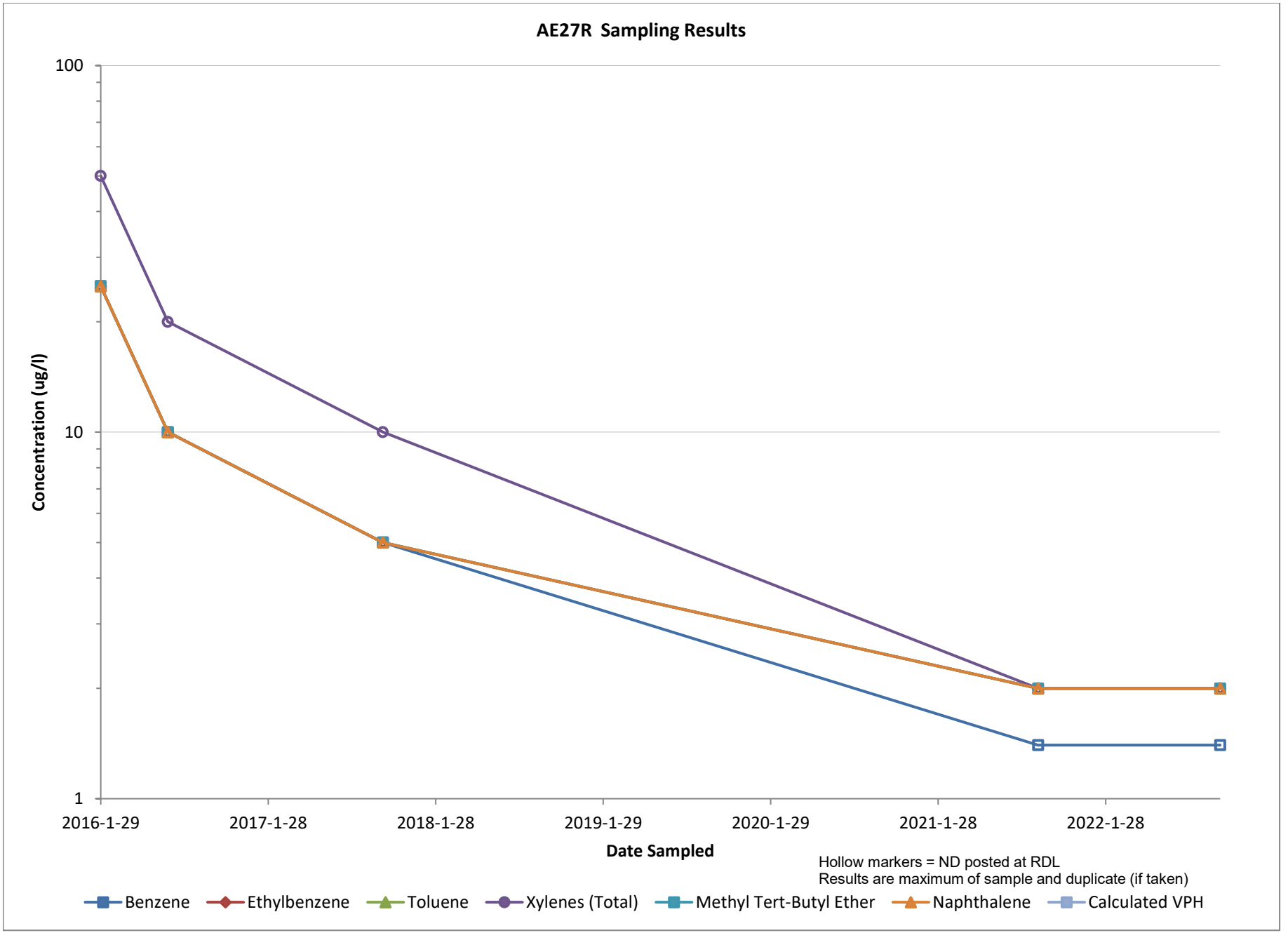

AE26R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

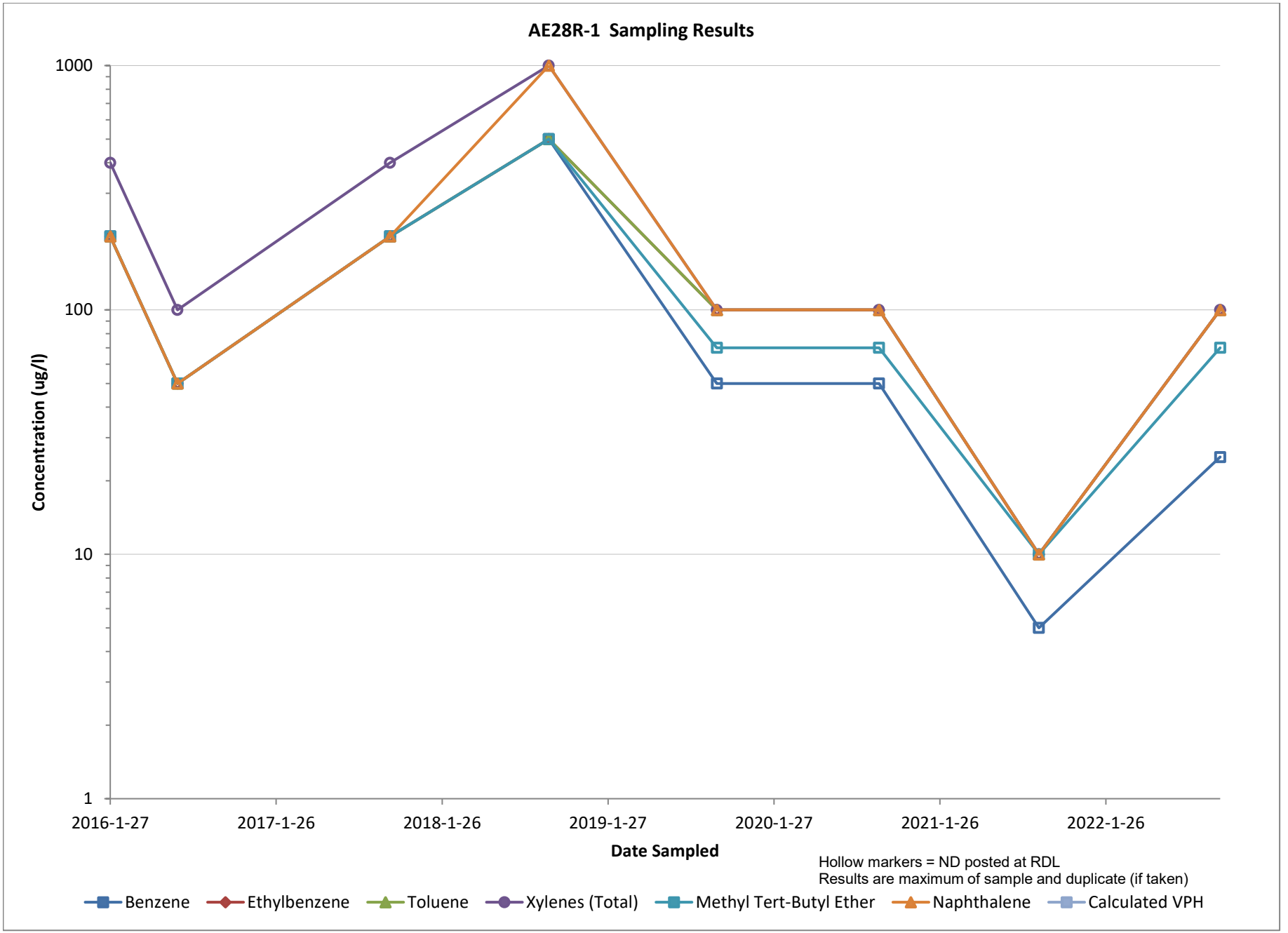

AE26R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

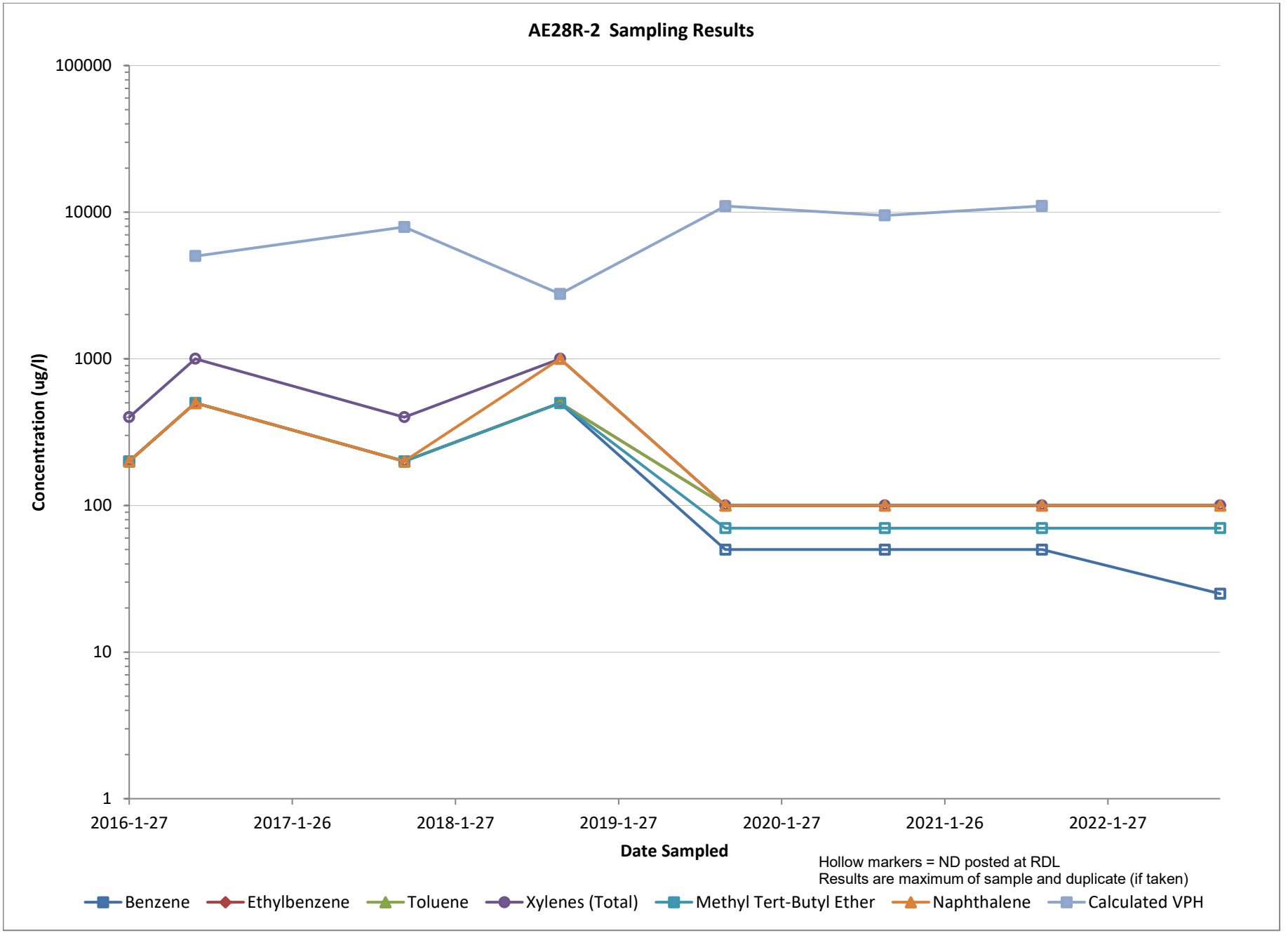

AE26R-4 Sampling Results
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

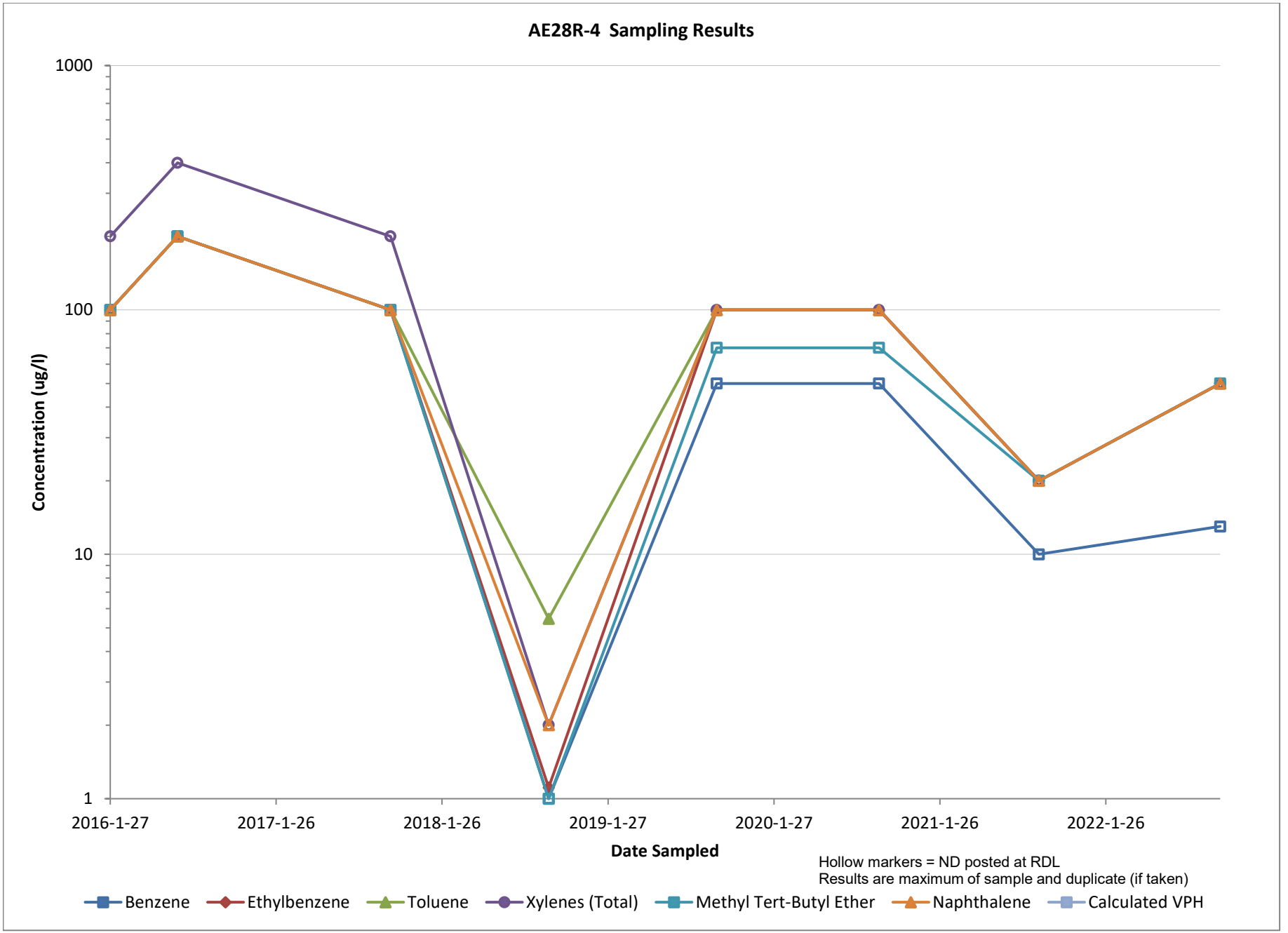

AE26R-5 Sampling Results
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

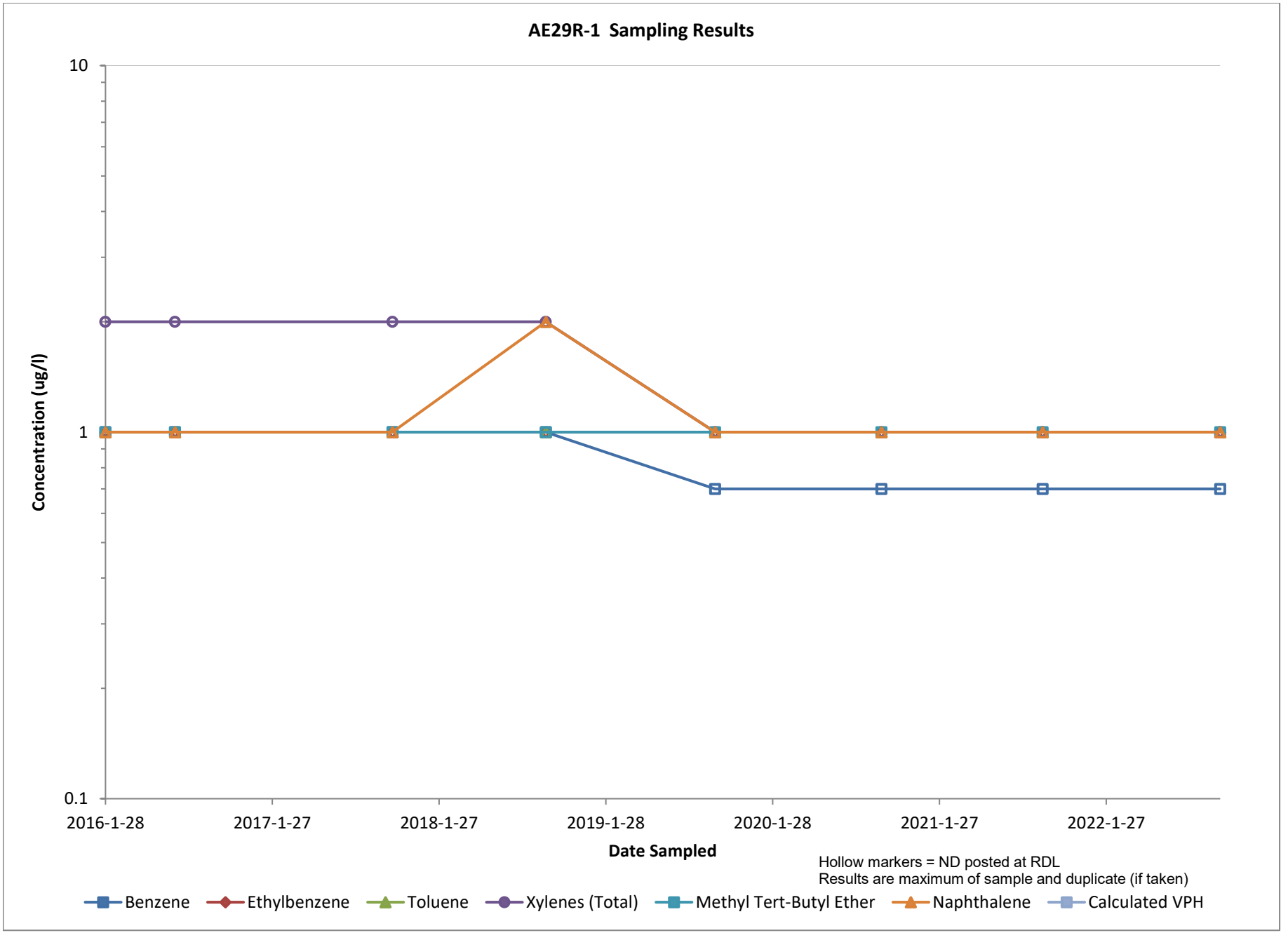

AE26S Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-25
2016-3-25
2018-3-25
2020-3-25
2022-3-25
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

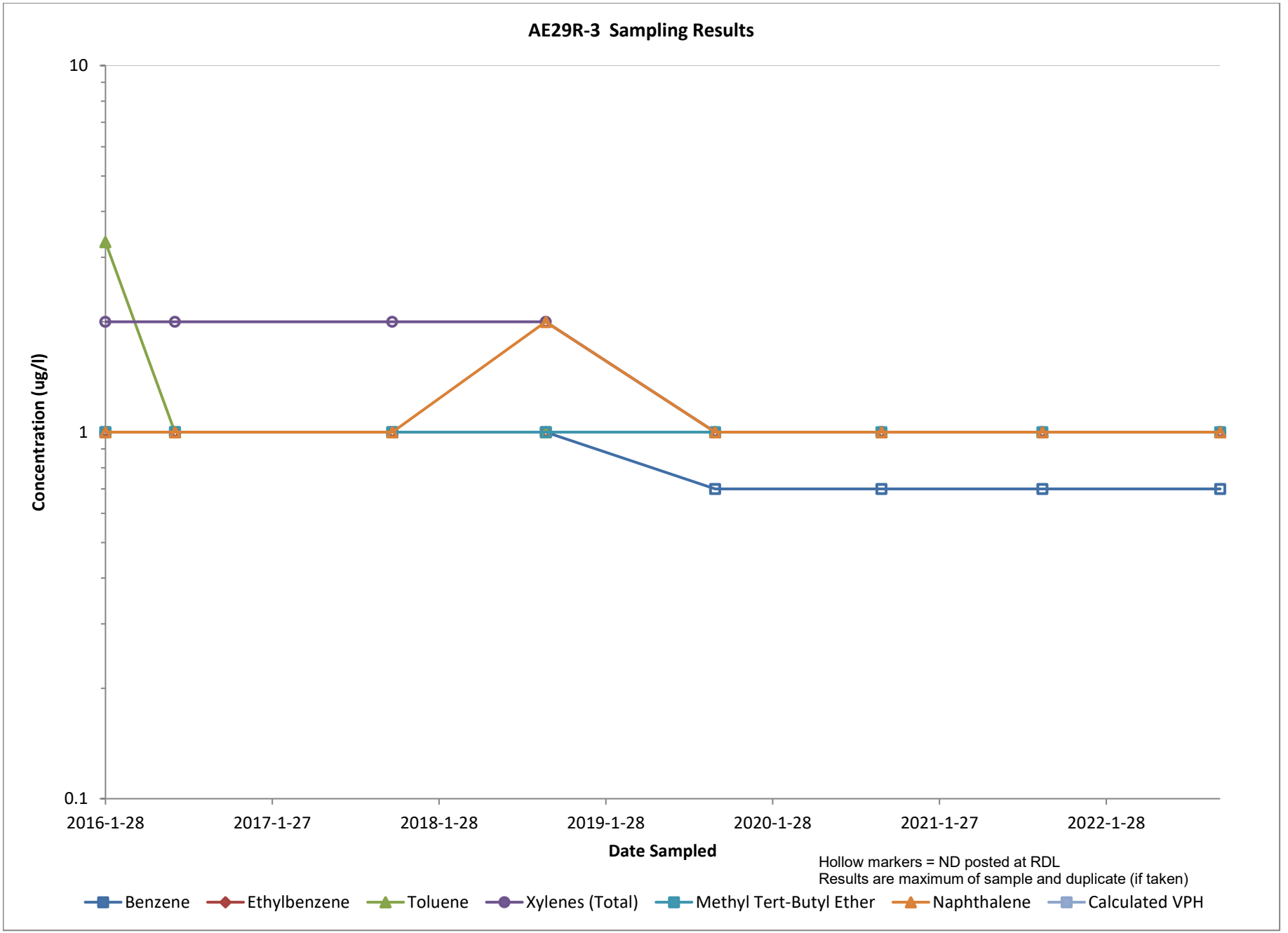

AE27R Sampling Results
100
10
1
Concentration (ug/l)
2016-1-29
2017-1-28
2018-1-28
2019-1-29
2020-1-29
2021-1-28
2022-1-28
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

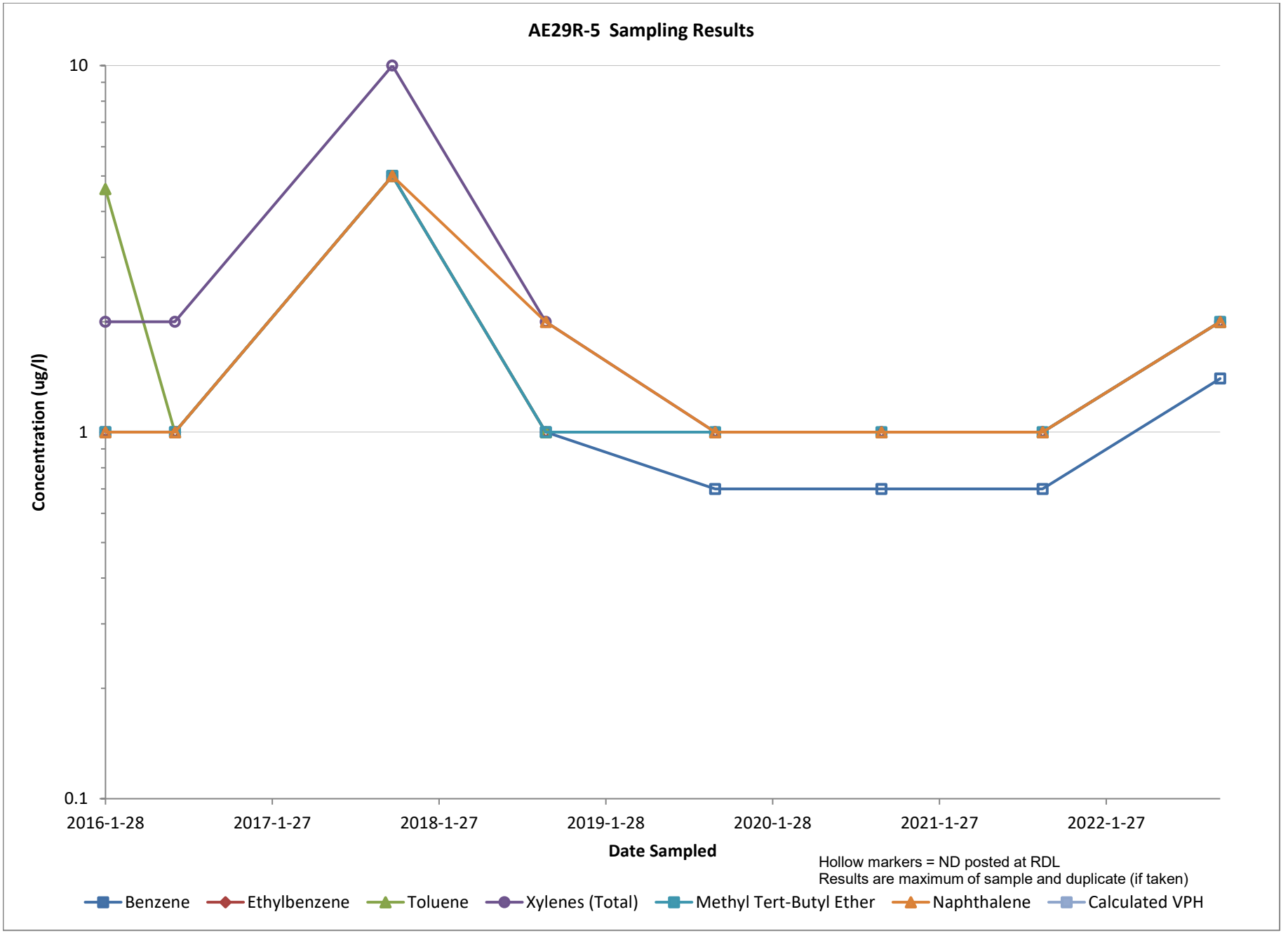

AE28R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

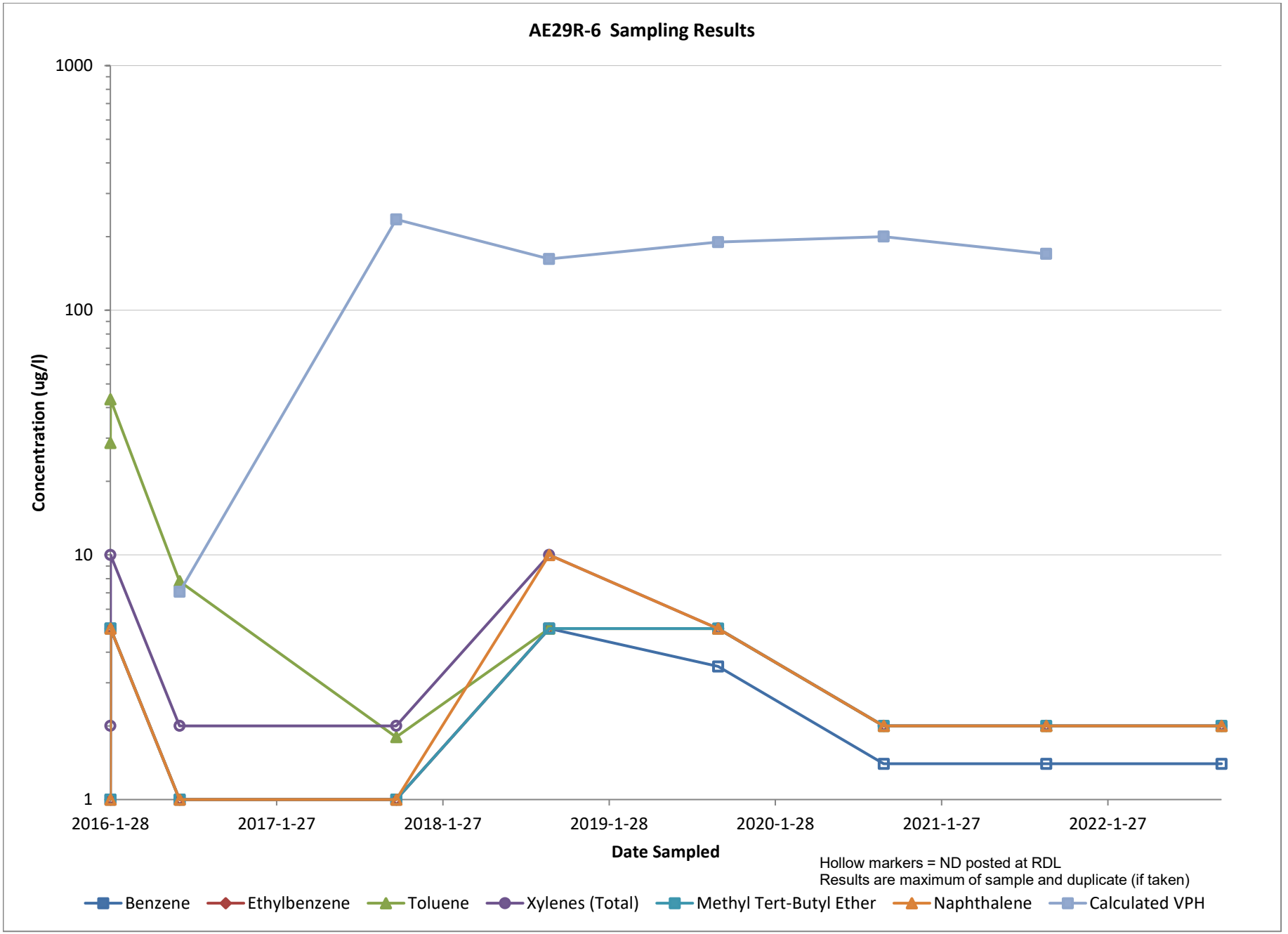

AE28R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

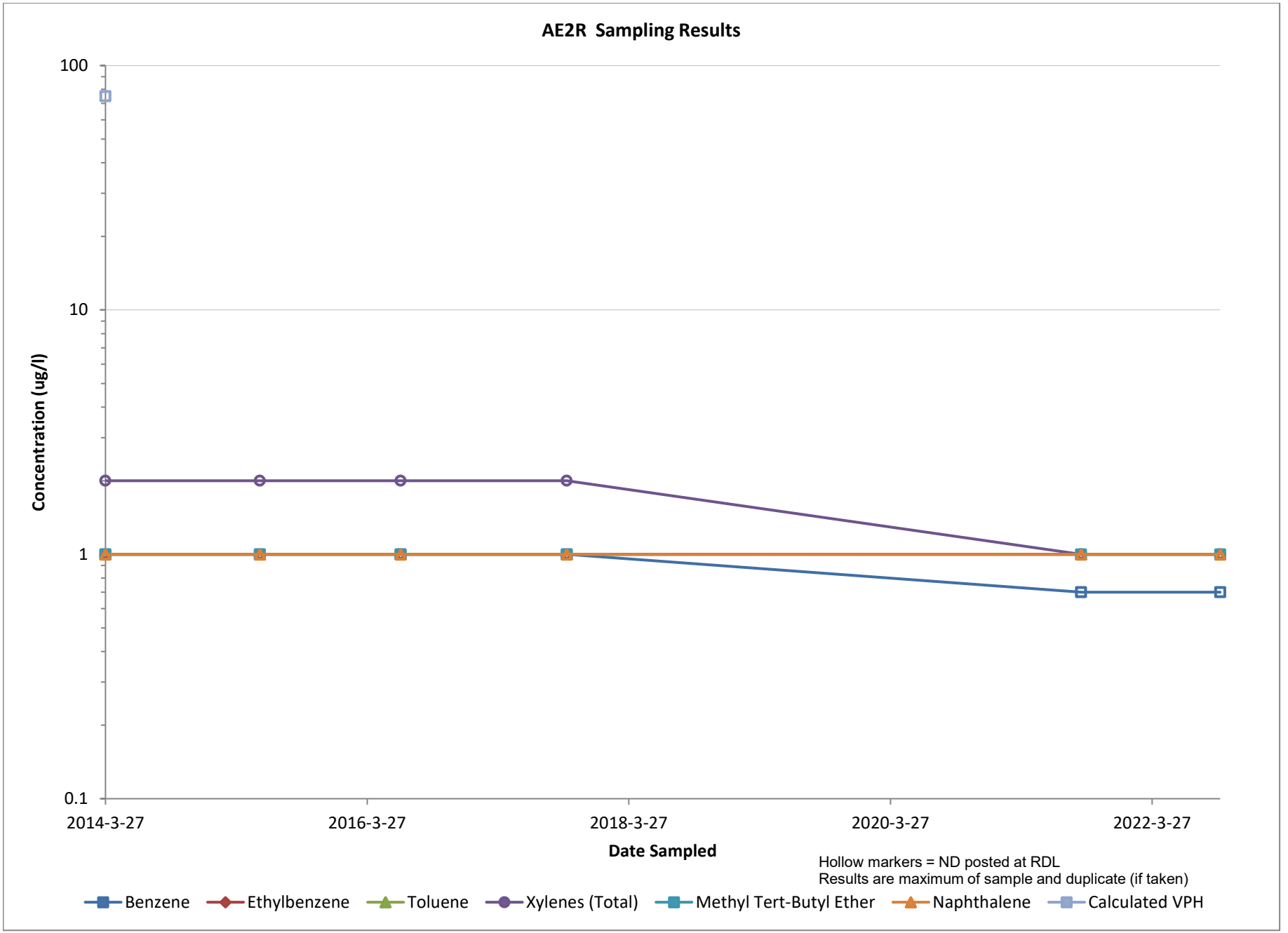

AE28R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

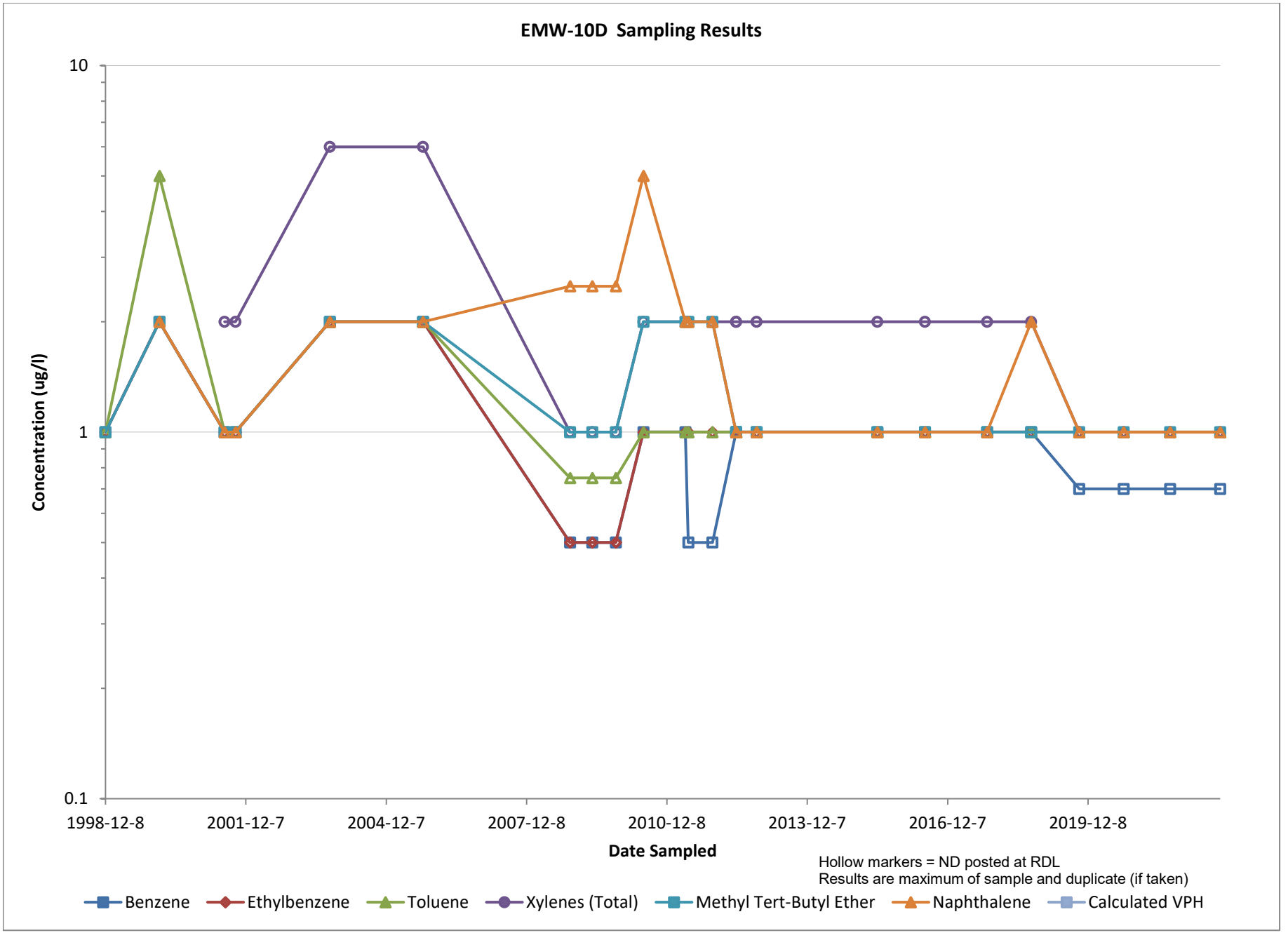

AE29R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

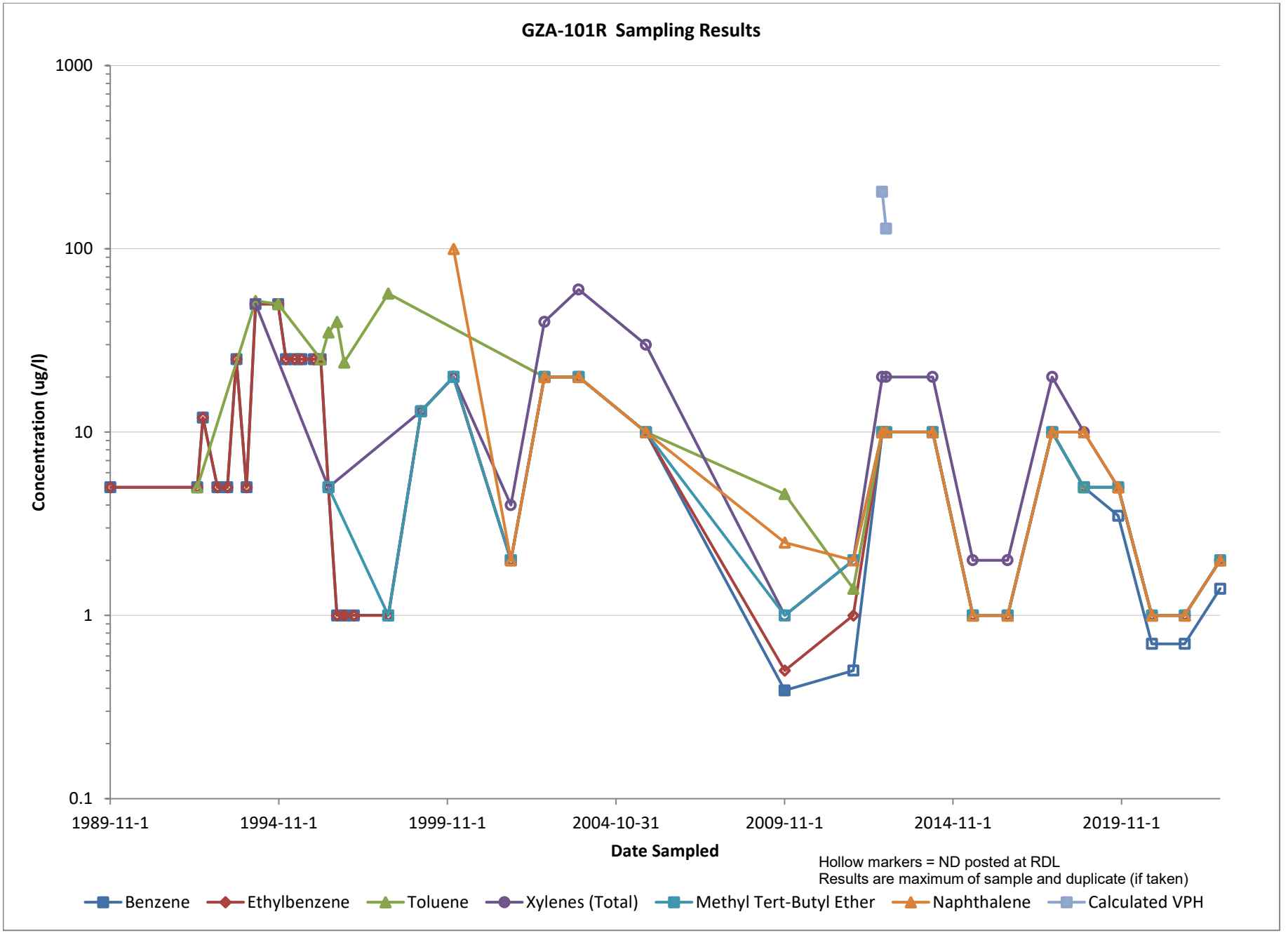

AE29R-3 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-28
2019-1-28
2020-1-28
2021-1-27
2022-1-28
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

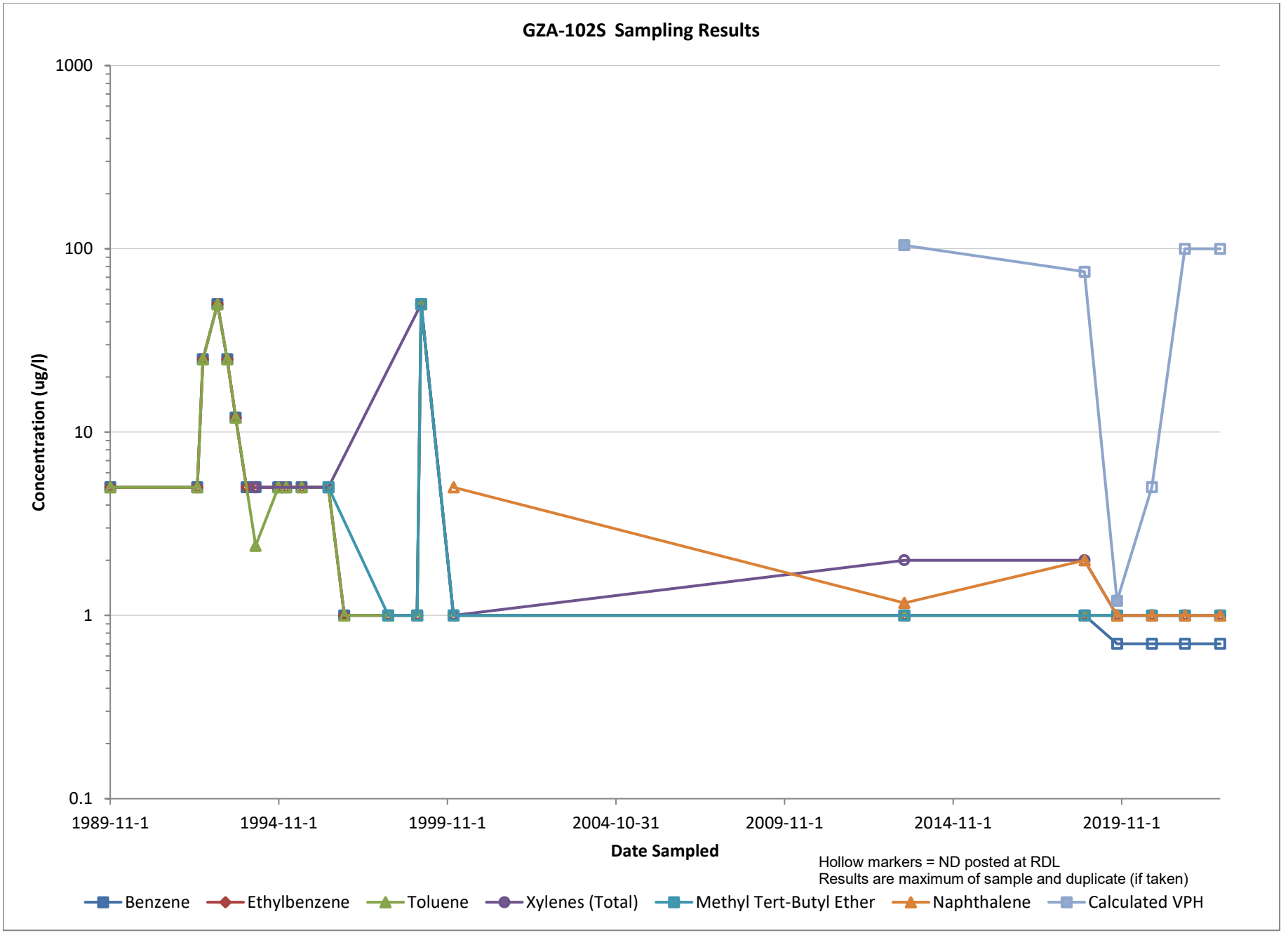

AE29R-5 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

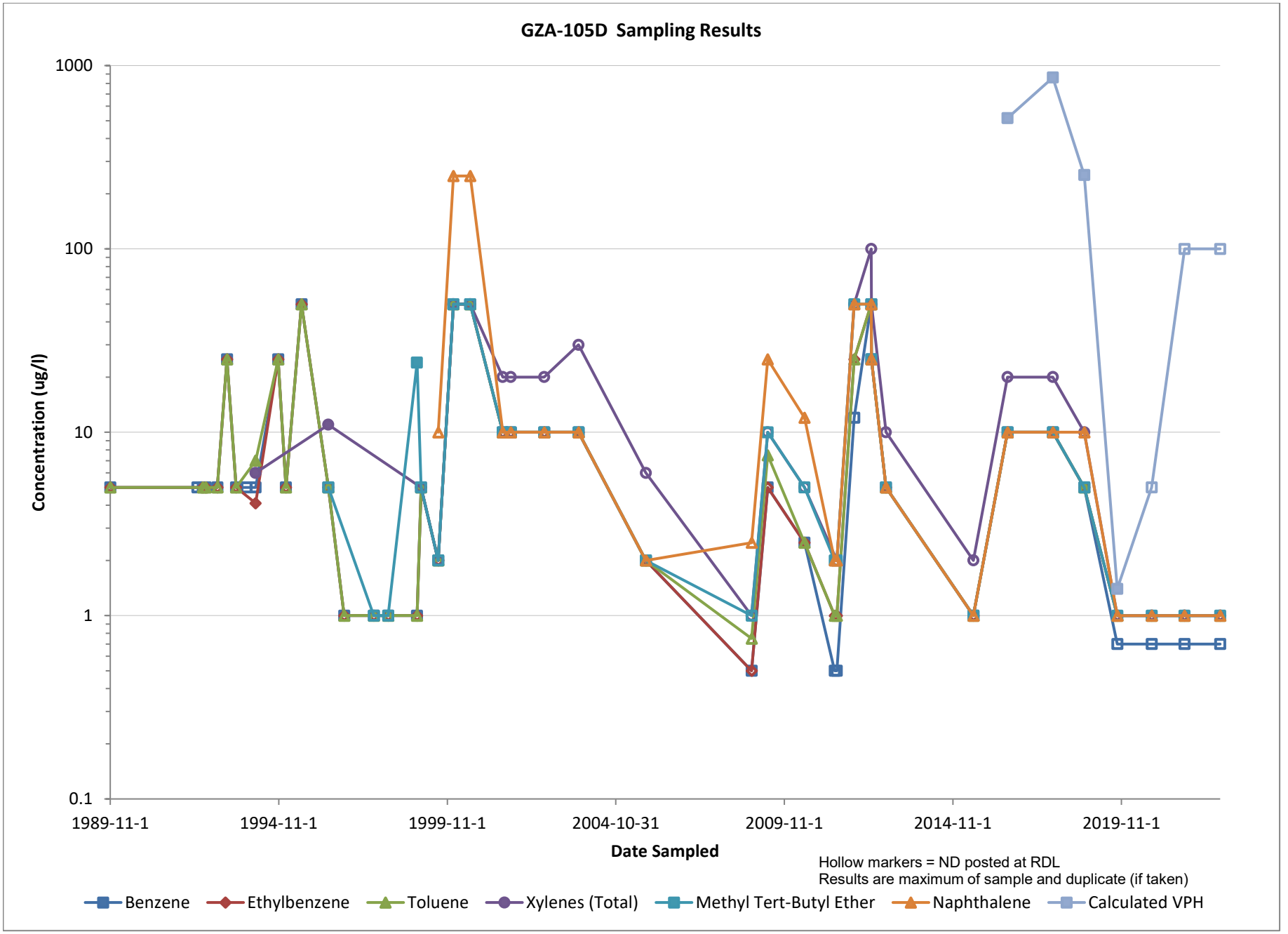

AE29R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

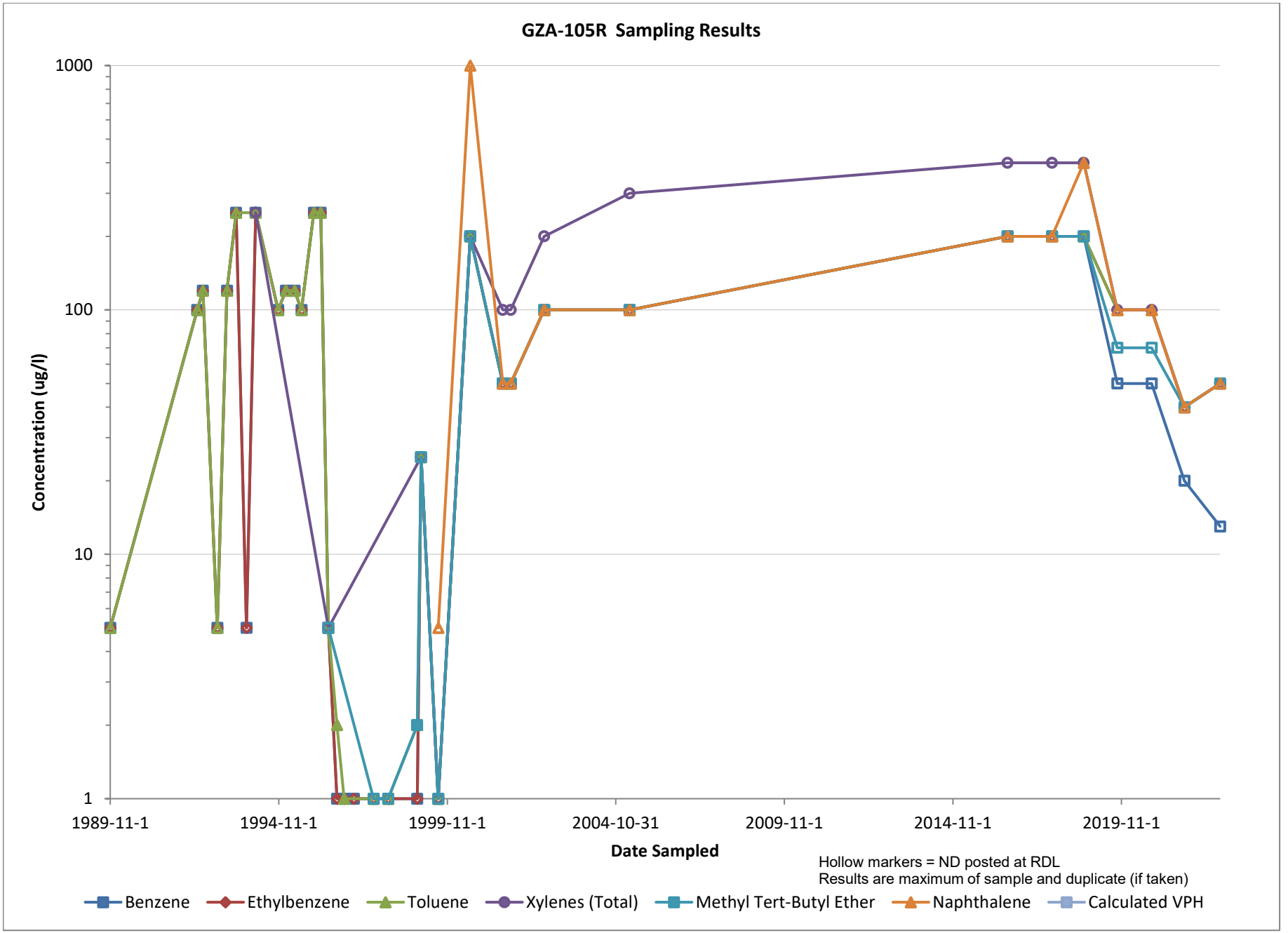

AE2R Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-3-27
2016-3-27
2018-3-27
2020-3-27
2022-3-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

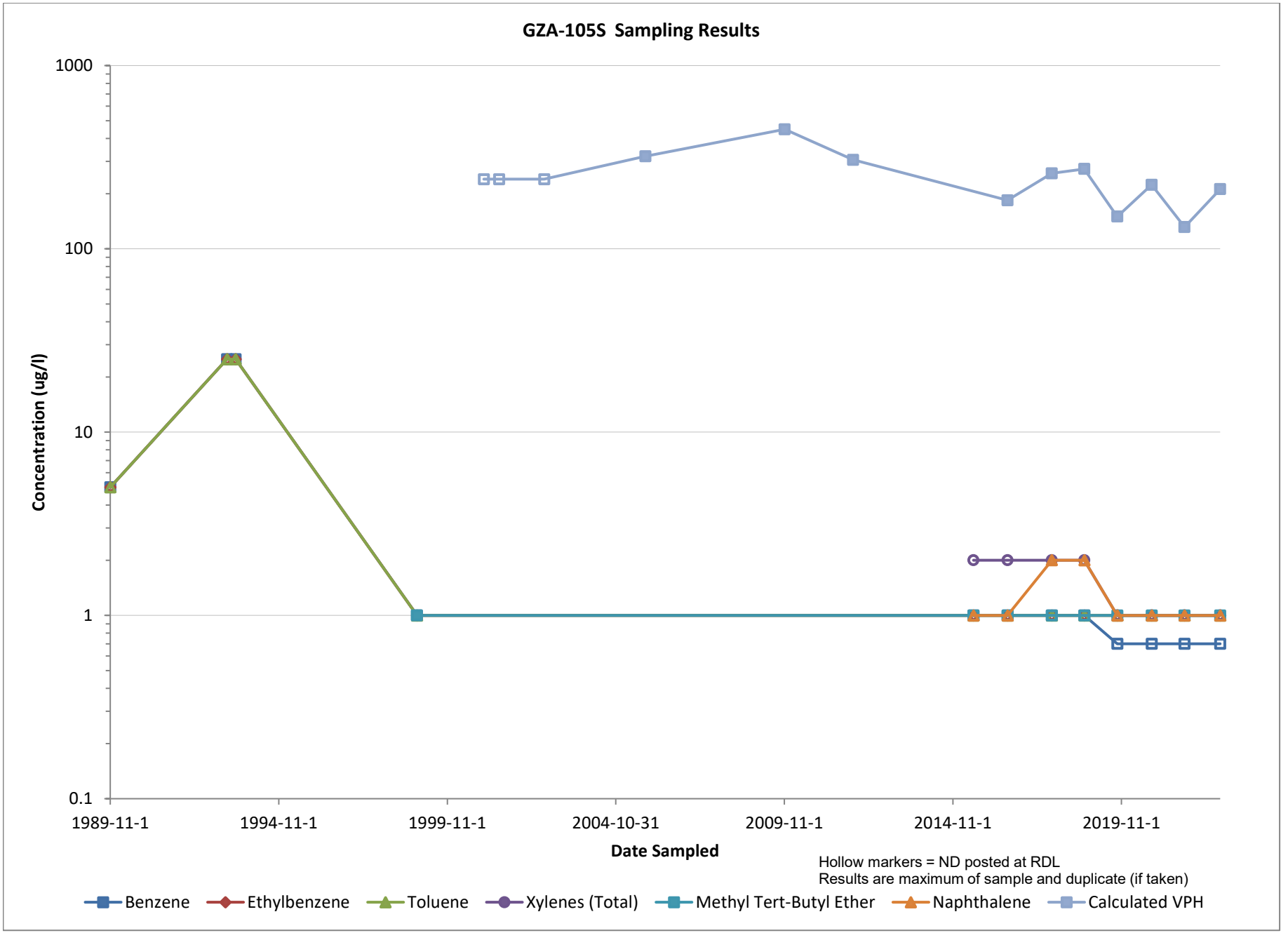

EMW-10D Sampling Results
10
1
0.1
Concentration (ug/l)
1998-12-8
2001-12-7
2004-12-7
2007-12-8
2010-12-8
2013-12-7
2016-12-7
2019-12-8
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

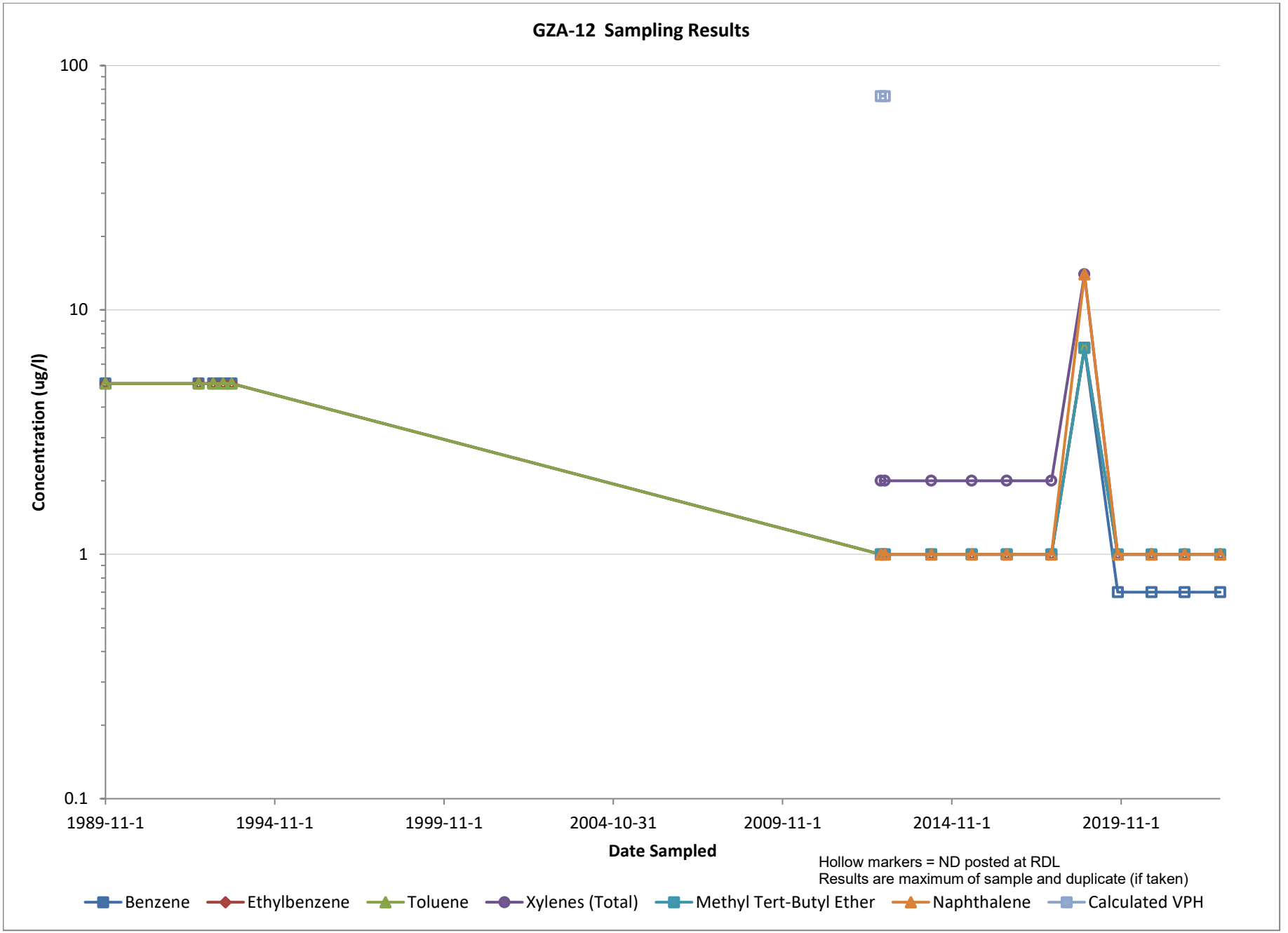

GZA-101R Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

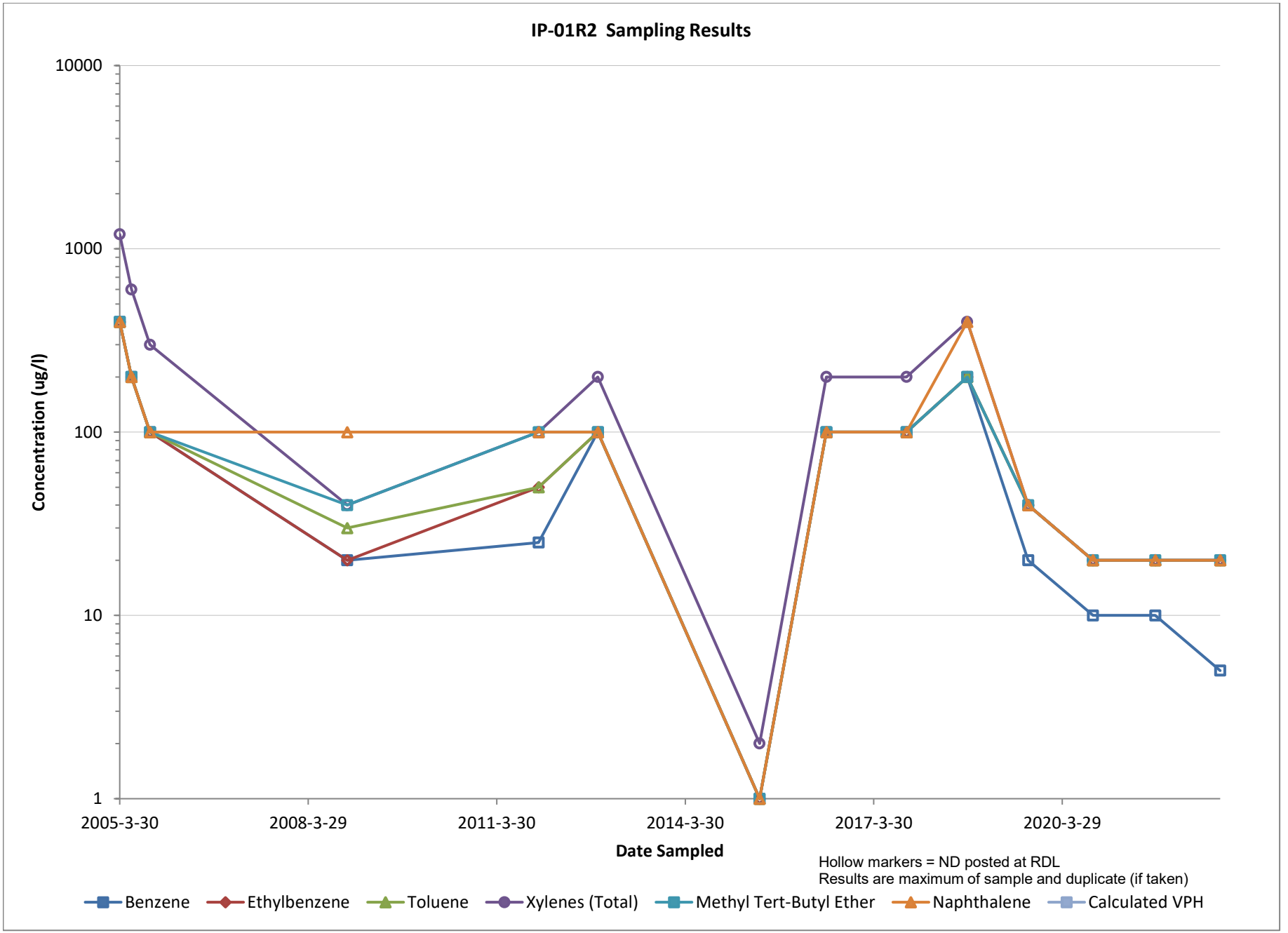

GZA-102S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

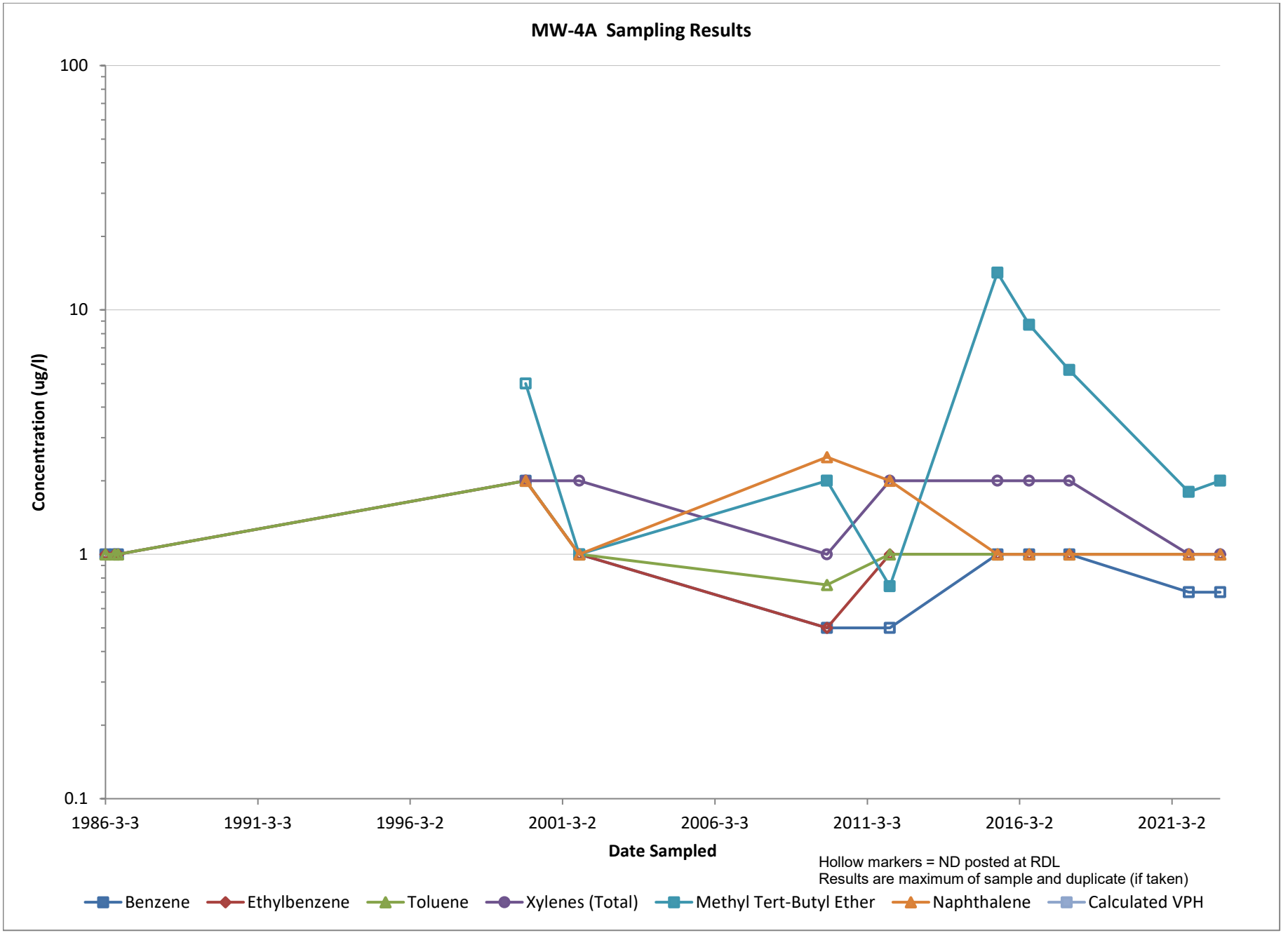

GZA-105D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

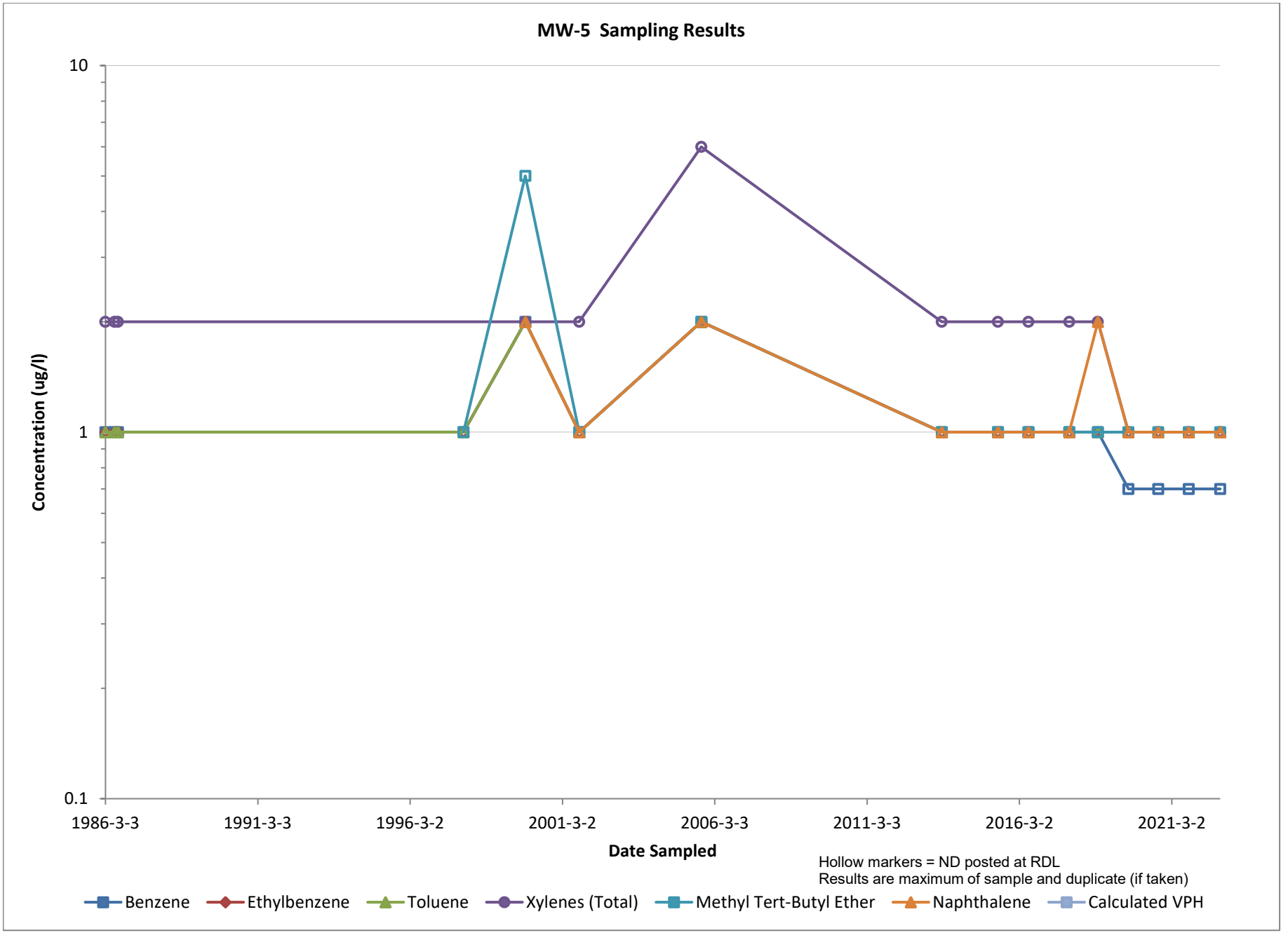

GZA-105R Sampling Results
1000
100
10
1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

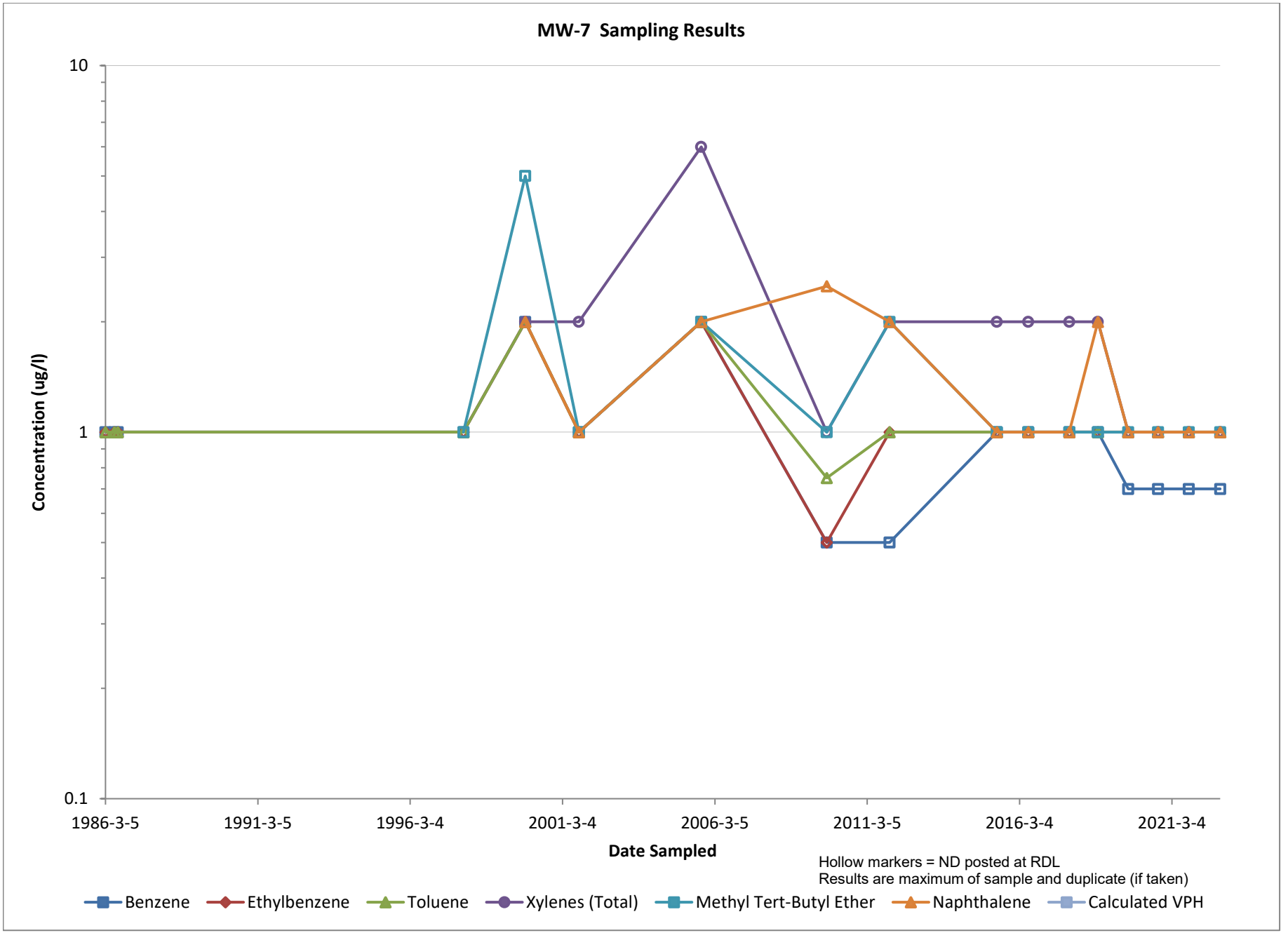

GZA-105S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

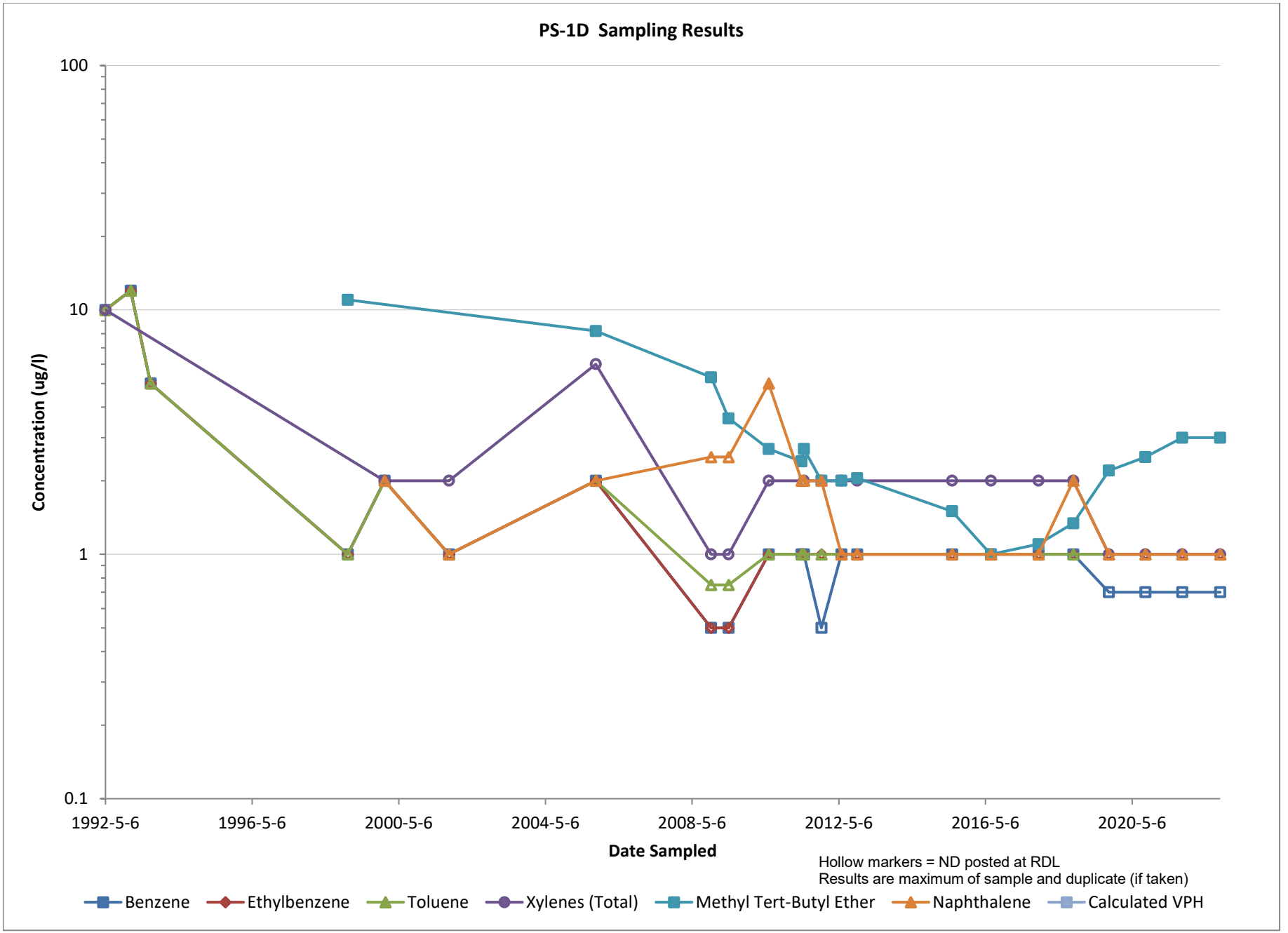

GZA-12 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

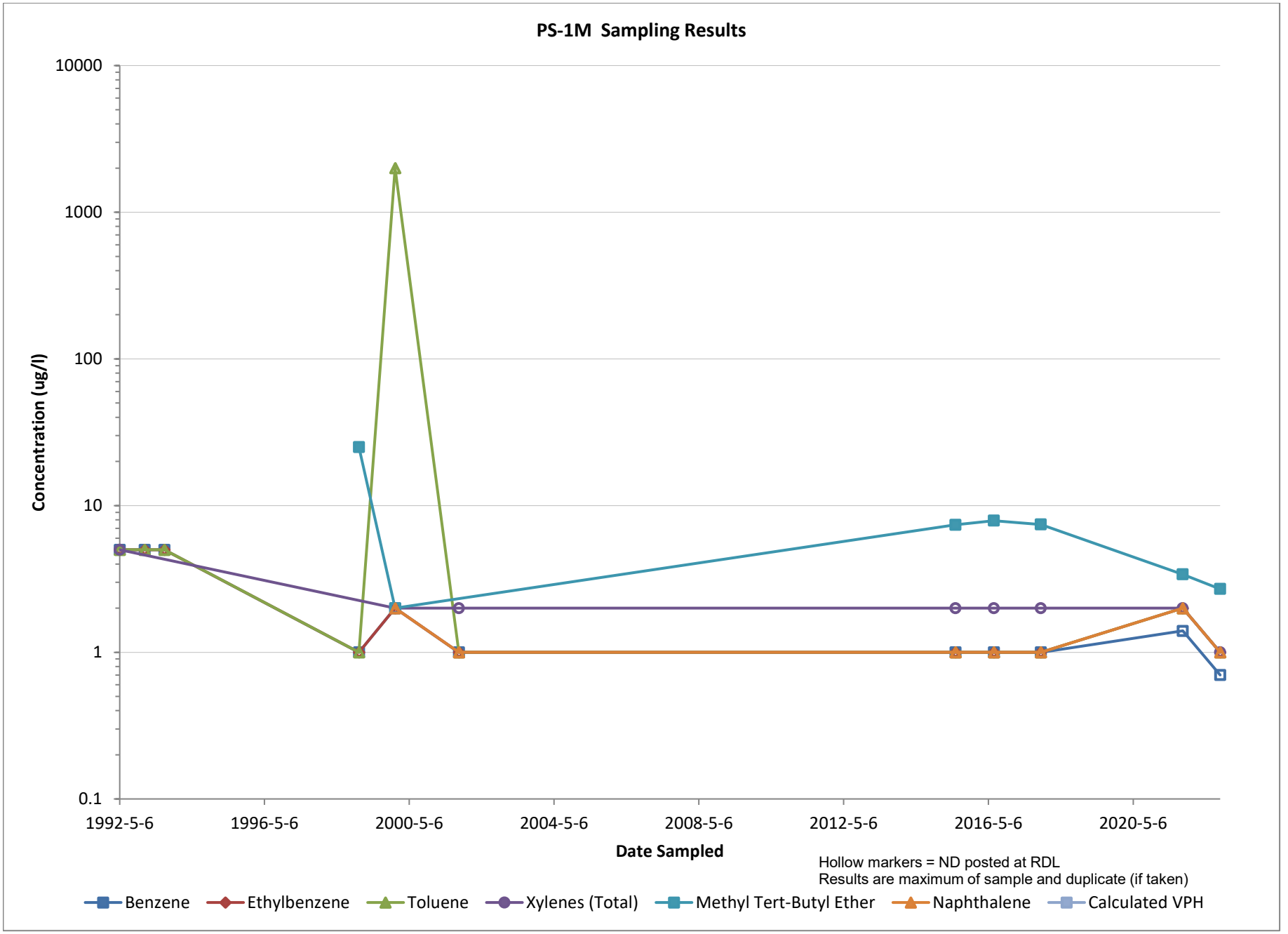

IP-01R2 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2005-3-30
2008-3-29
2011-3-30
2014-3-30
2017-3-30
2020-3-29
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

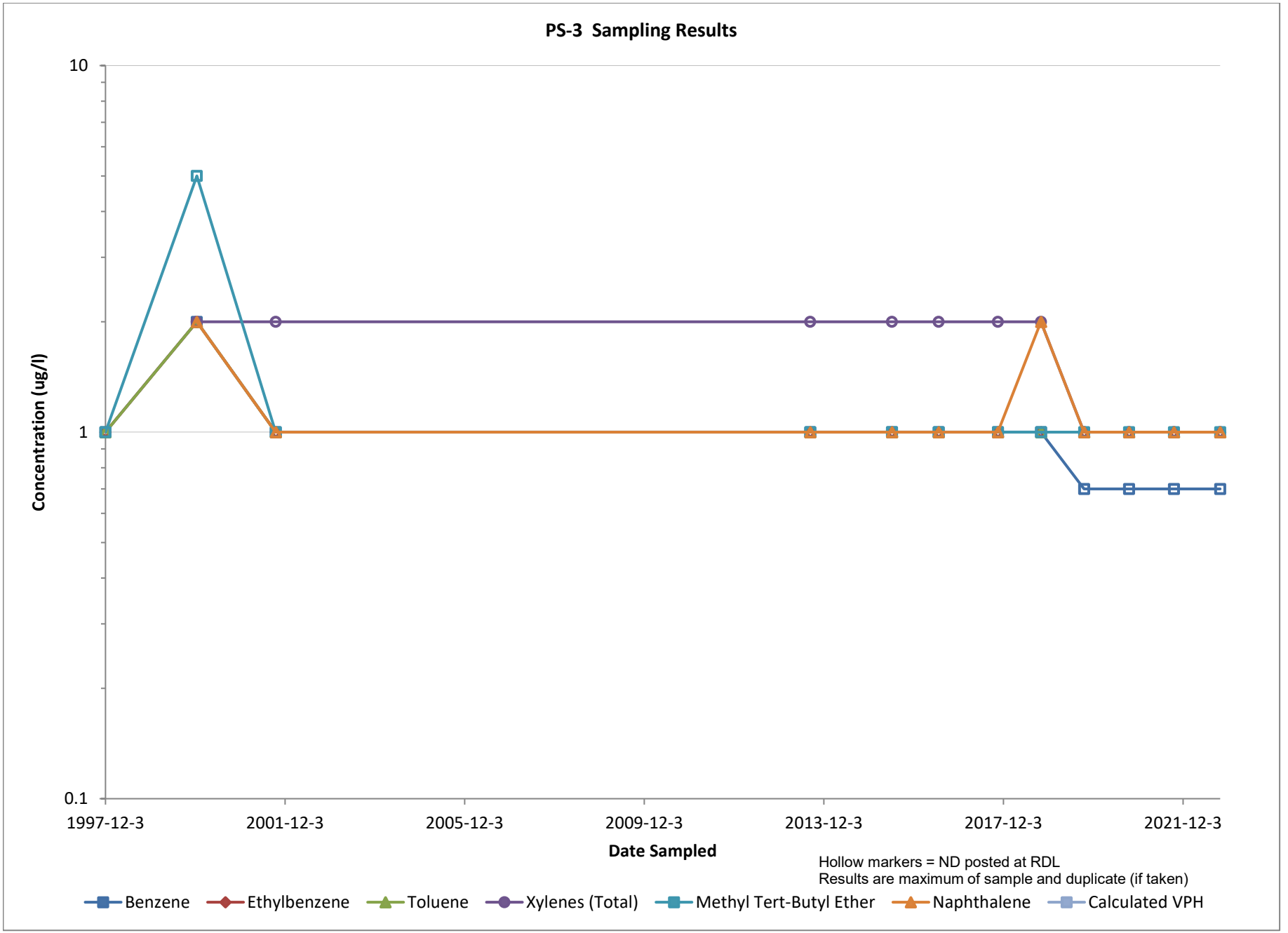

MW-4A Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

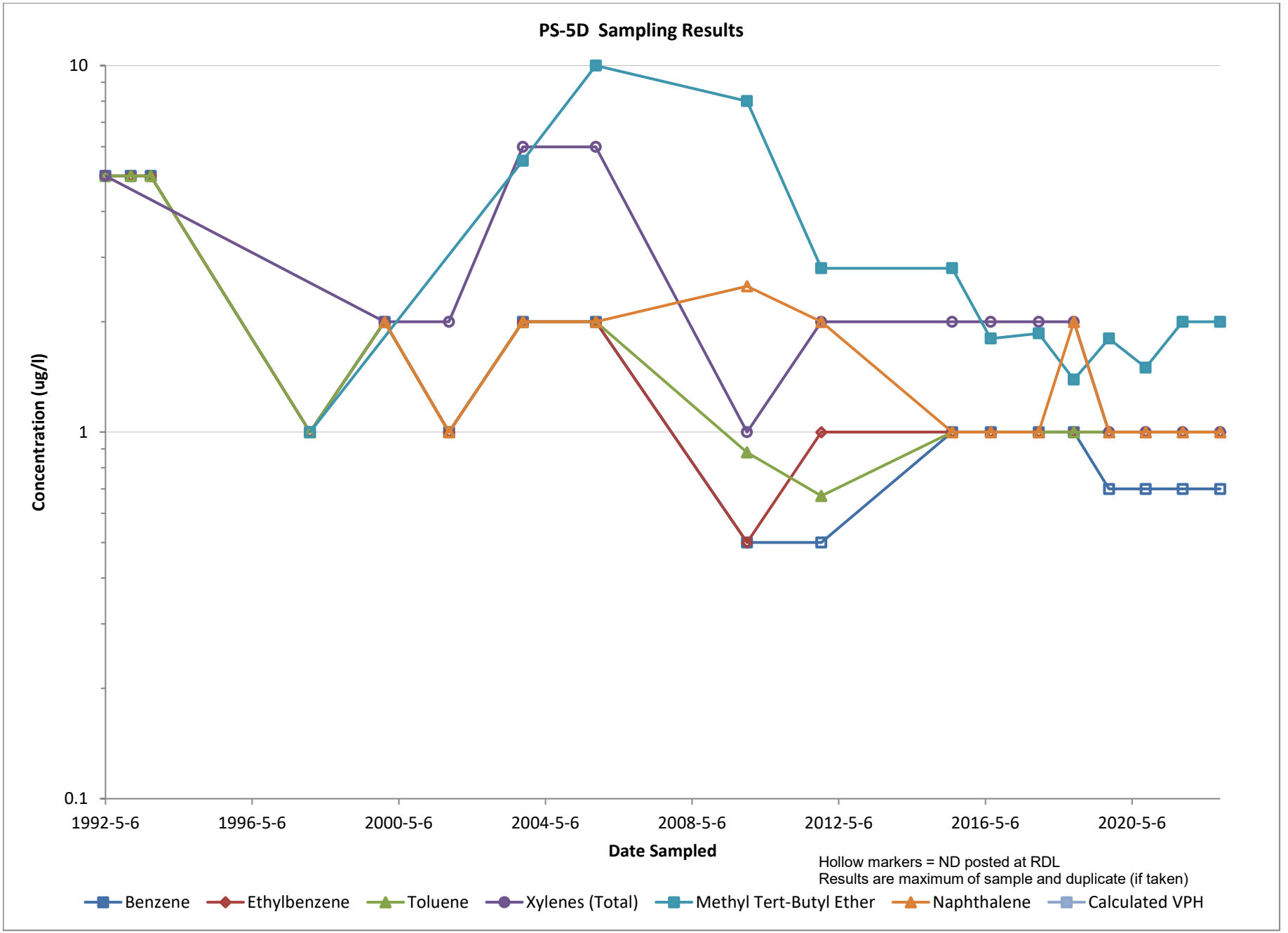

MW-5 Sampling Results
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

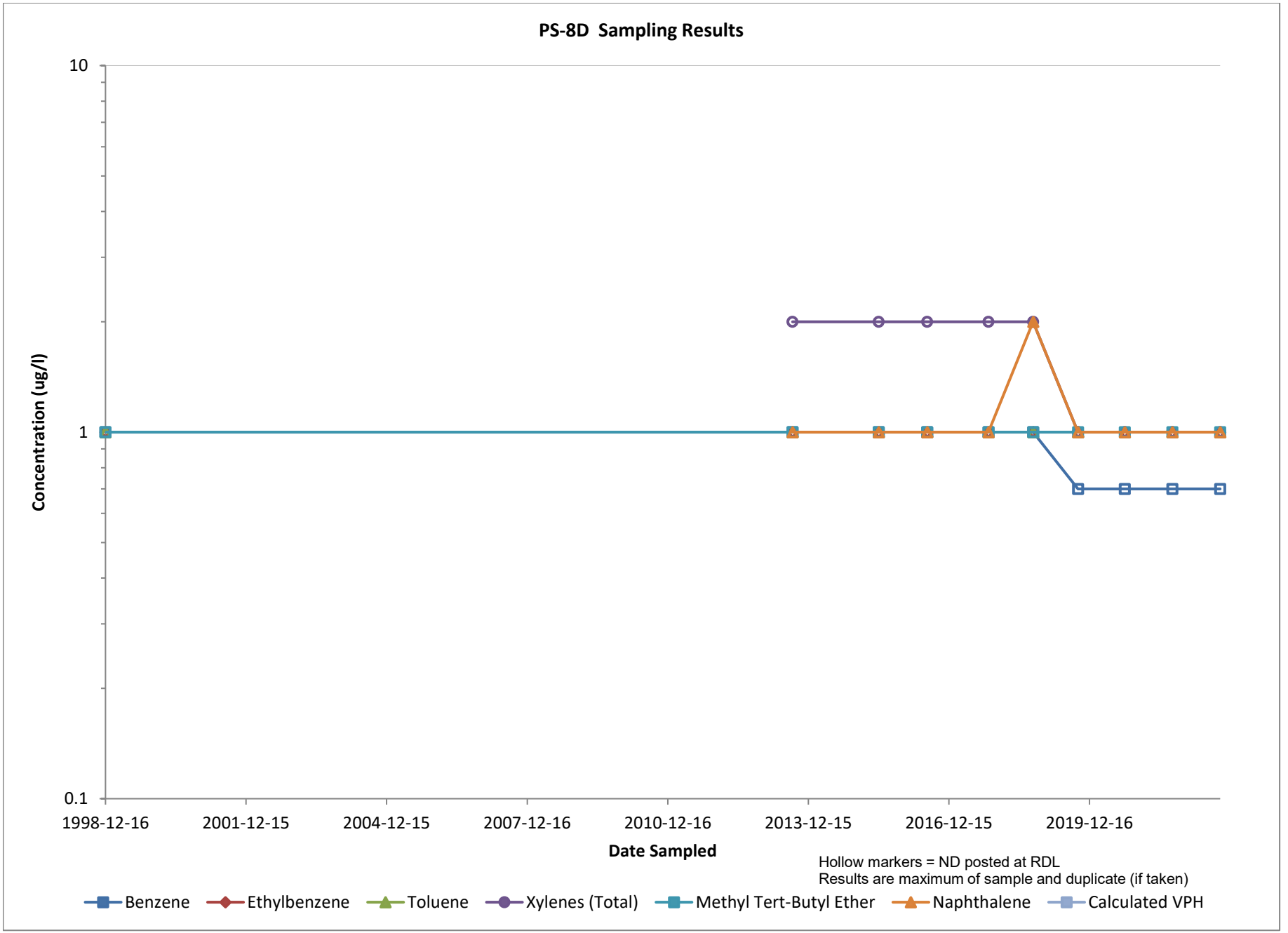

MW-7 Sampling Results
10
1
0.1
Concentration (ug/l)
1986-3-5
1991-3-5
1996-3-4
2001-3-4
2006-3-5
2011-3-5
2016-3-4
2021-3-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

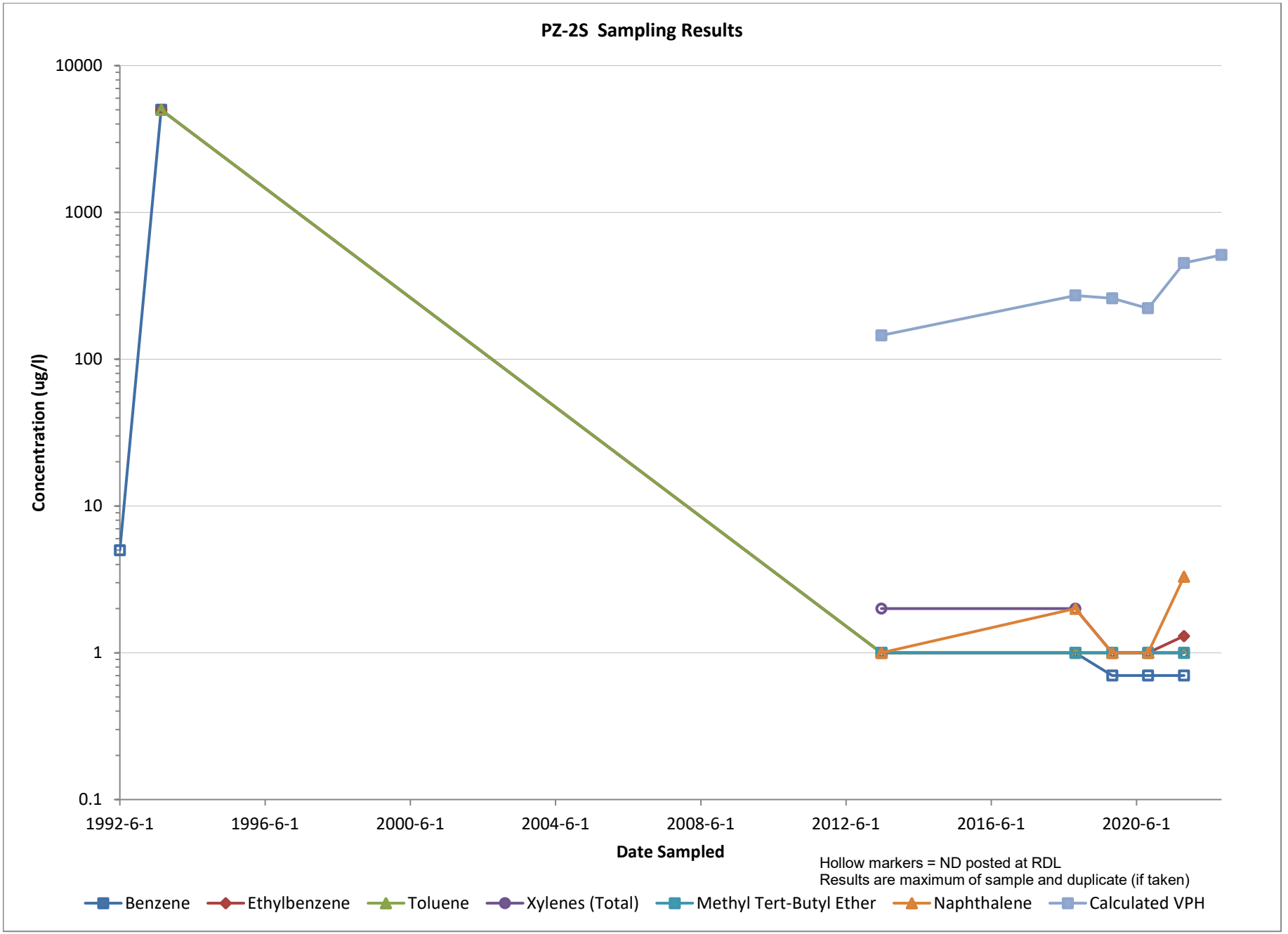

PS-1D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

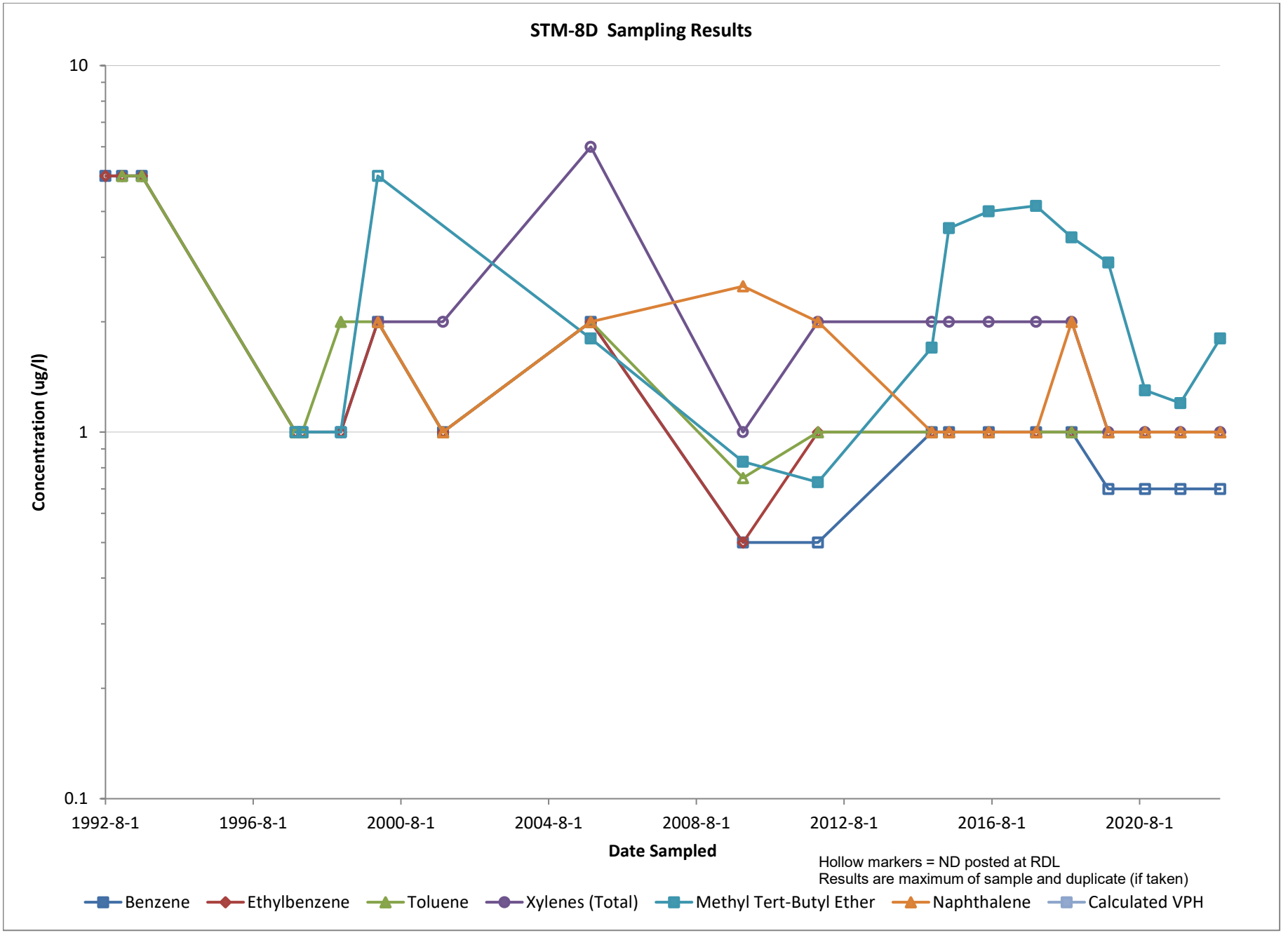

PS-1M Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

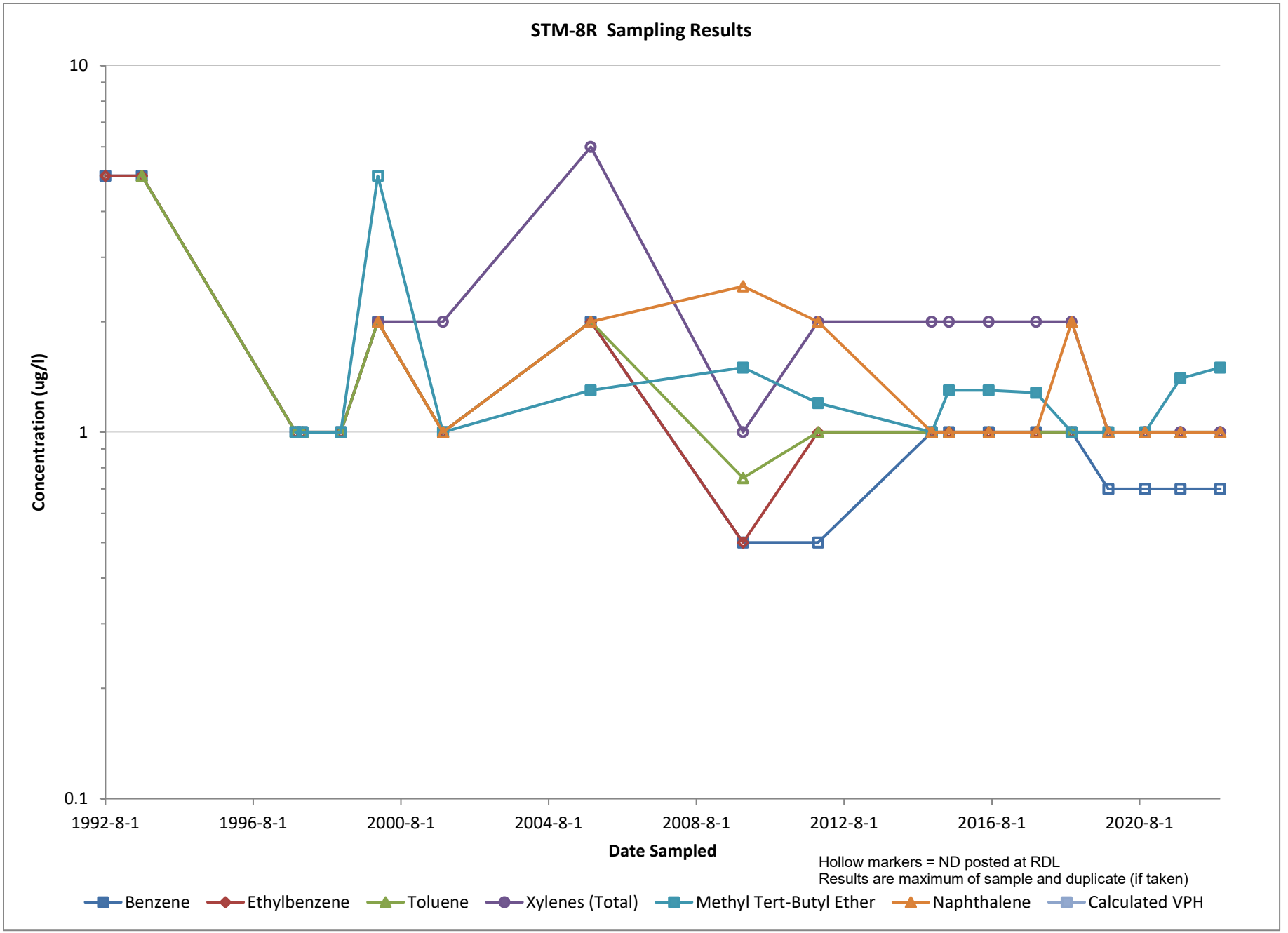

PS-3 Sampling Results
10
1
0.1
Concentration (ug/l)
1997-12-3
2001-12-3
2005-12-3
2009-12-3
2013-12-3
2017-12-3
2021-12-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

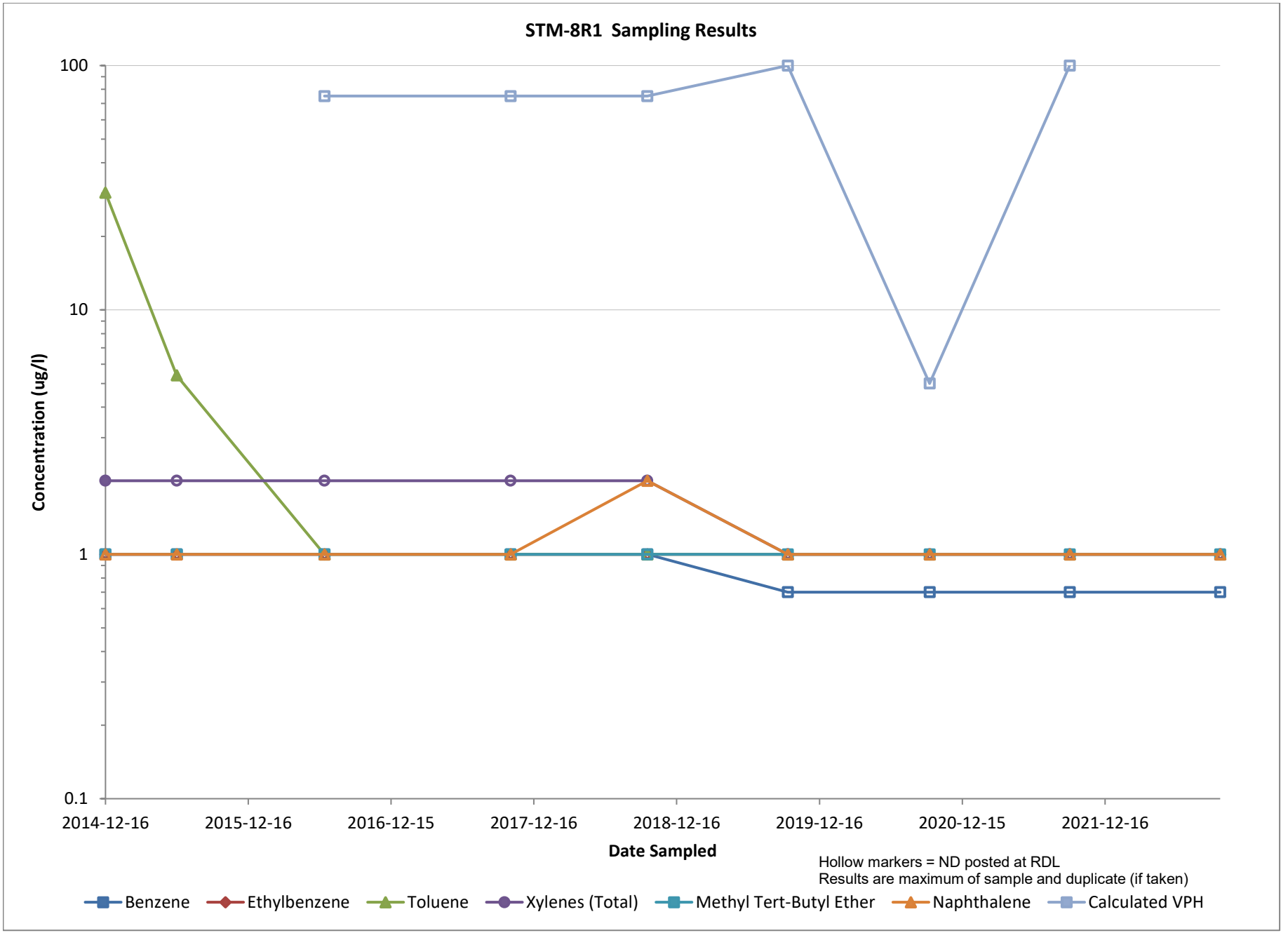

PS-5D Sampling Results
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

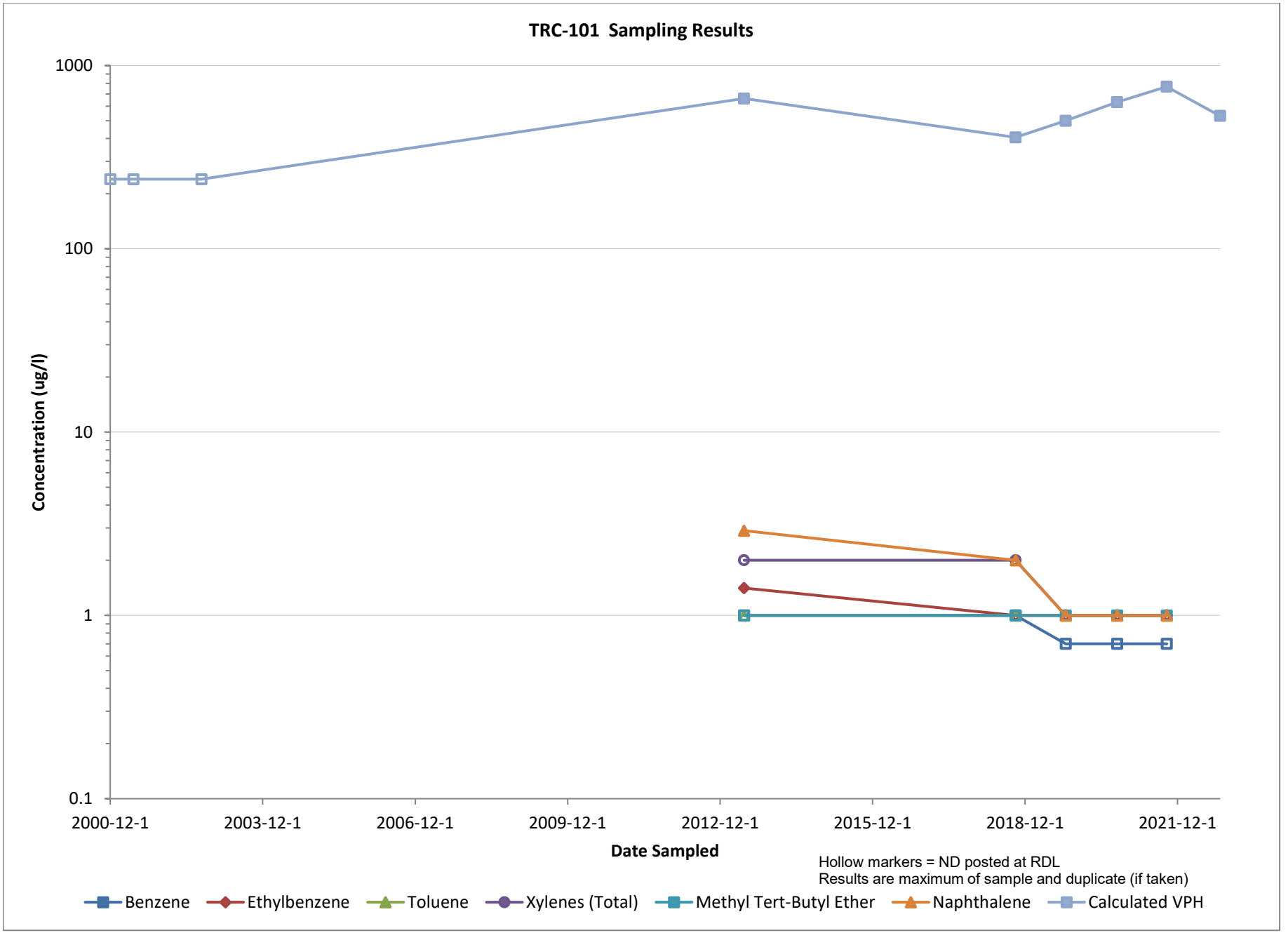

PS-8D Sampling Results
10
1
0.1
Concentration (ug/l)
1998-12-16
2001-12-15
2004-12-15
2007-12-16
2010-12-16
2013-12-15
2016-12-15
2019-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

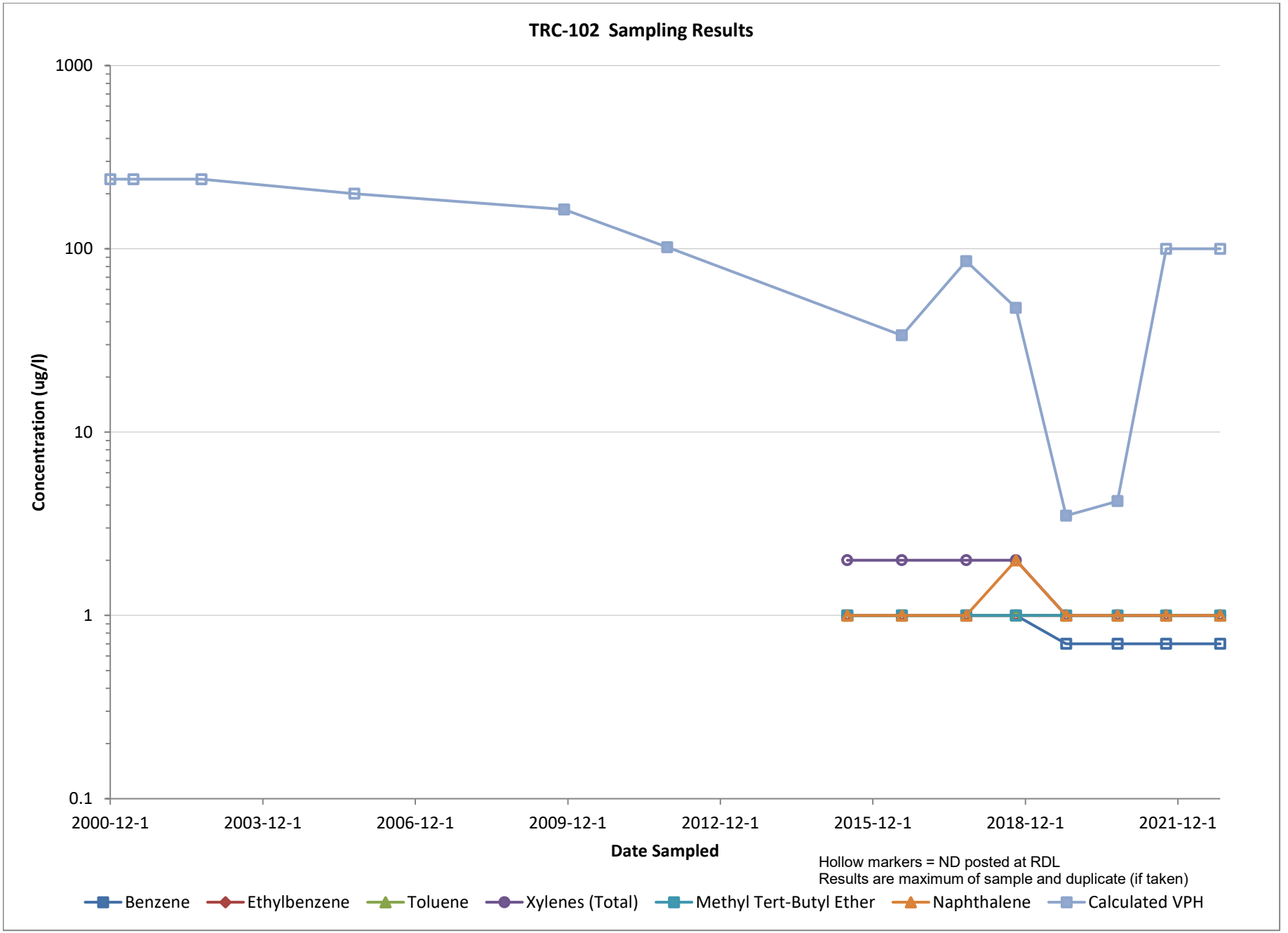

PZ-2S Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1992-6-1
1996-6-1
2000-6-1
2004-6-1
2008-6-1
2012-6-1
2016-6-1
2020-6-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

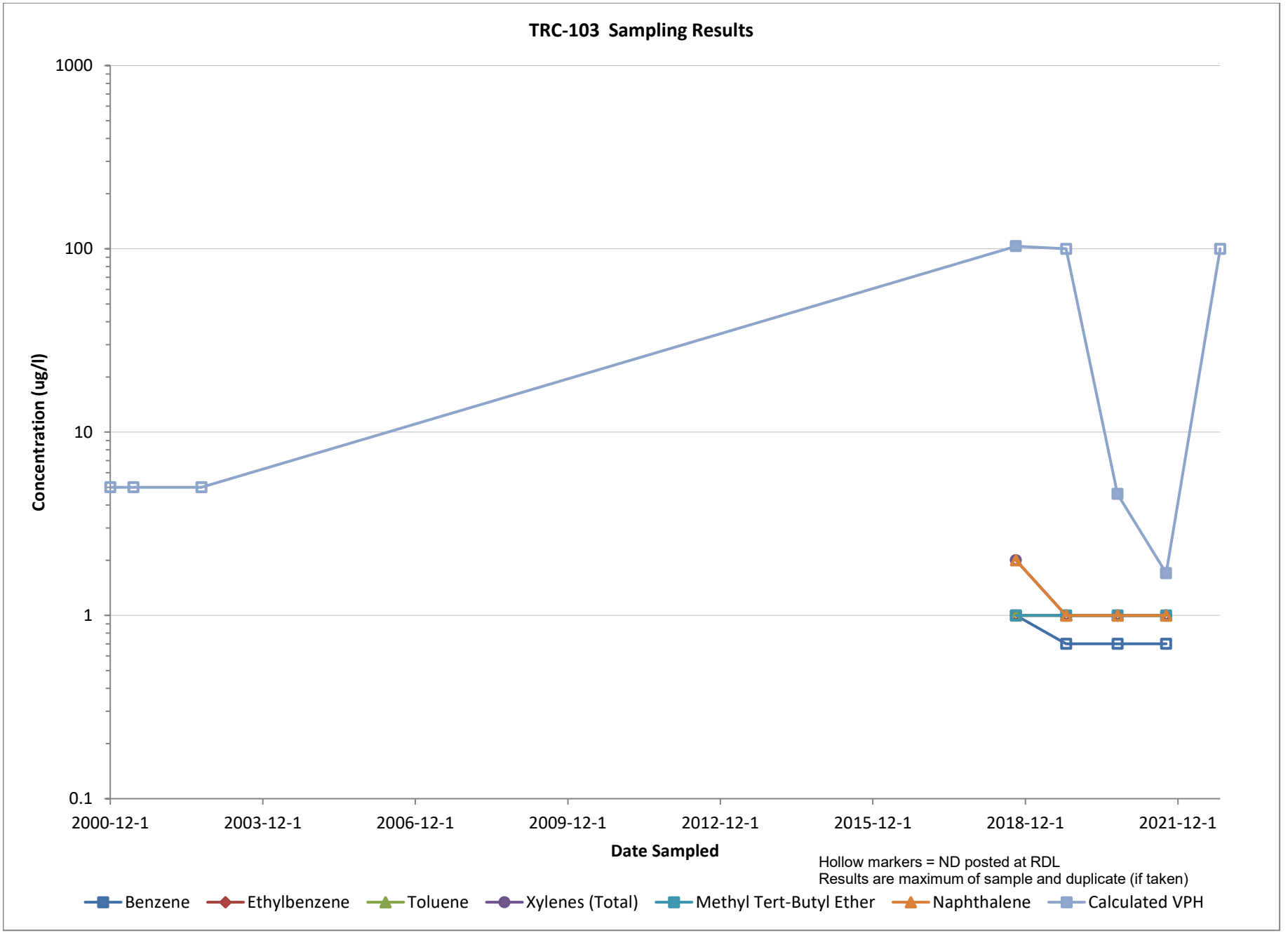

STM-8D Sampling Results
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

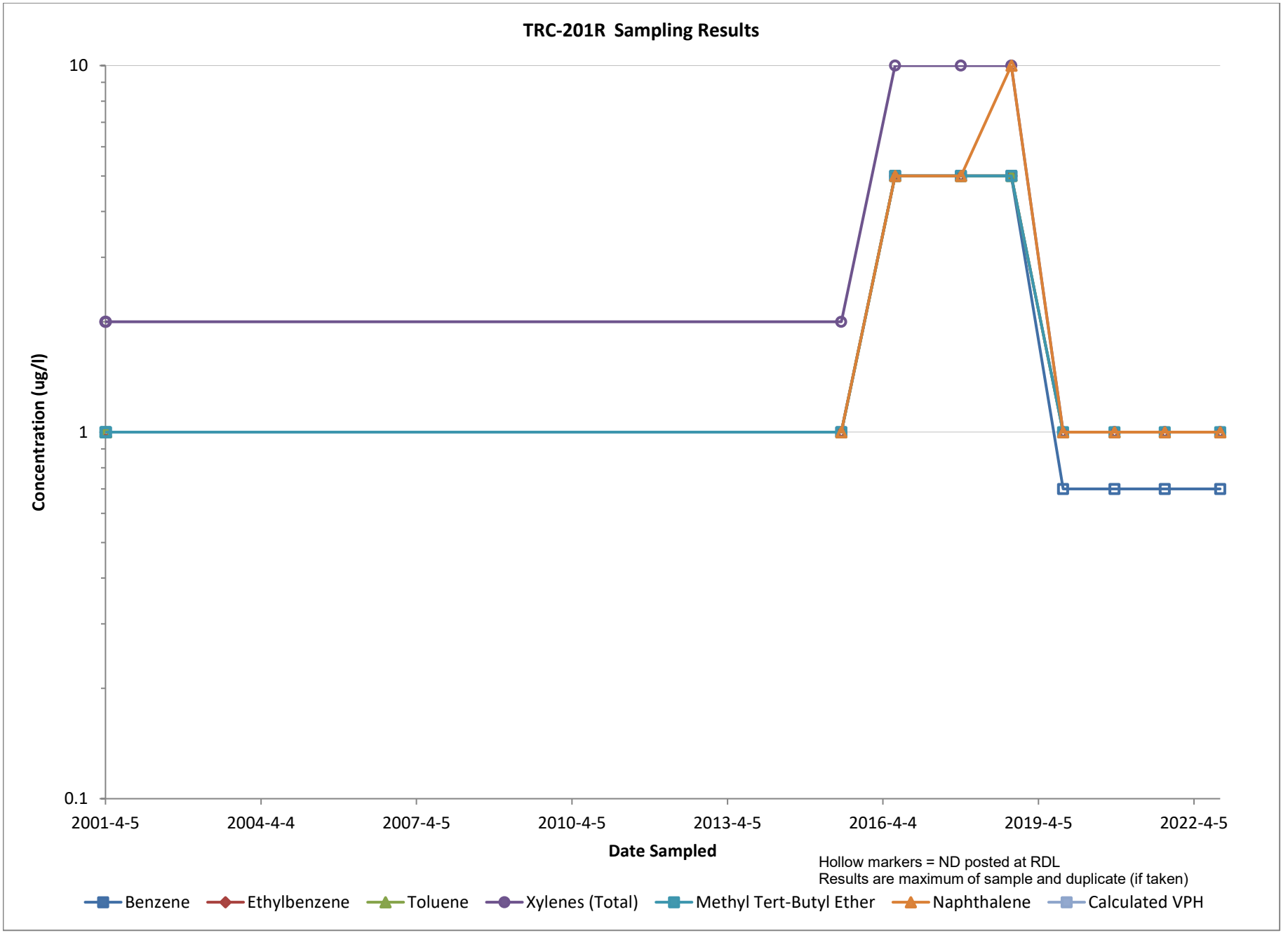

STM-8R Sampling Results
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

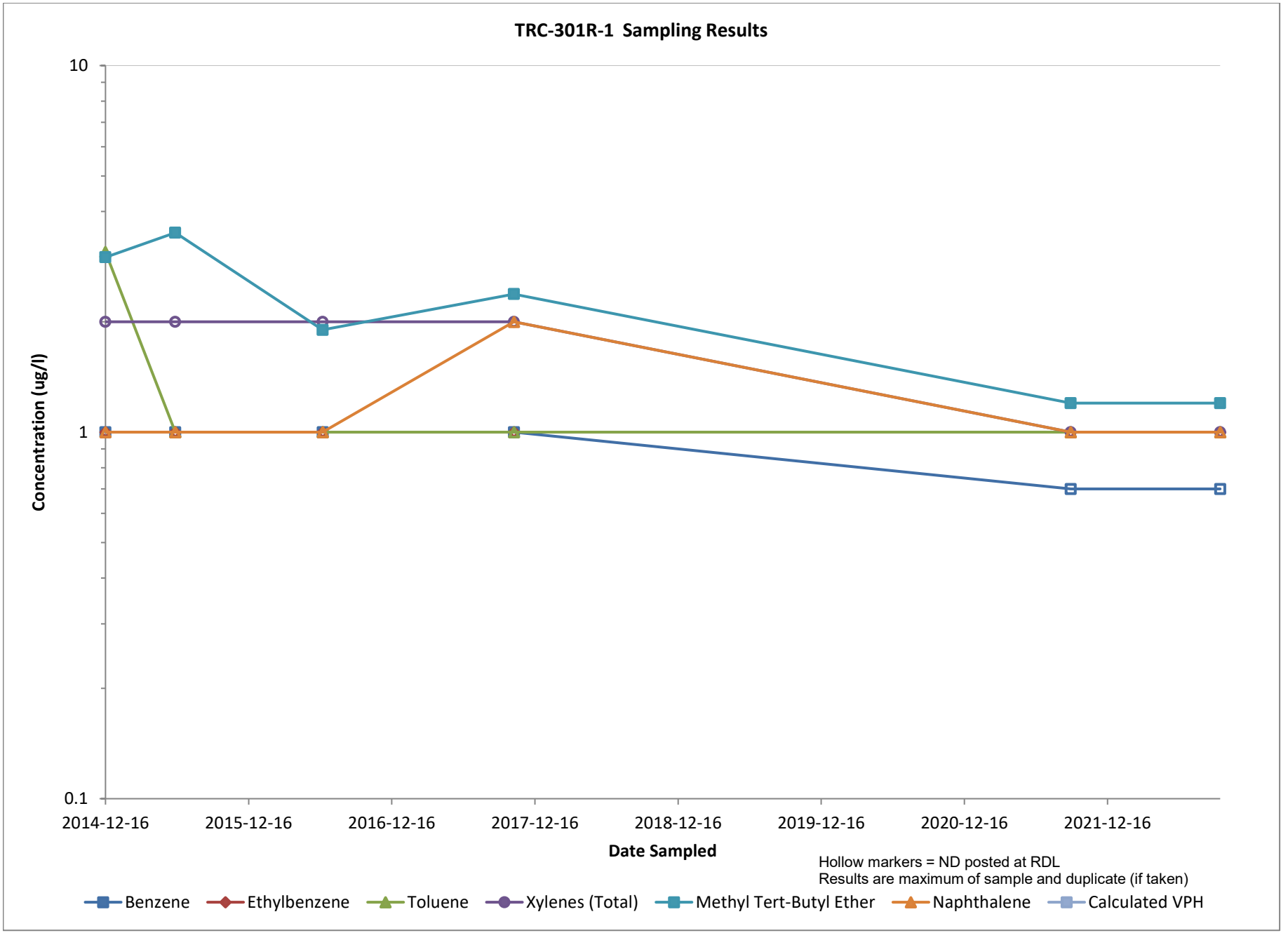

STM-8R1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-15
2017-12-16
2018-12-16
2019-12-16
2020-12-15
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

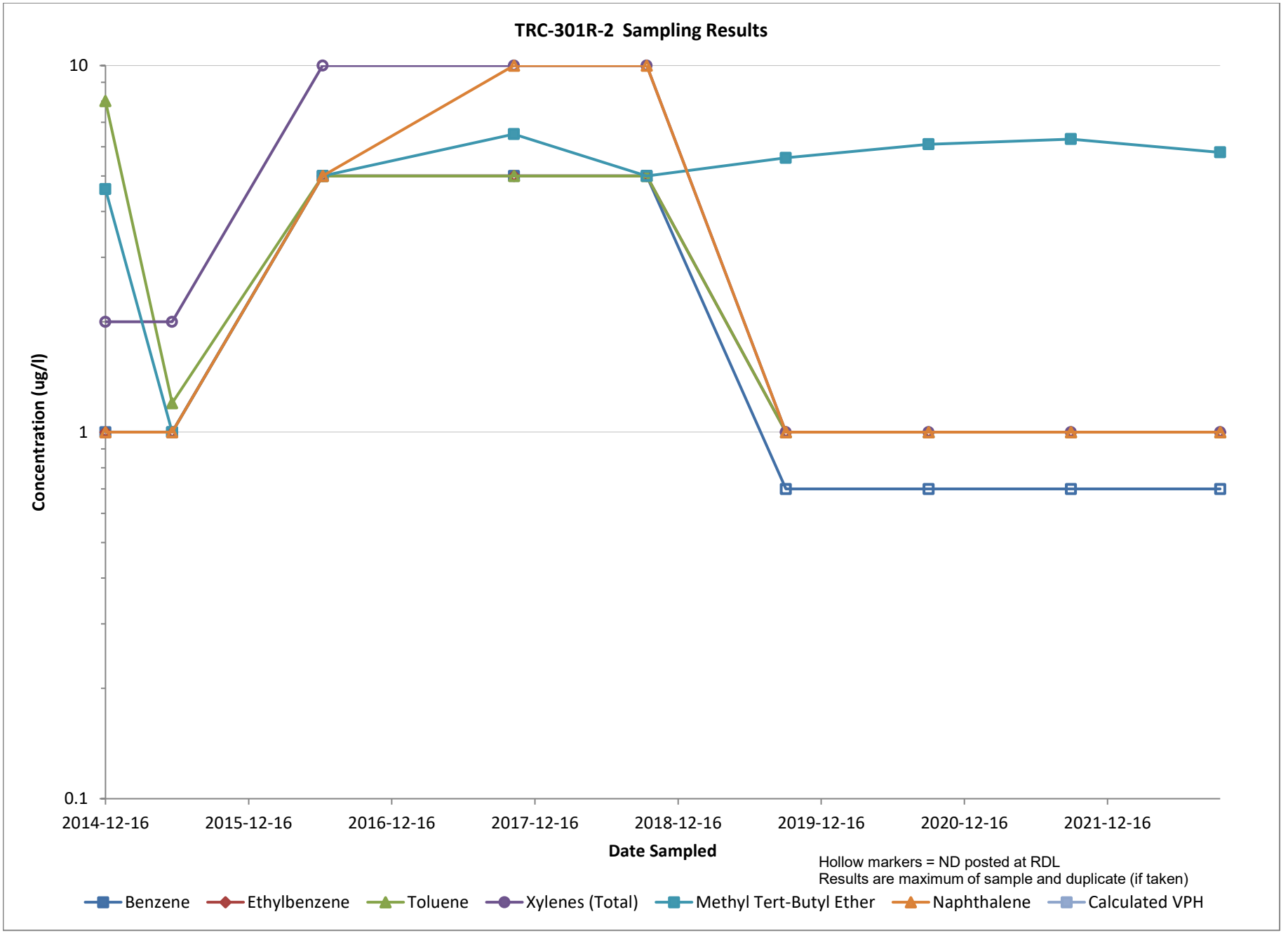

TRC-101 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2000-12-1
2003-12-1
2006-12-1
2009-12-1
2012-12-1
2015-12-1
2018-12-1
2021-12-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

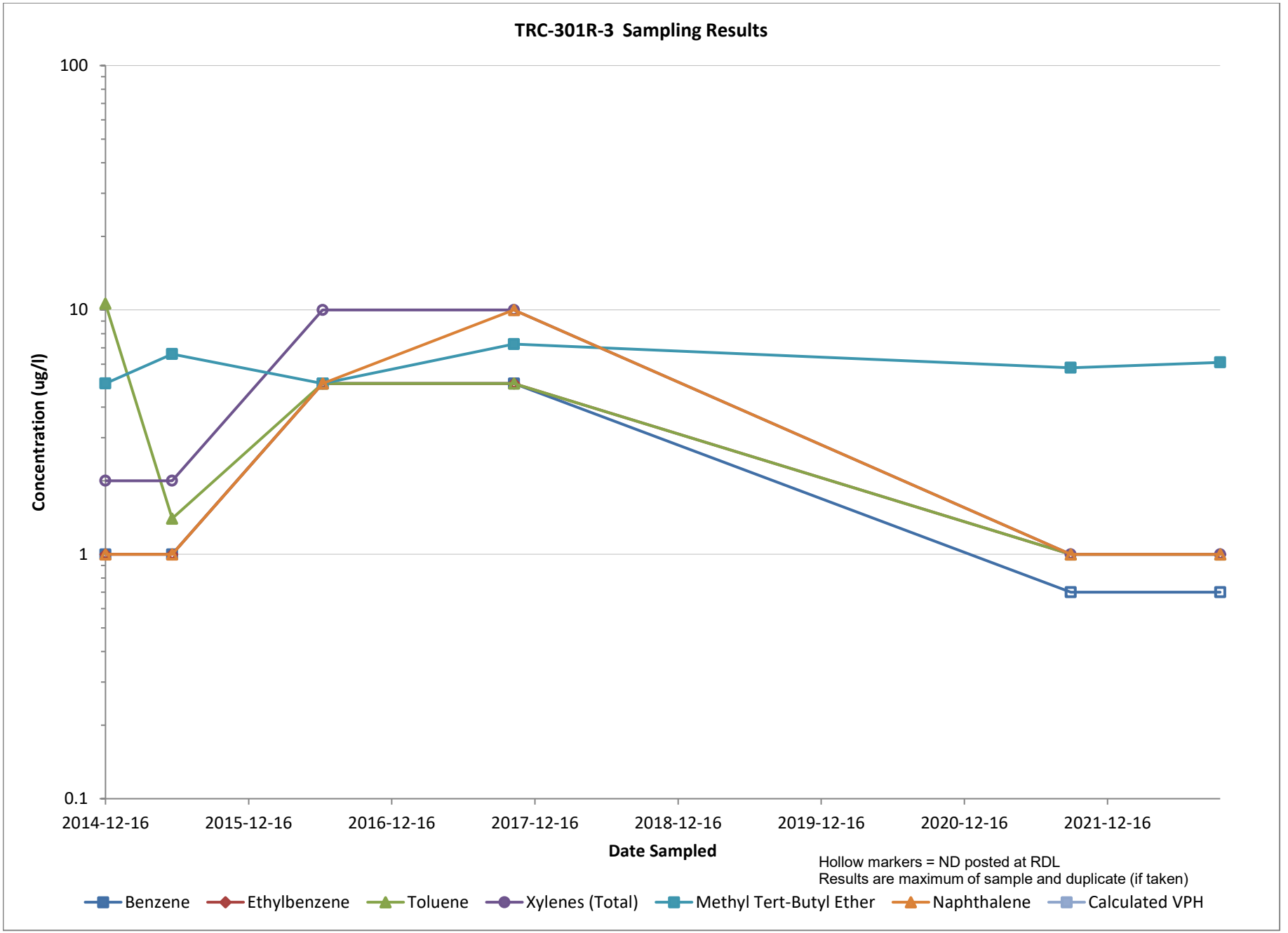

TRC-102 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2000-12-1
2003-12-1
2006-12-1
2009-12-1
2012-12-1
2015-12-1
2018-12-1
2021-12-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

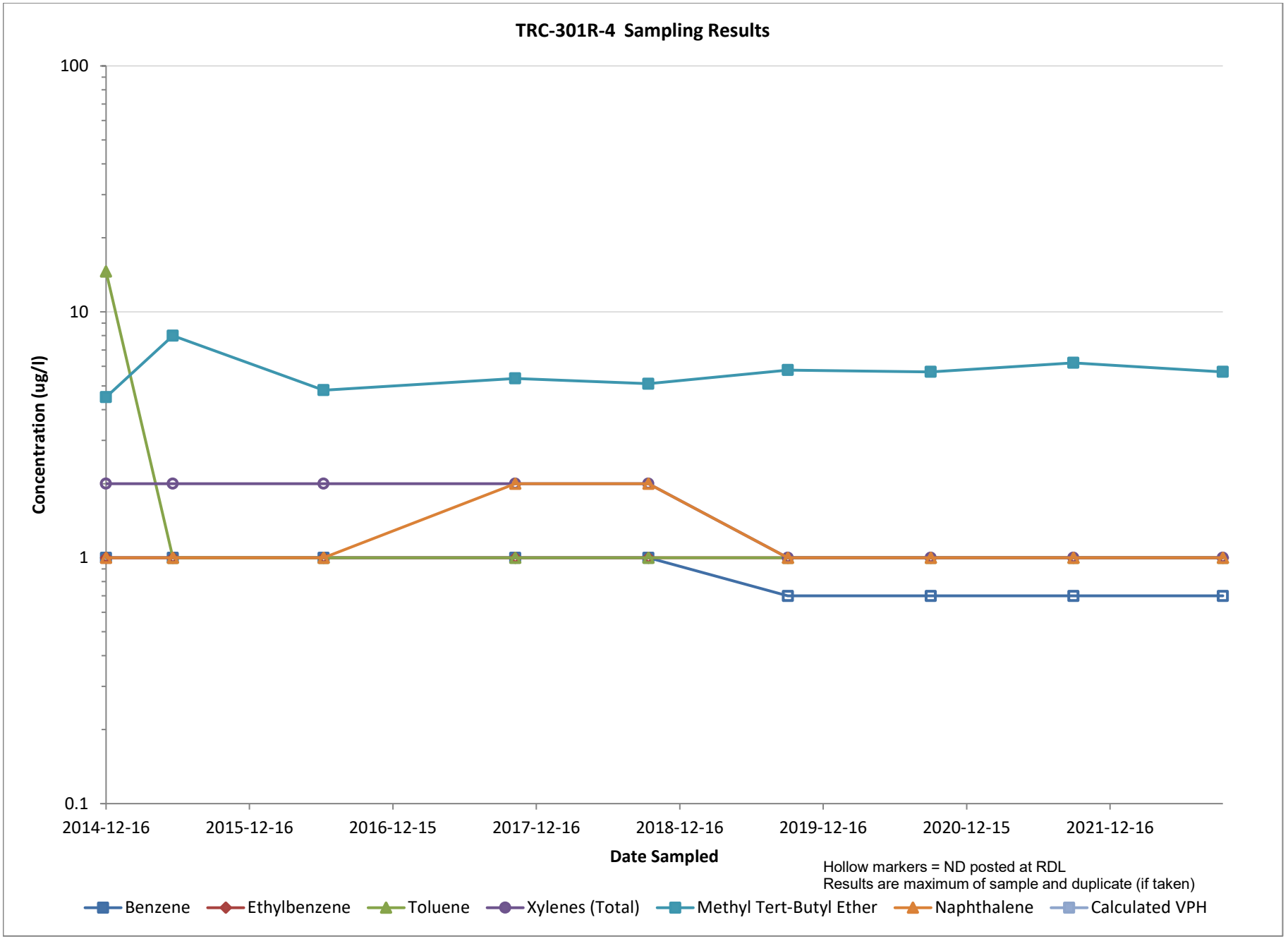

TRC-103 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2000-12-1
2003-12-1
2006-12-1
2009-12-1
2012-12-1
2015-12-1
2018-12-1
2021-12-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH


TRC-201R Sampling Results
10
1
0.1
Concentration (ug/l)
2001-4-5
2004-4-4
2007-4-5
2010-4-5
2013-4-5
2016-4-4
2019-4-5
2022-4-5
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

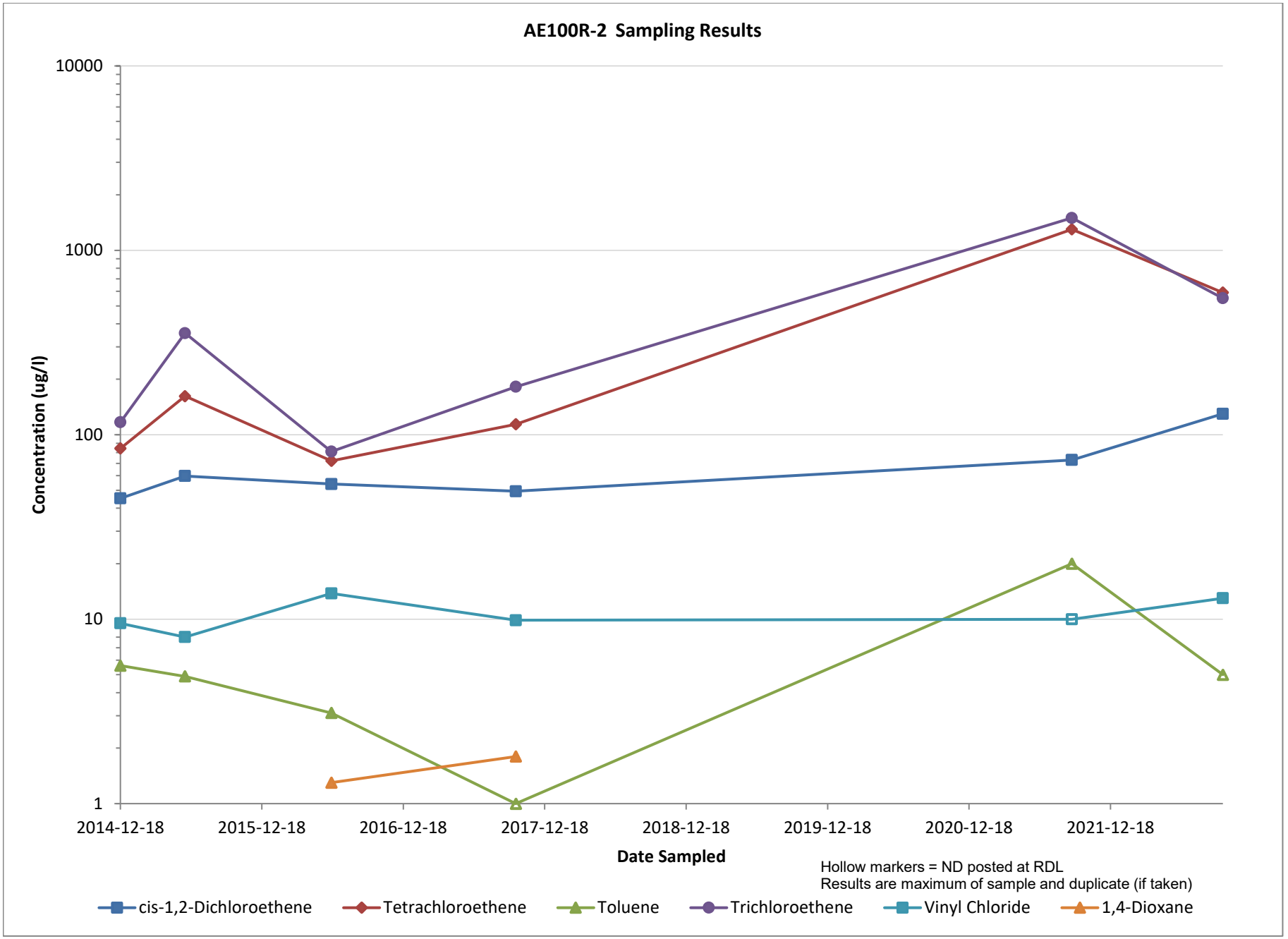

TRC-301R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

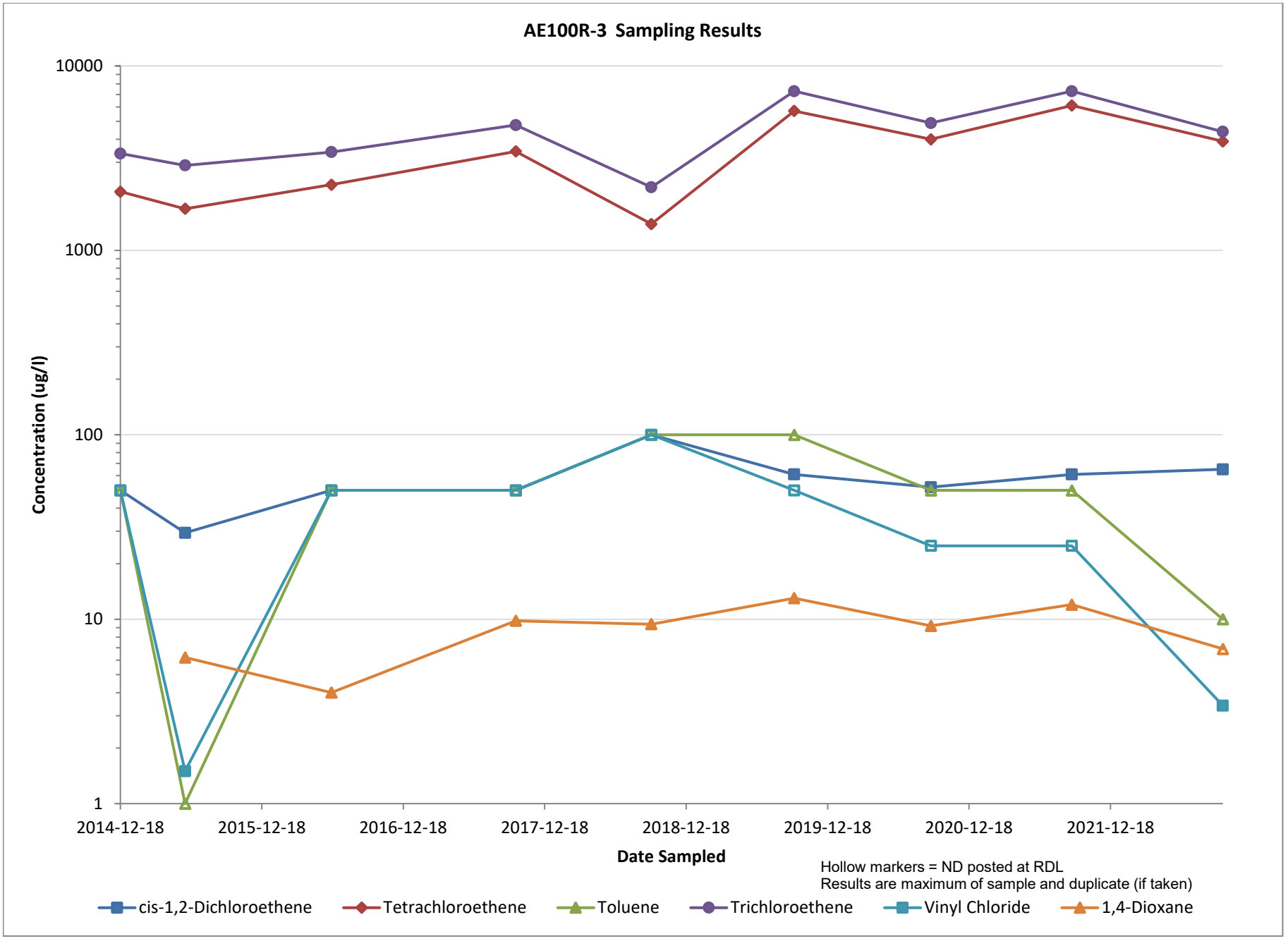

TRC-301R-2 Sampling Results
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

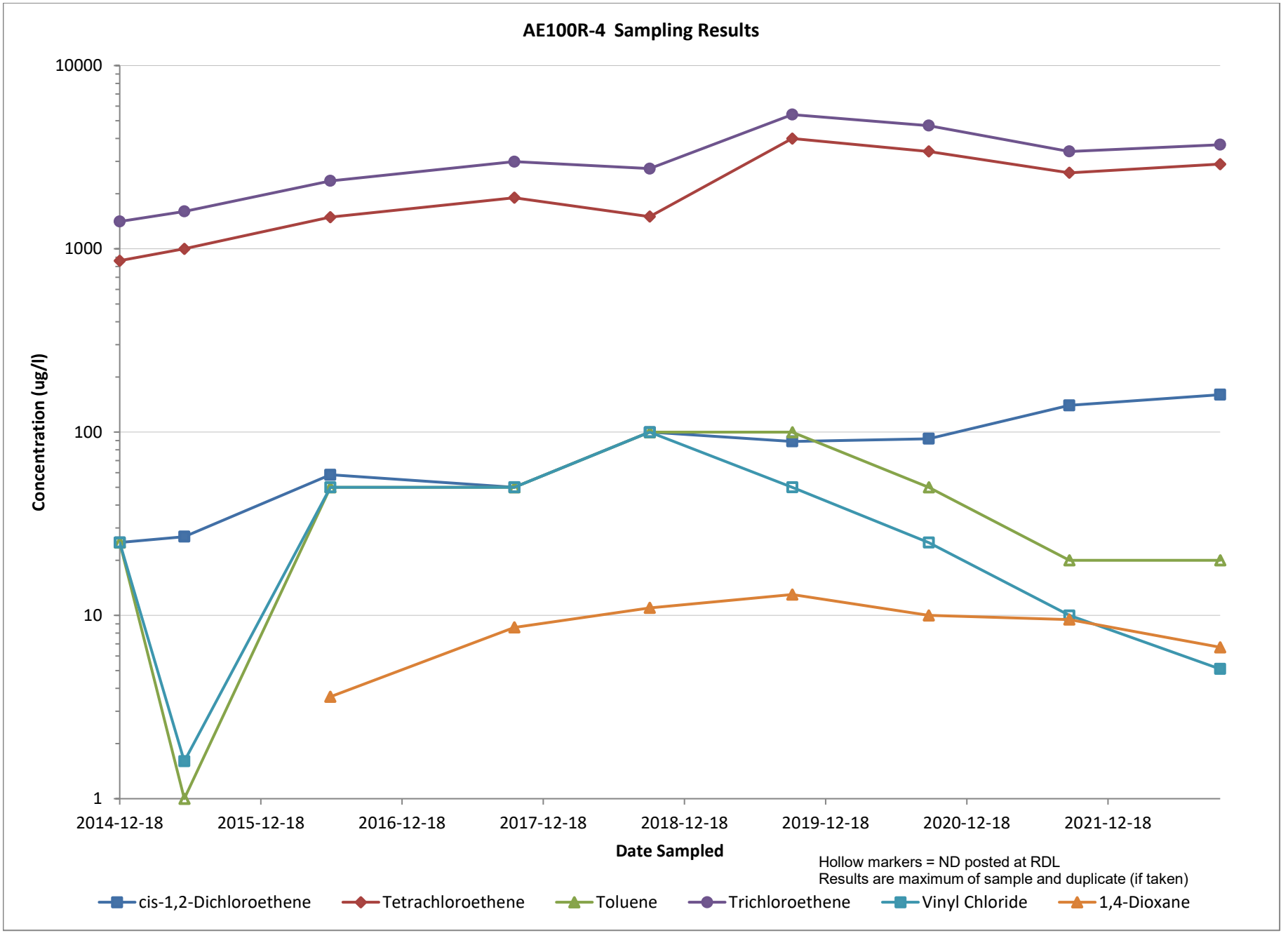

TRC-301R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

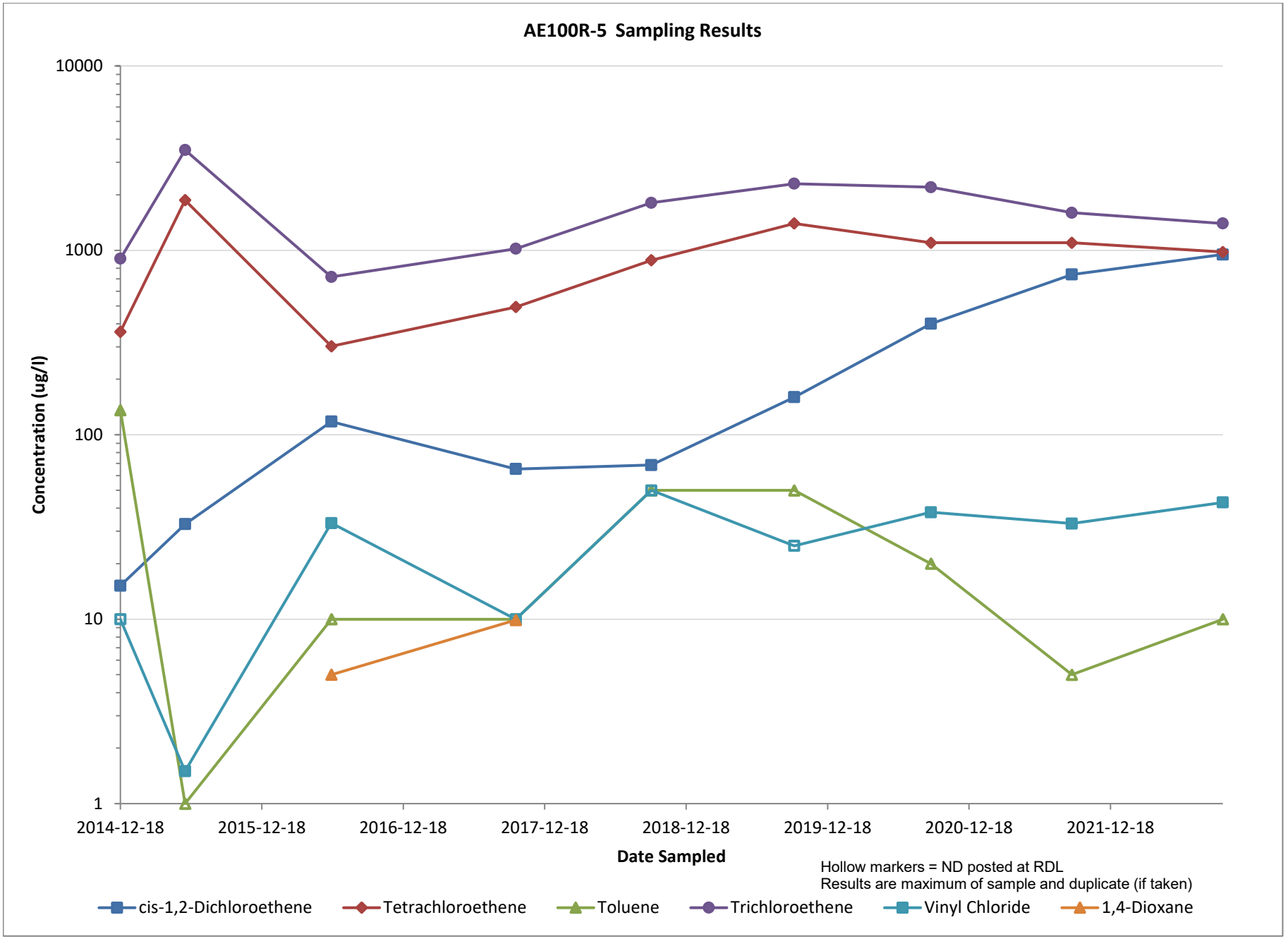

TRC-301R-4 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-15
2017-12-16
2018-12-16
2019-12-16
2020-12-15
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
Benzene
Ethylbenzene
Toluene
Xylenes (Total)
Methyl Tert-Butyl Ether
Naphthalene
Calculated VPH

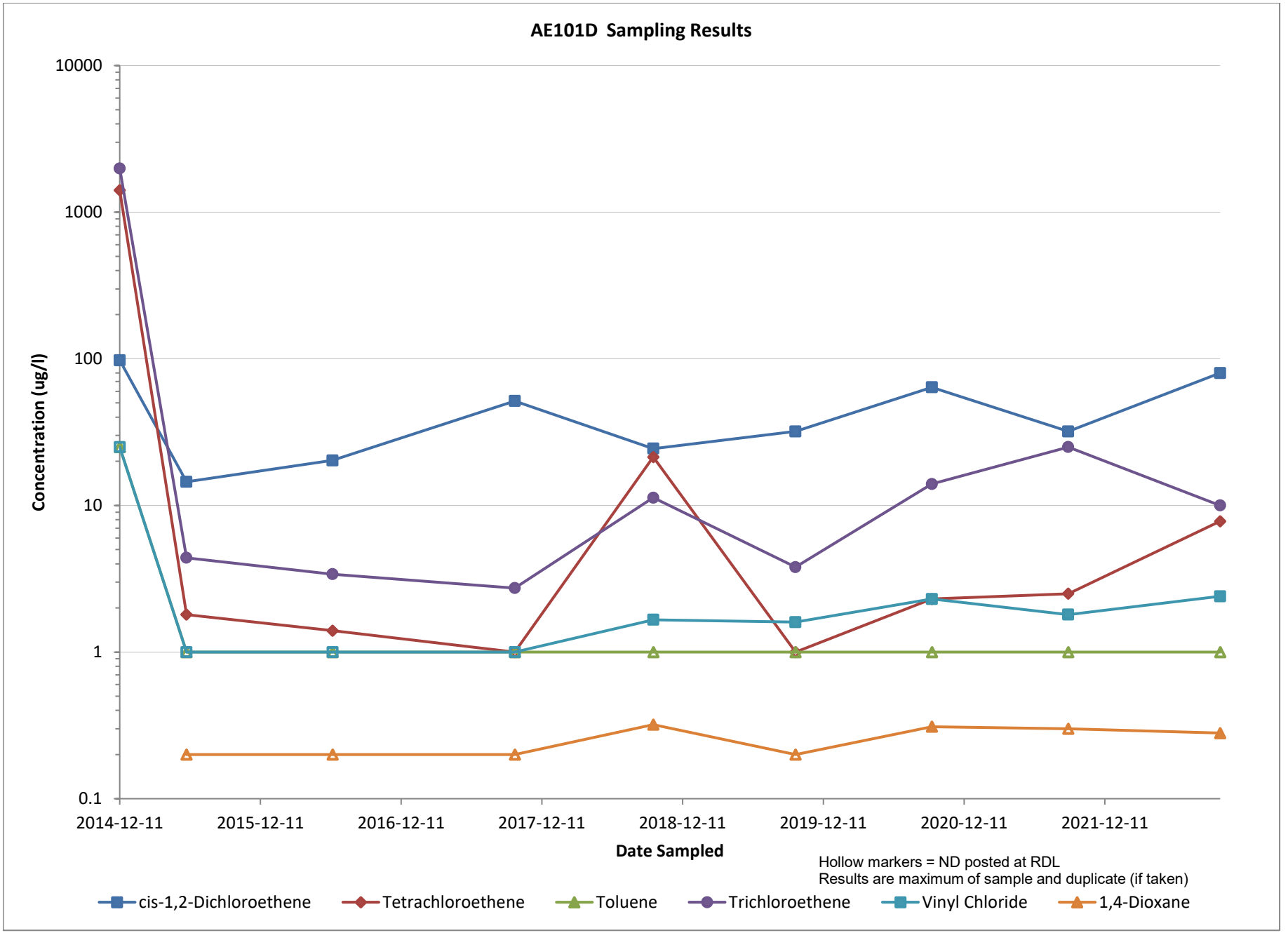
CHLORINATED VOLATILVE ORGANIC COMPOUNDS

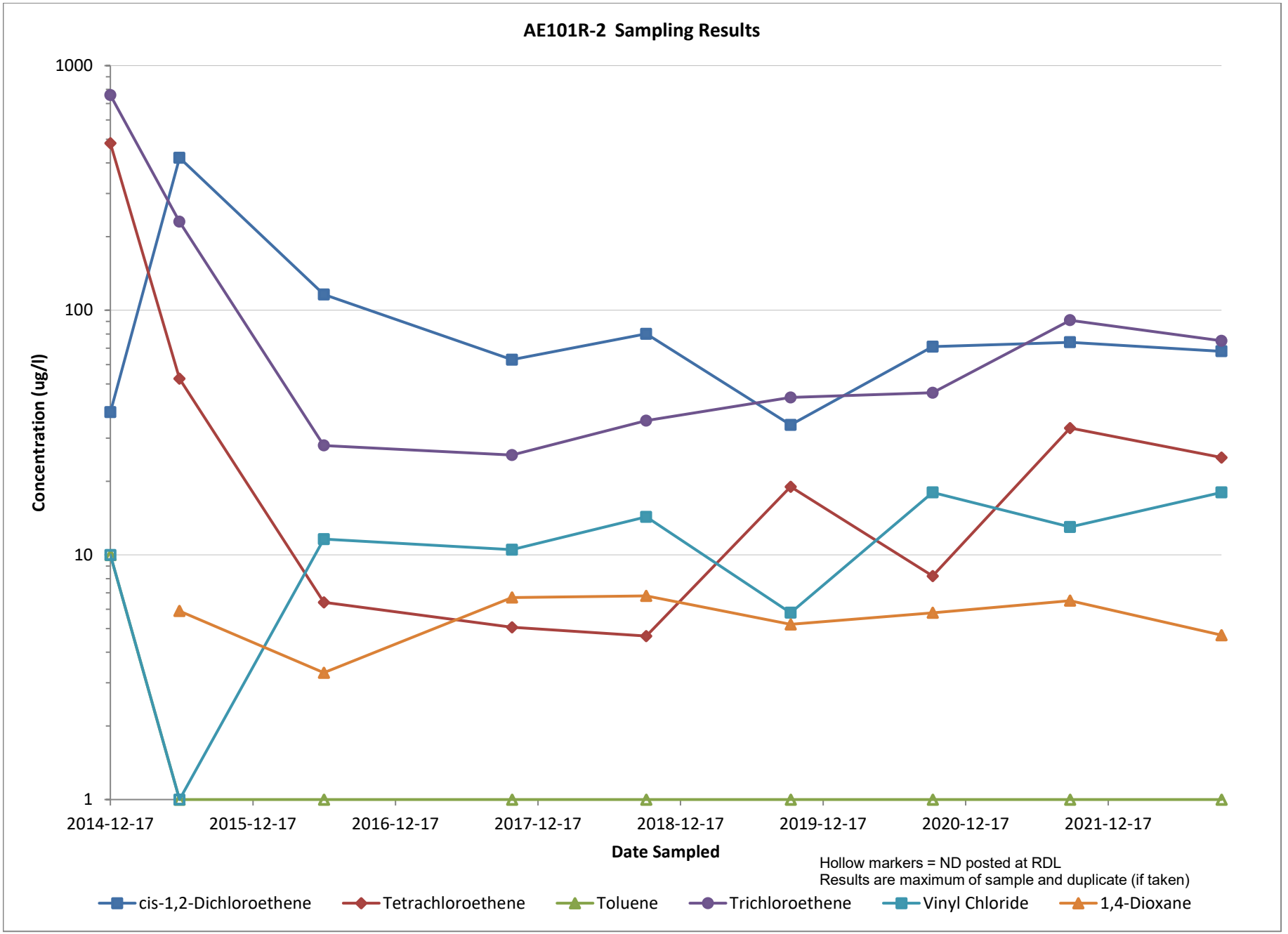

AE100R-2 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

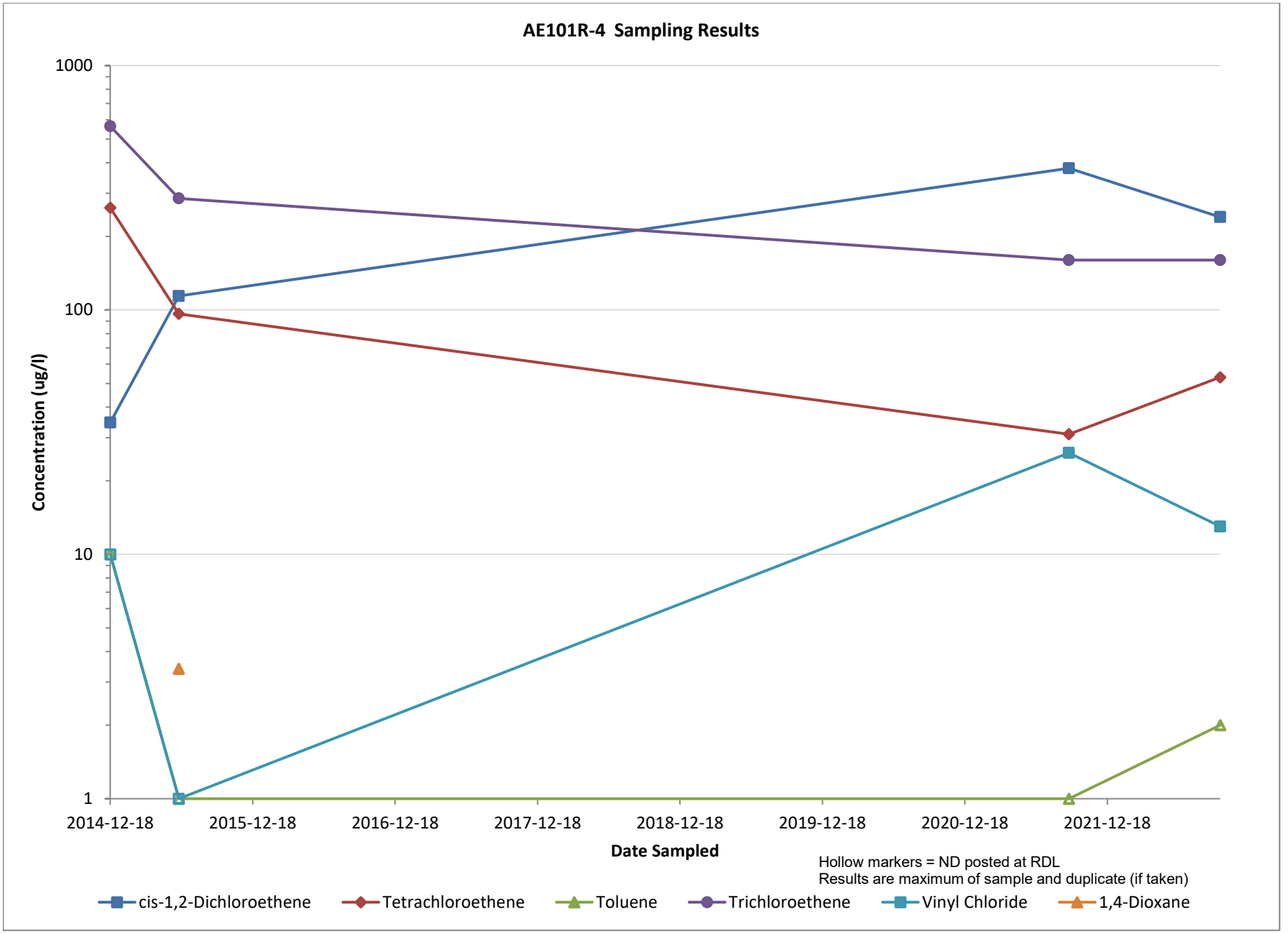

AE100R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

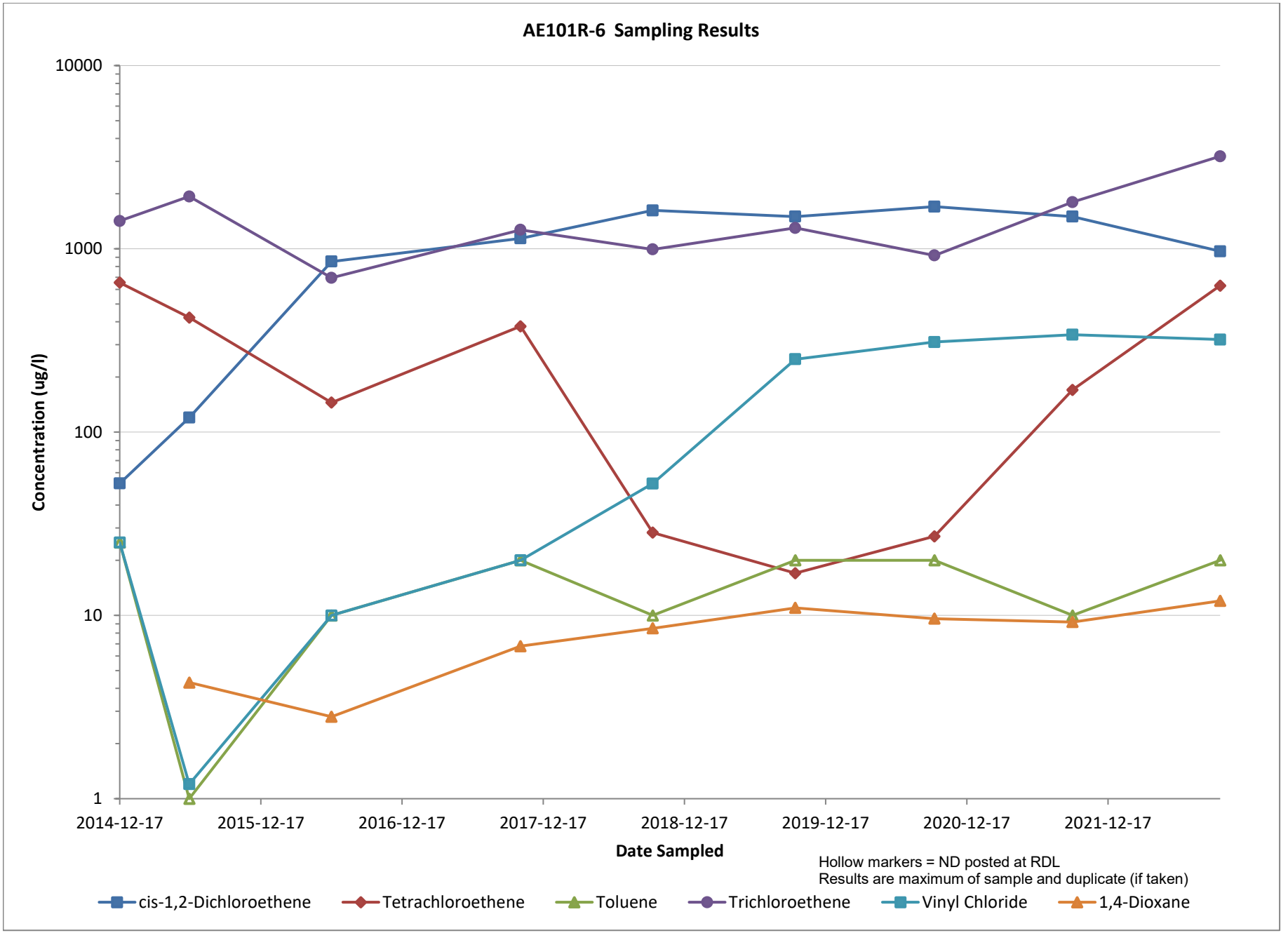

AE100R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

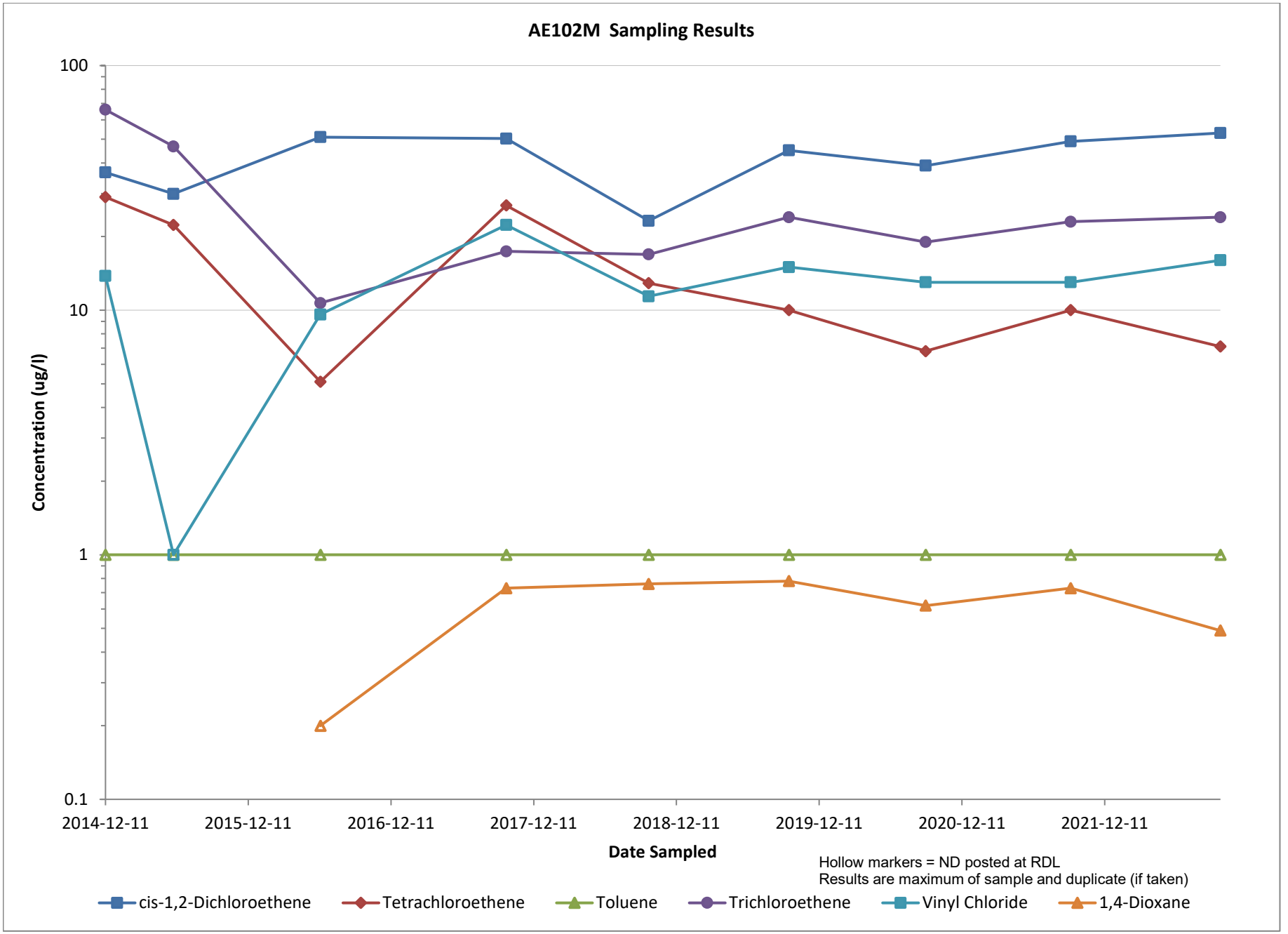

AE100R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

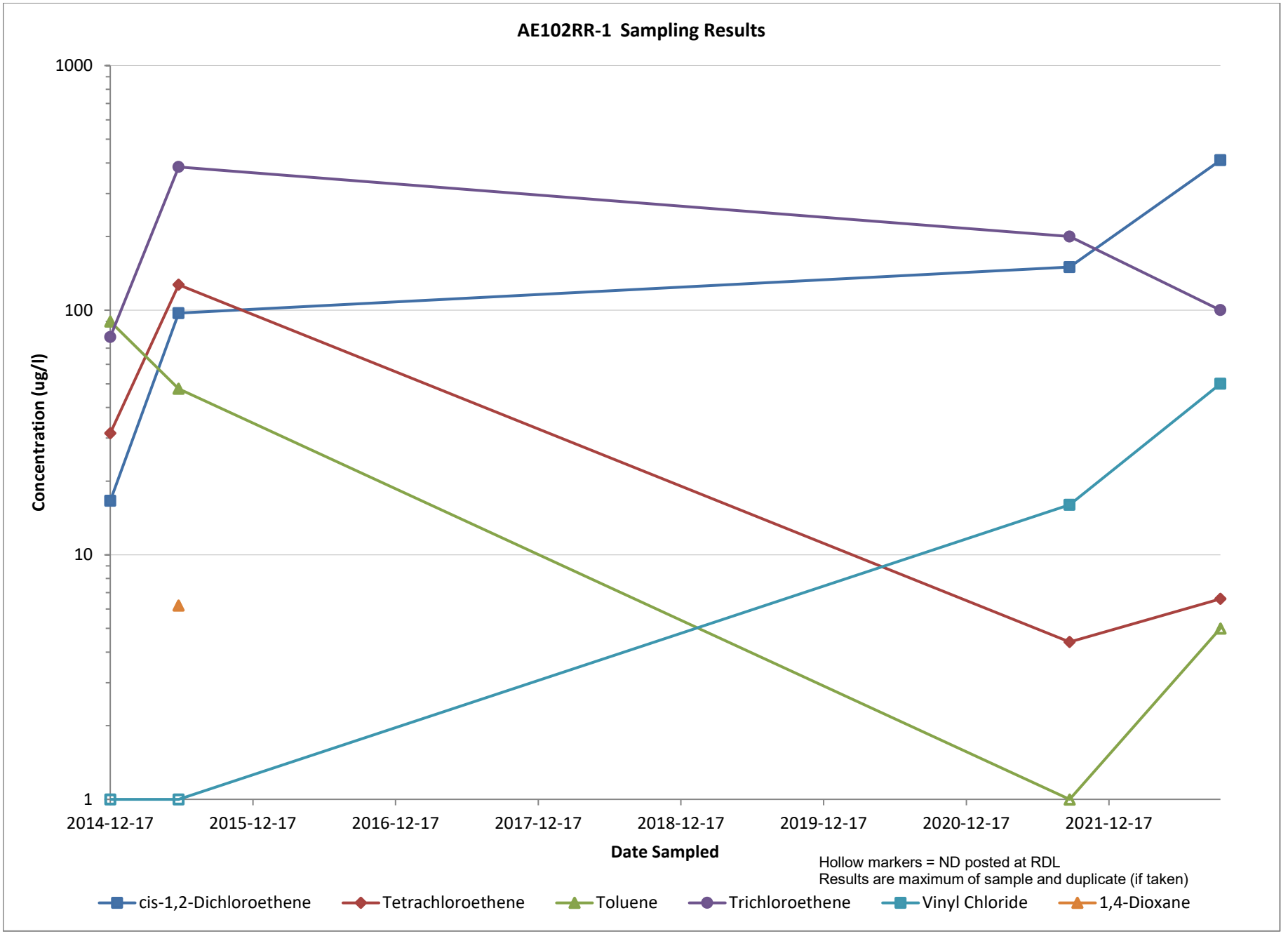

AE101D Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

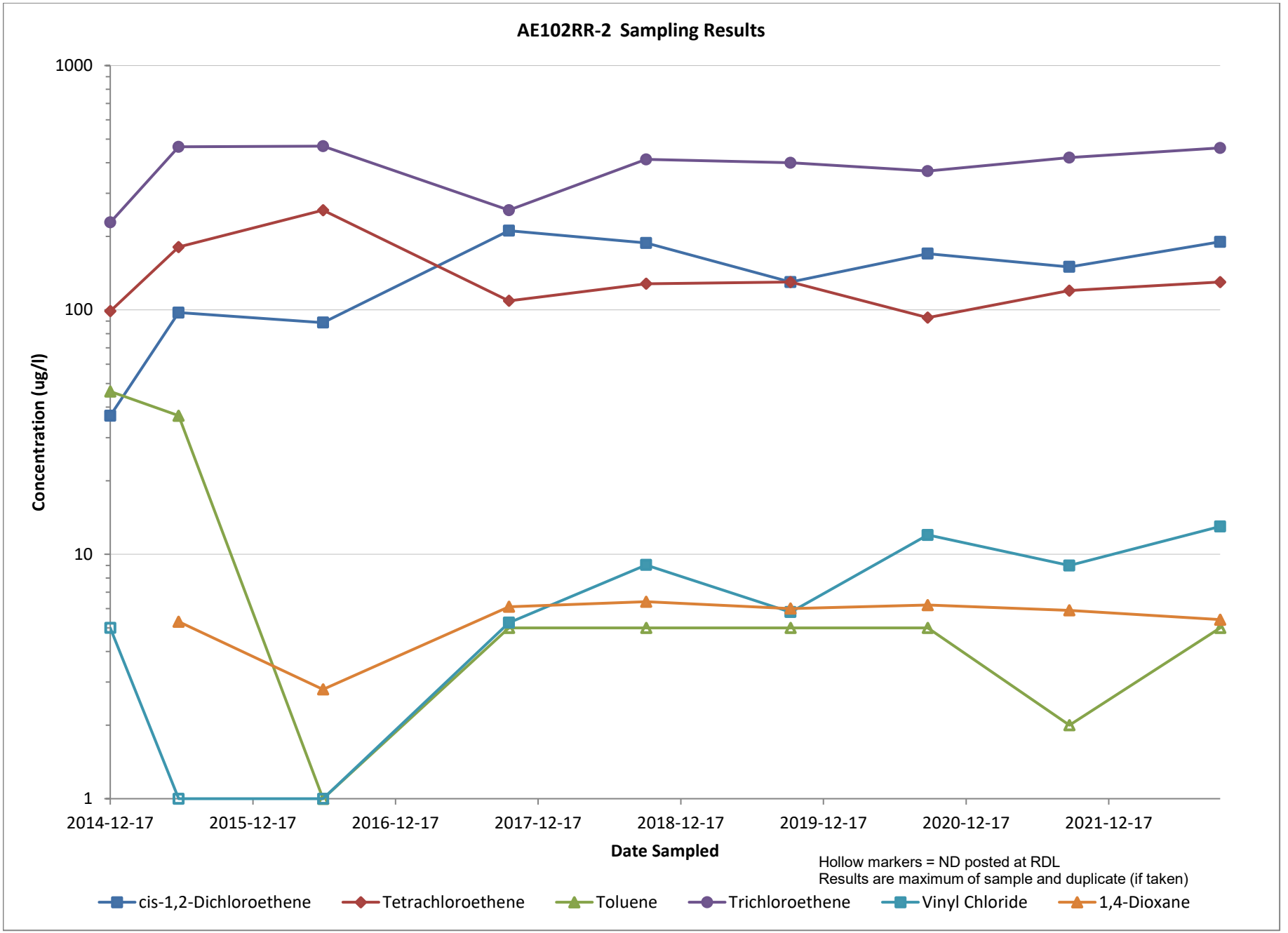

AE101R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

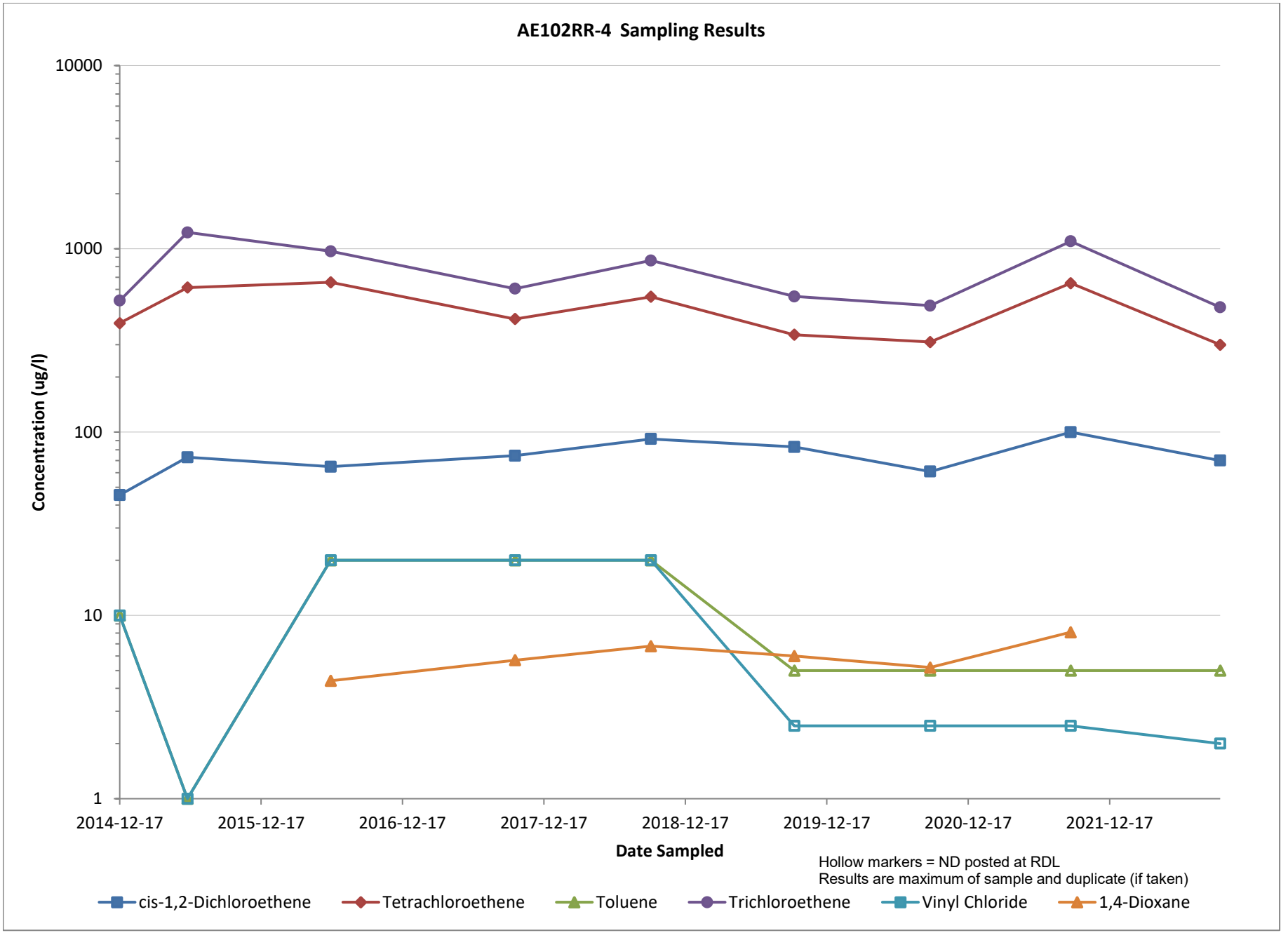

AE101R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

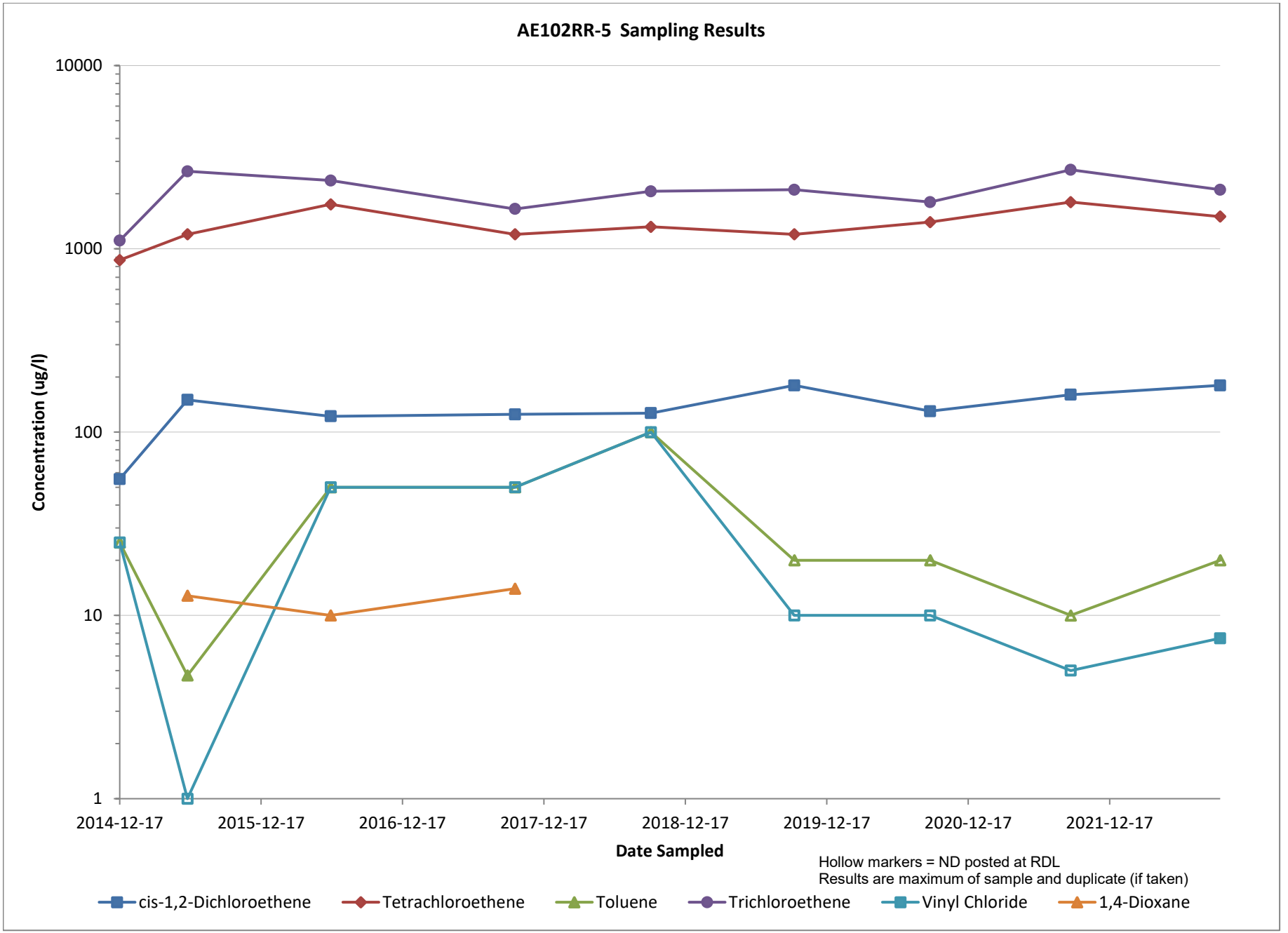

AE101R-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

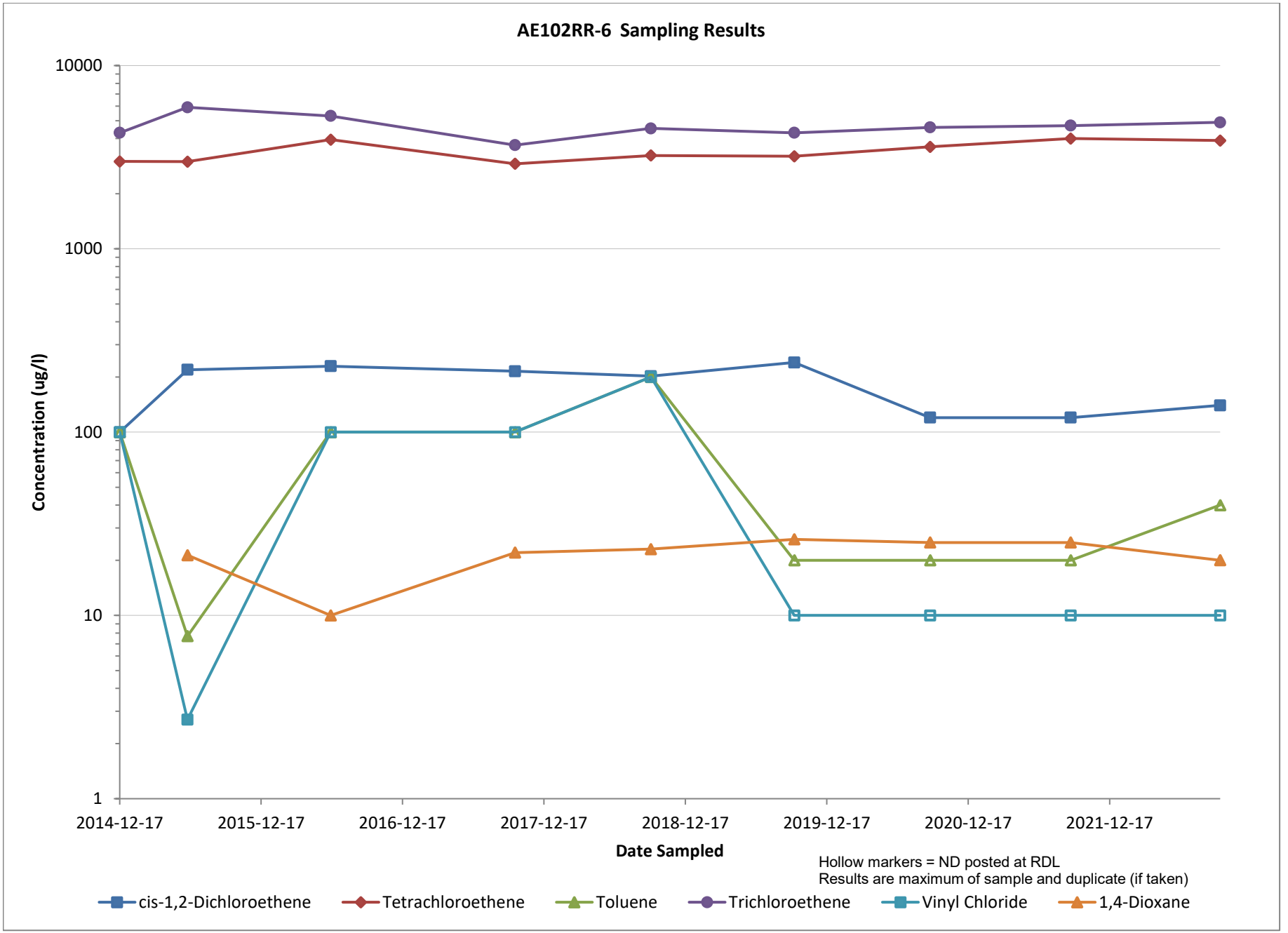

AE102M Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

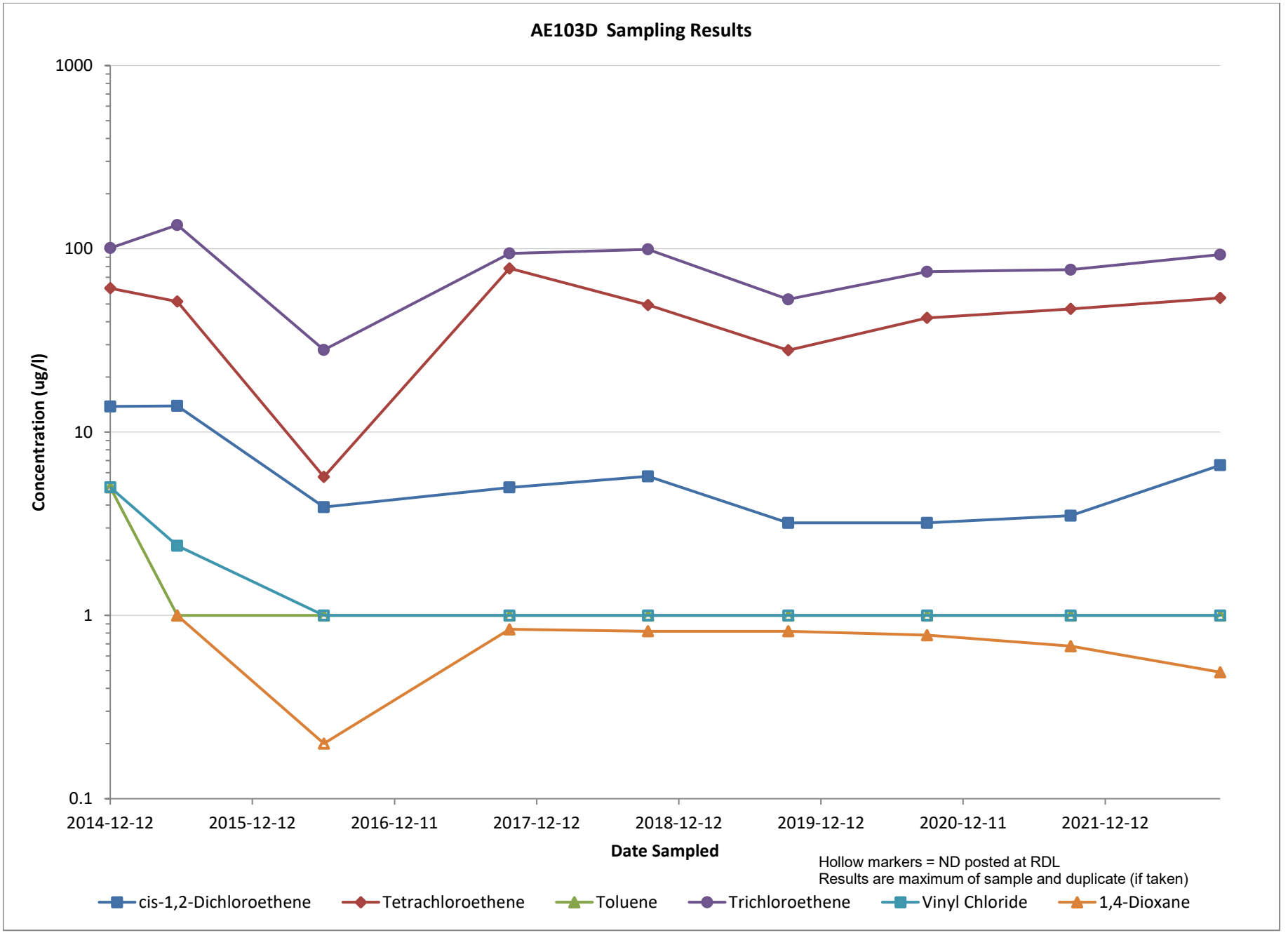

AE102RR-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

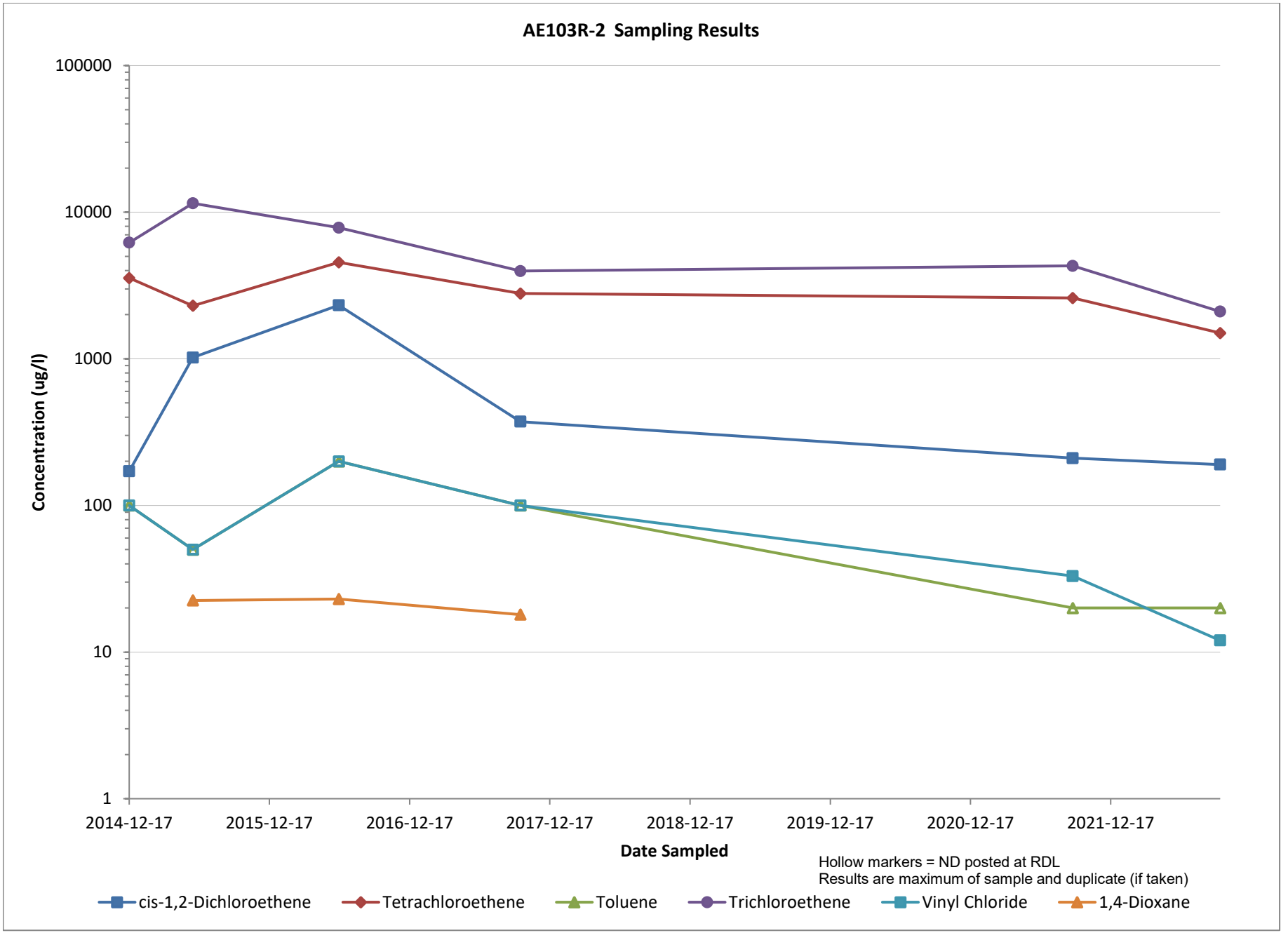

AE102RR-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

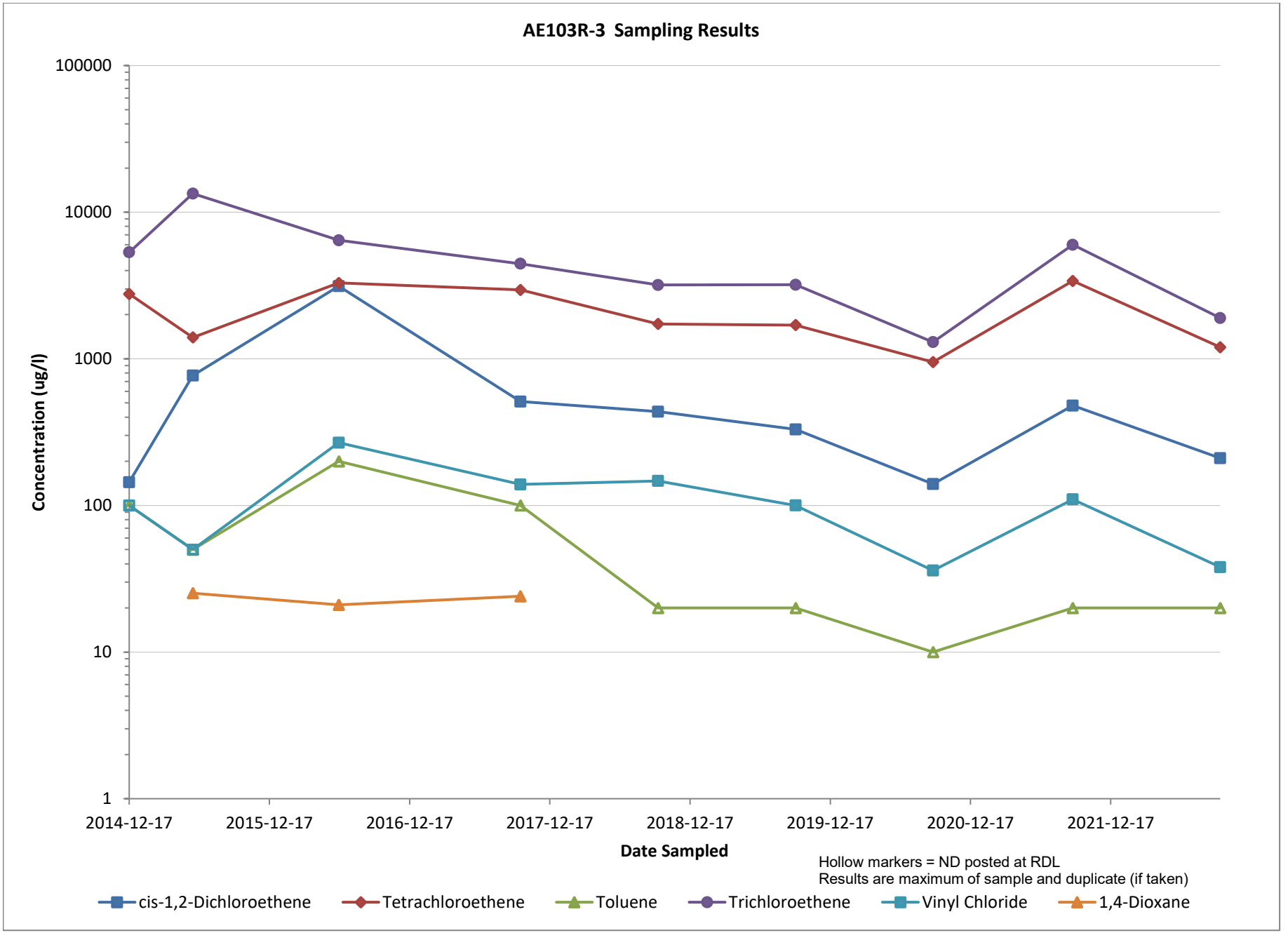

AE102RR-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

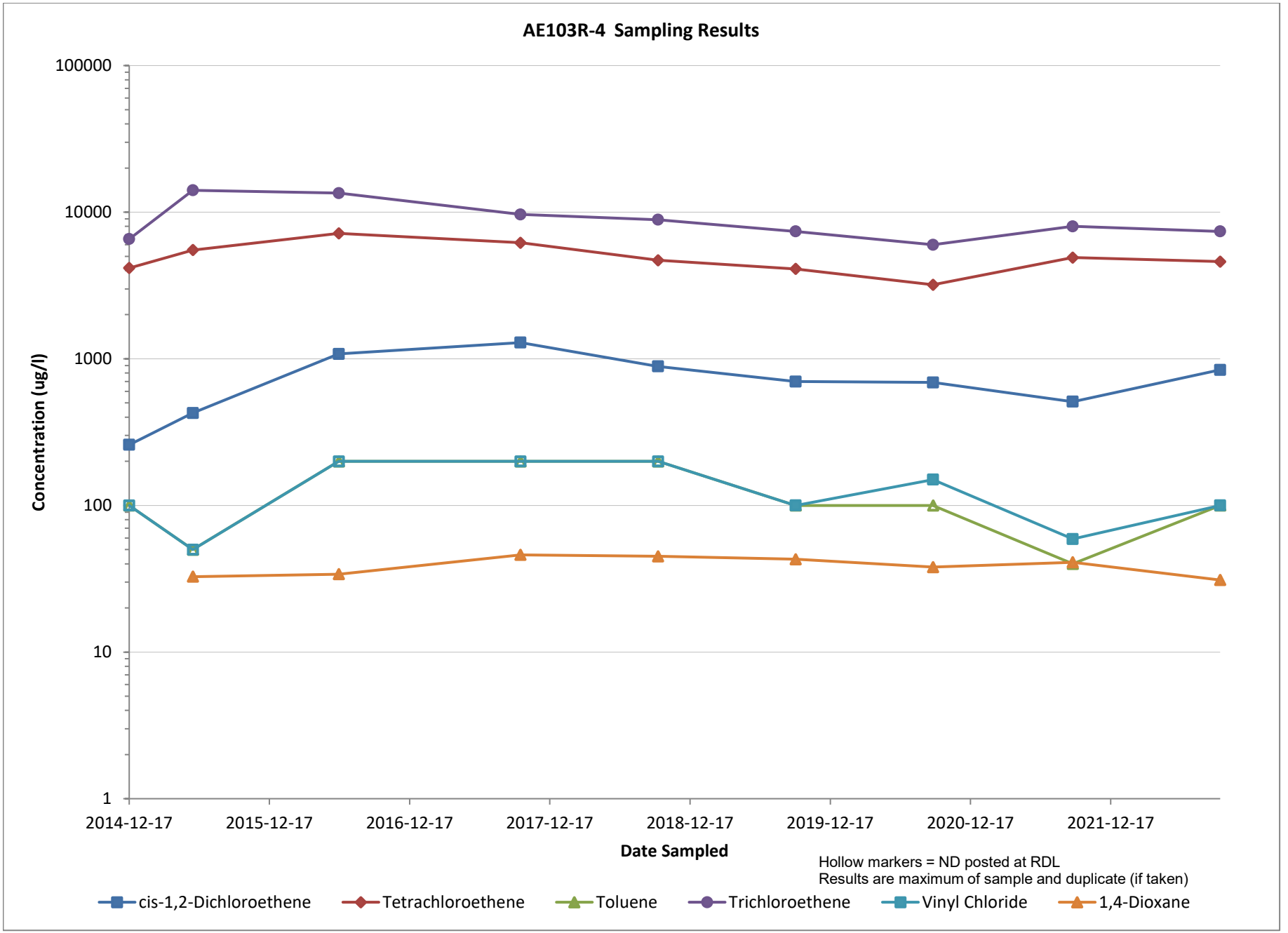

AE102RR-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

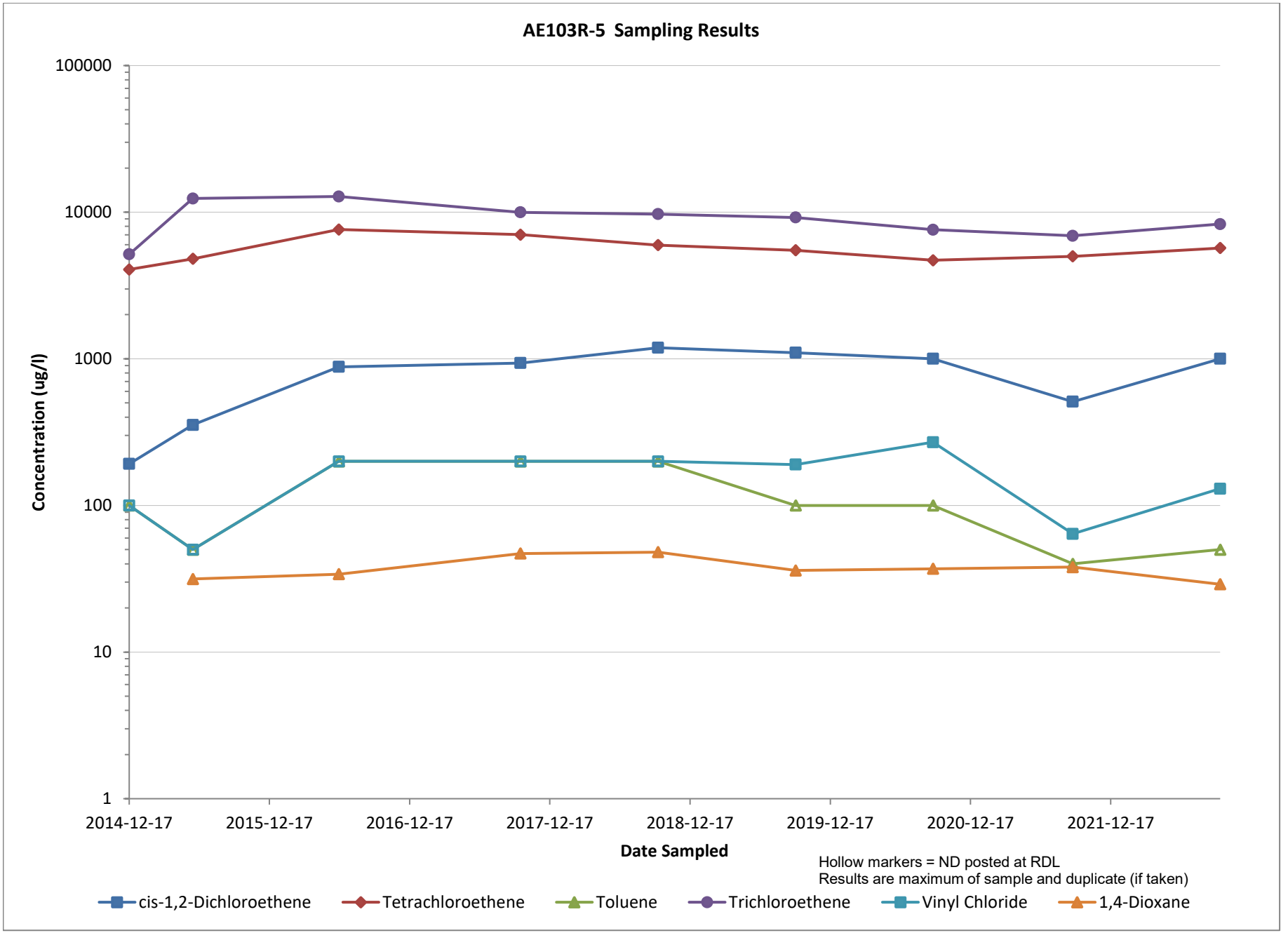

AE102RR-6 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

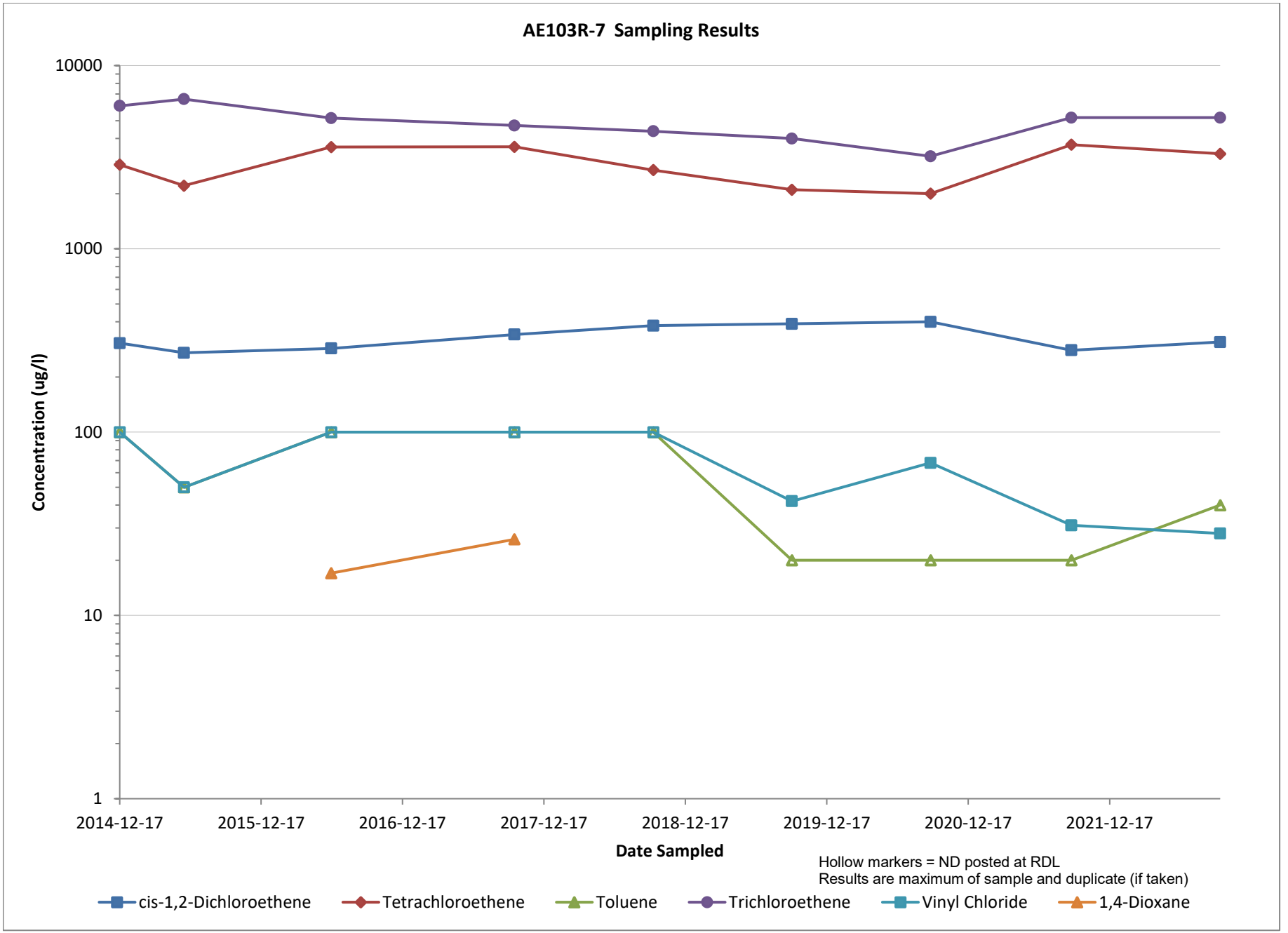

AE103D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-12-12
2015-12-12
2016-12-11
2017-12-12
2018-12-12
2019-12-12
2020-12-11
2021-12-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

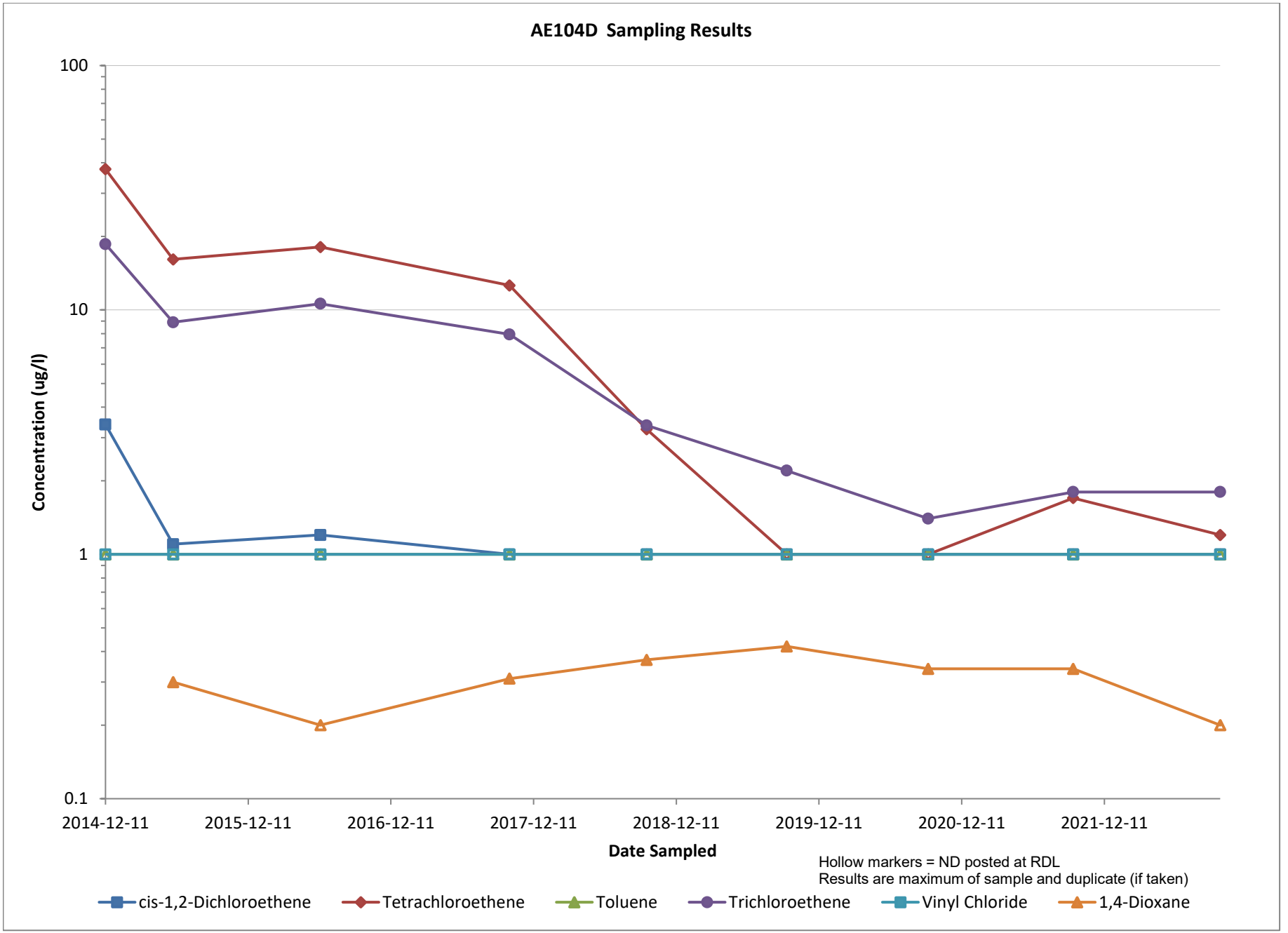

AE103R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

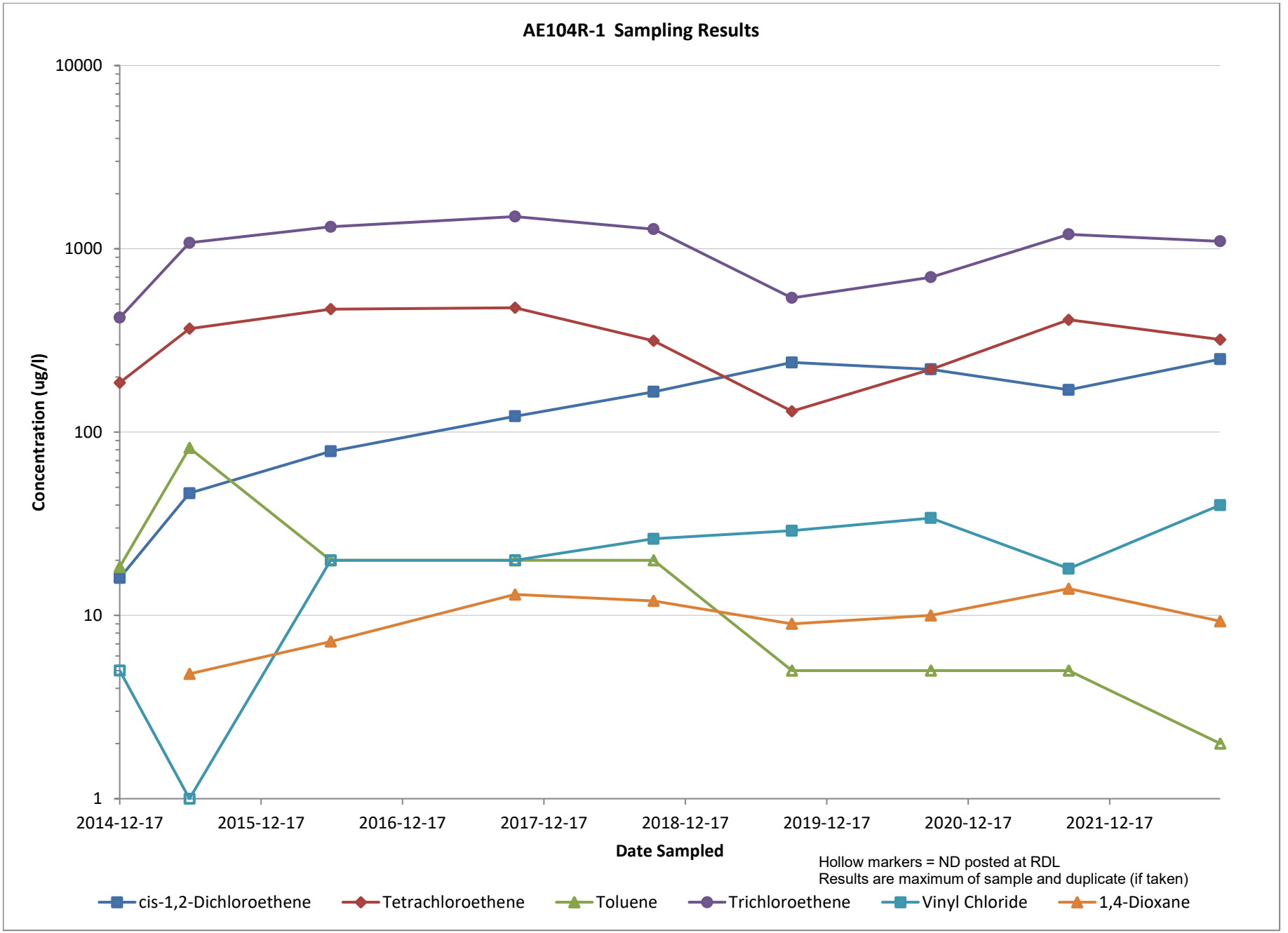

AE103R-3 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

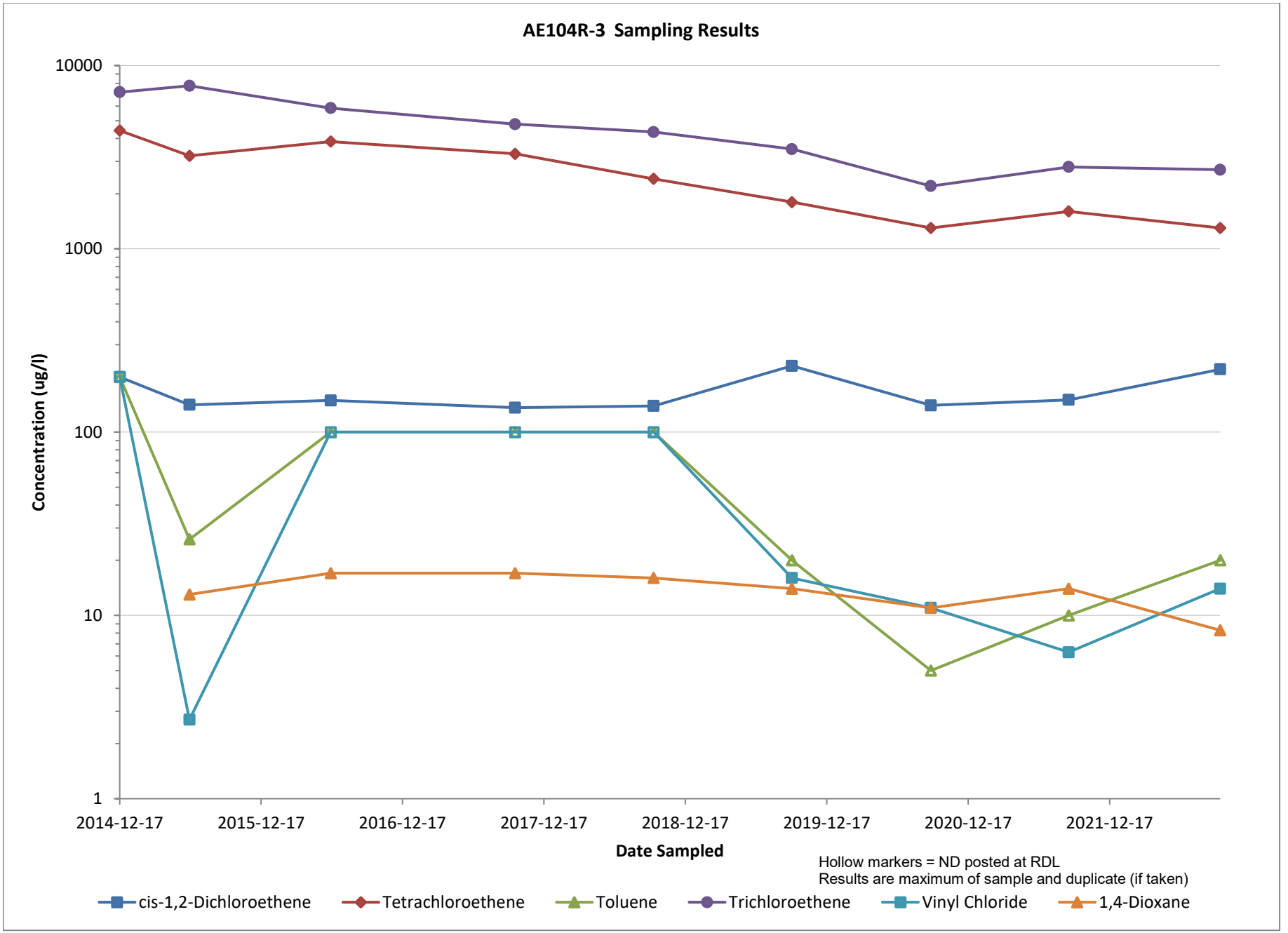

AE103R-4 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

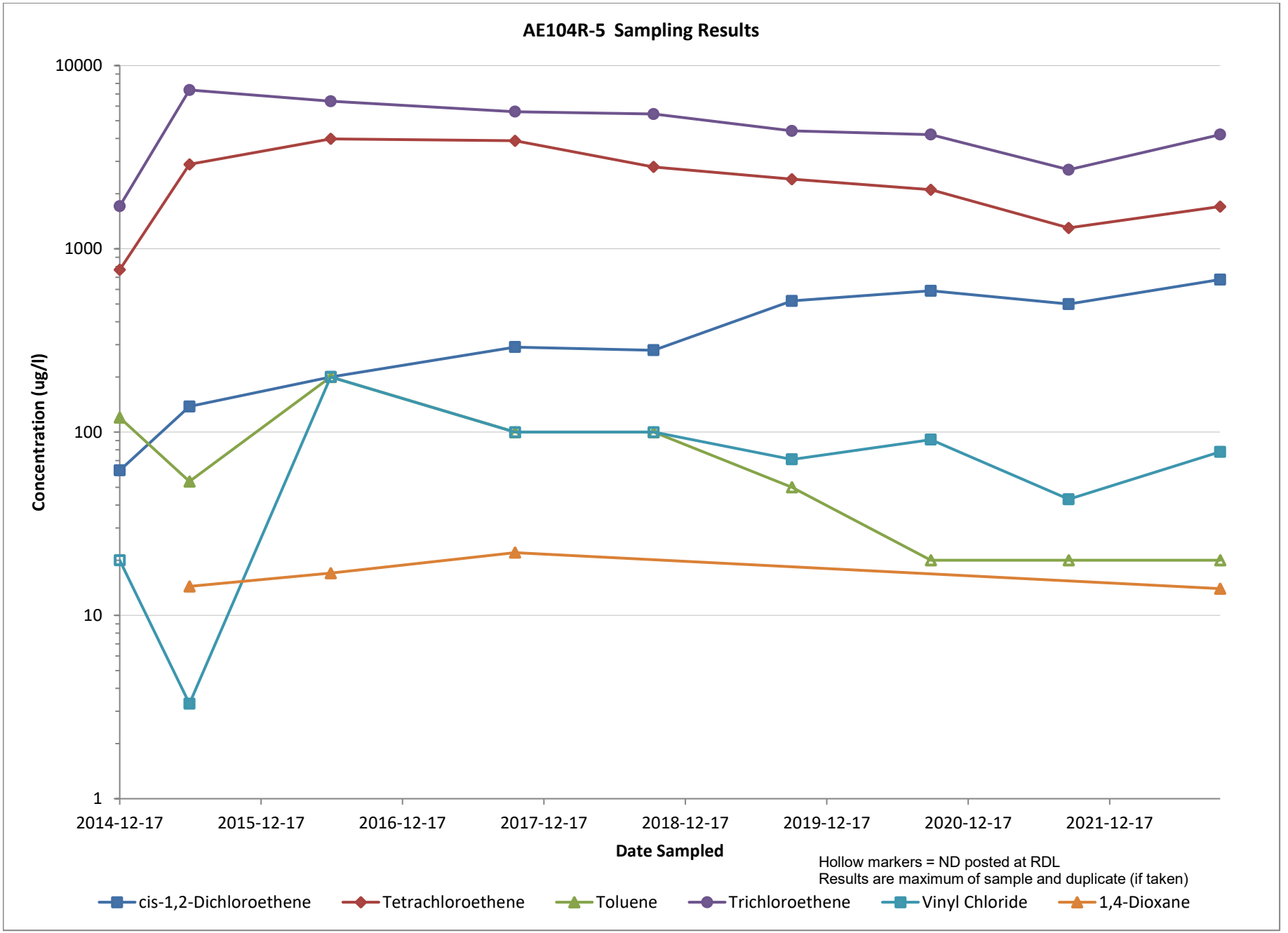

AE103R-5 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

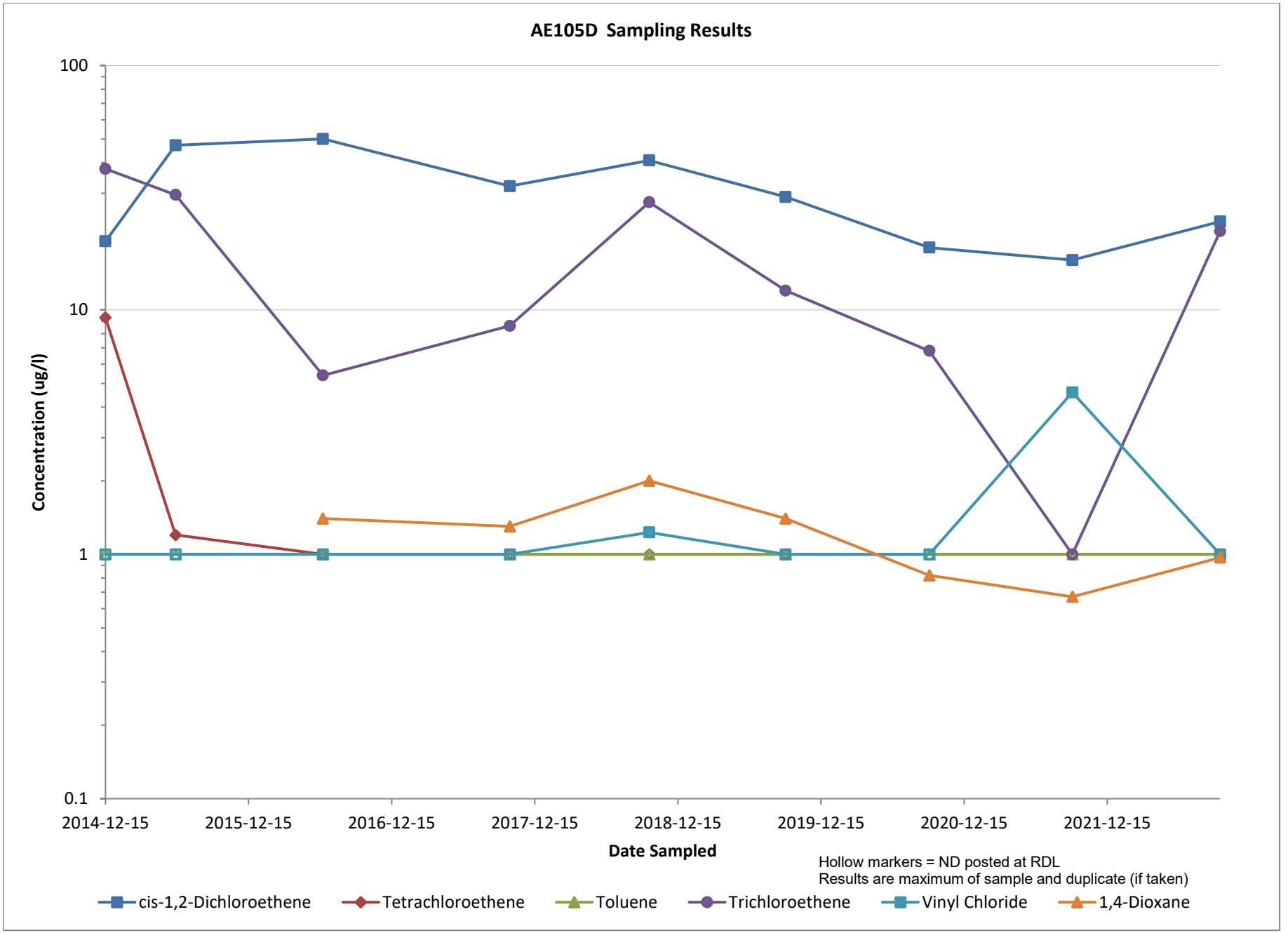

AE103R-7 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

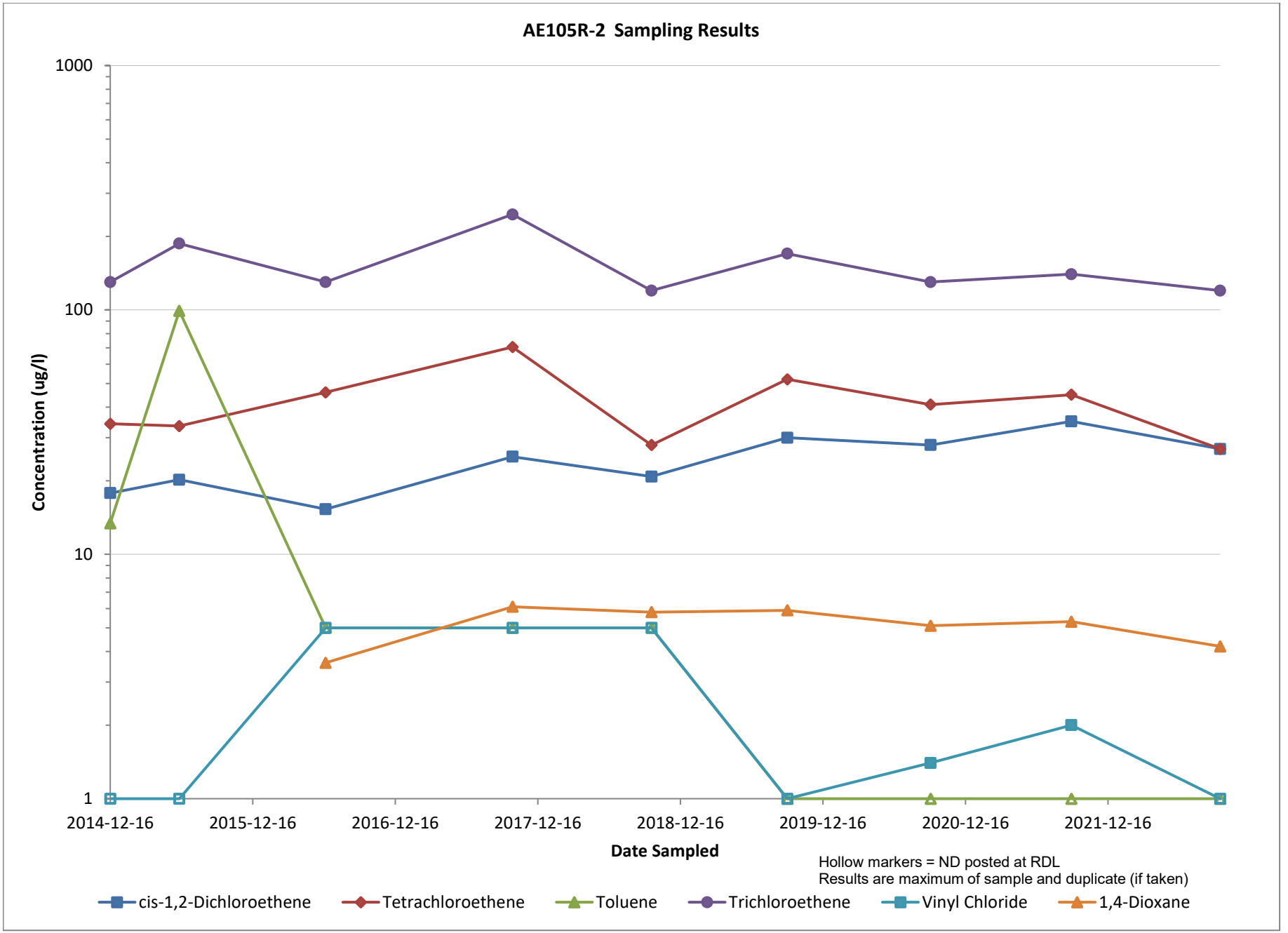

AE104D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-11
2015-12-11
2016-12-11
2017-12-11
2018-12-11
2019-12-11
2020-12-11
2021-12-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

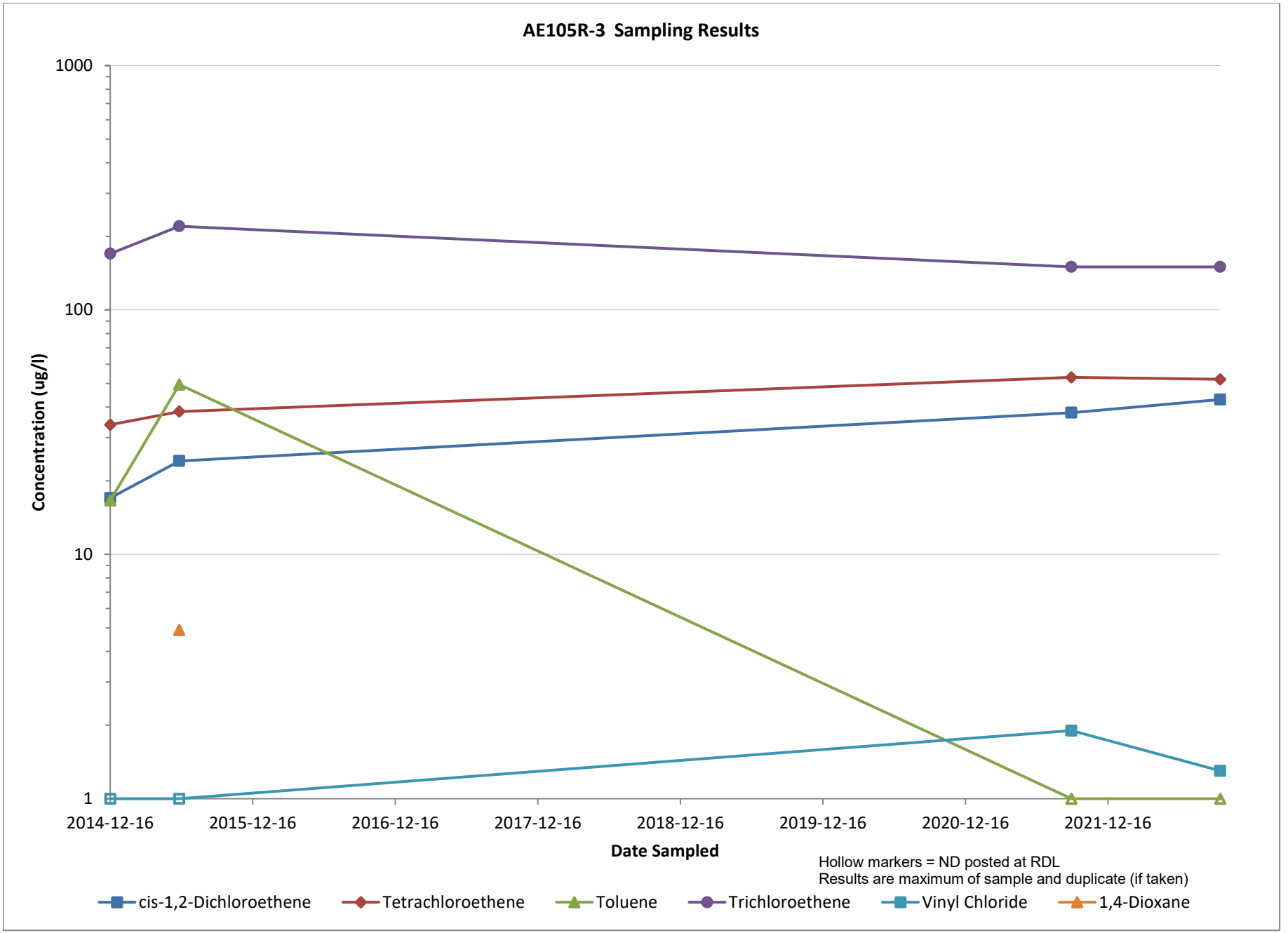

AE104R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

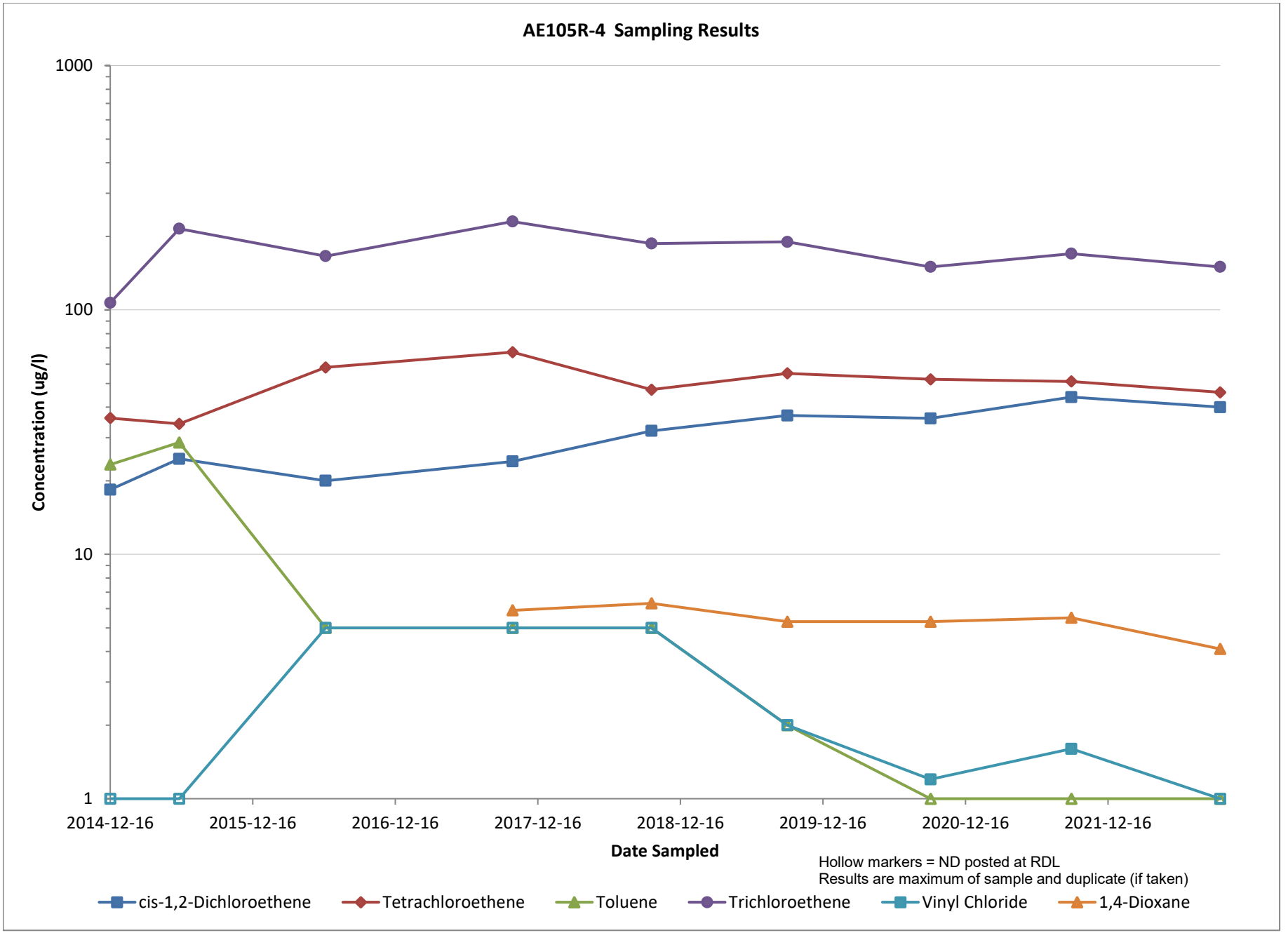

AE104R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

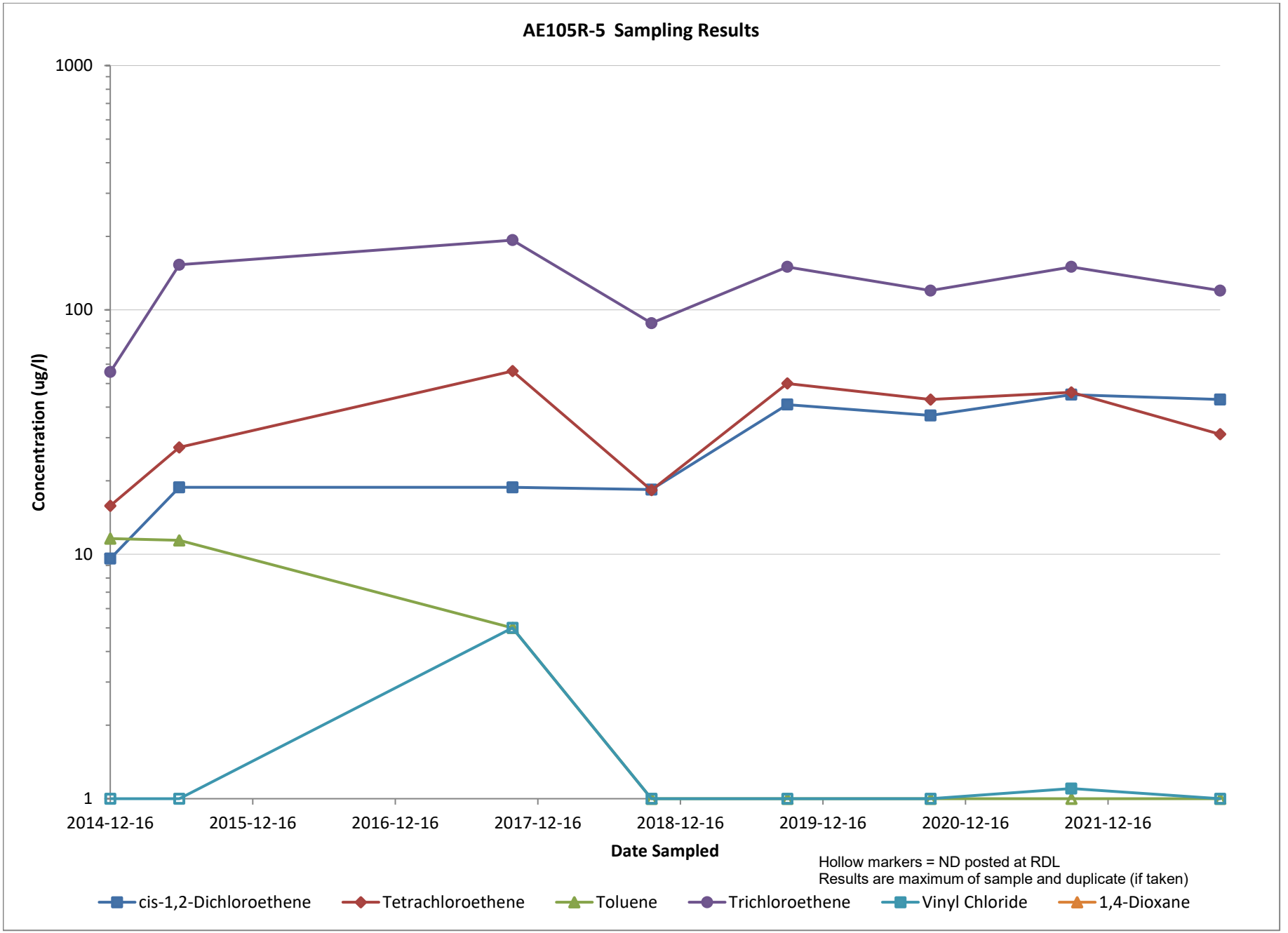

AE104R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2014-12-17
2015-12-17
2016-12-17
2017-12-17
2018-12-17
2019-12-17
2020-12-17
2021-12-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

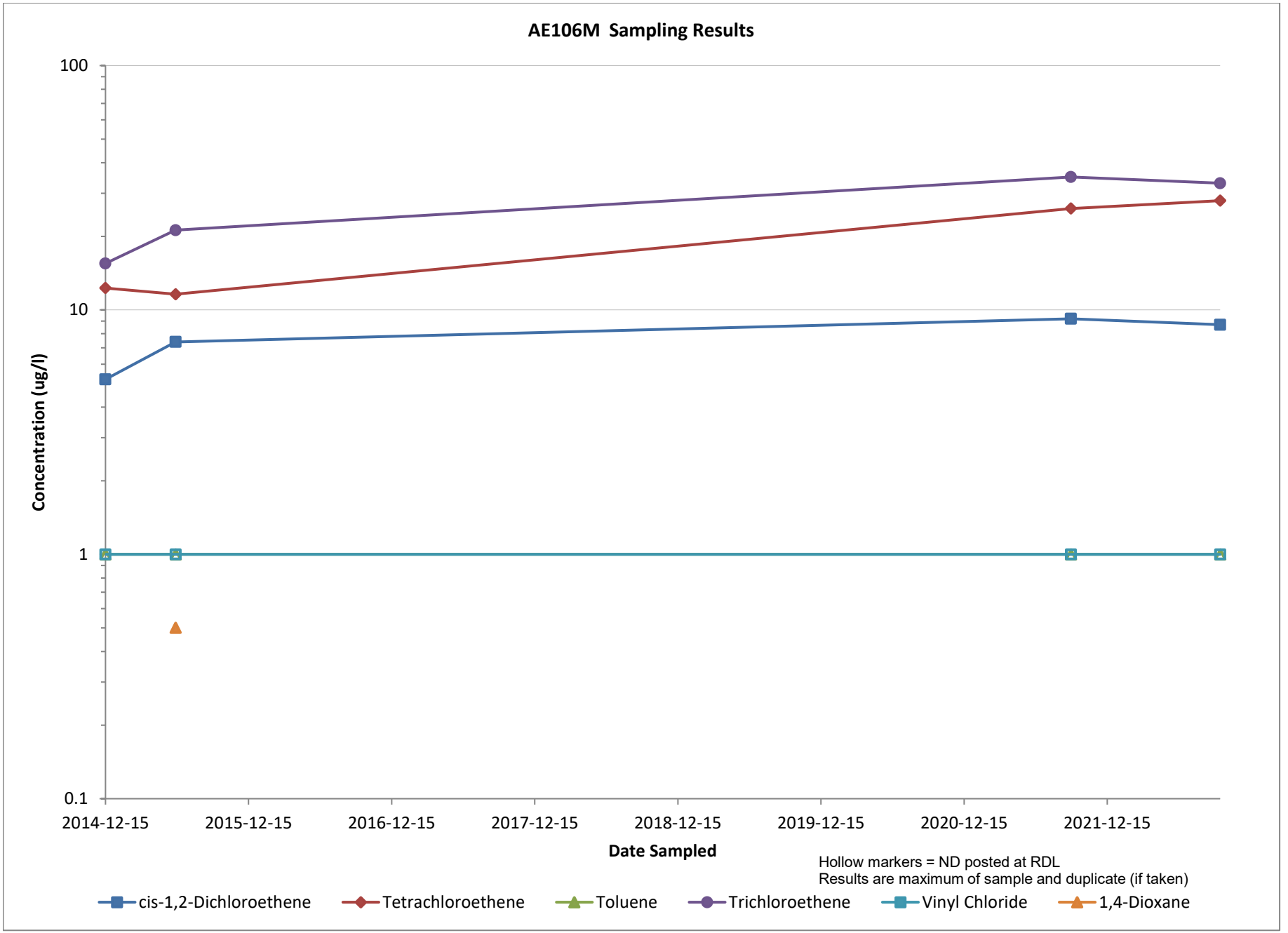

AE105D Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
2021-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

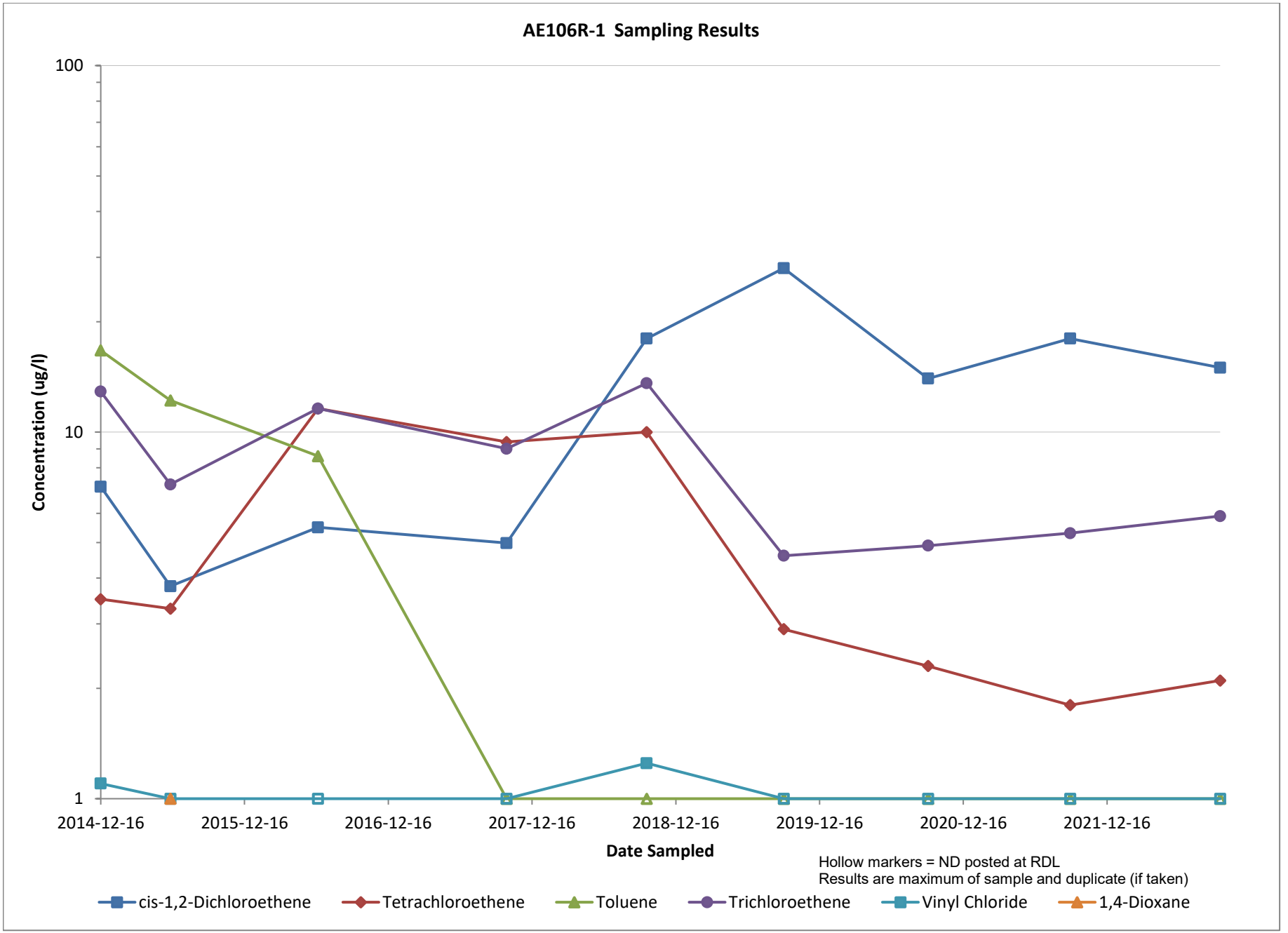

AE105R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

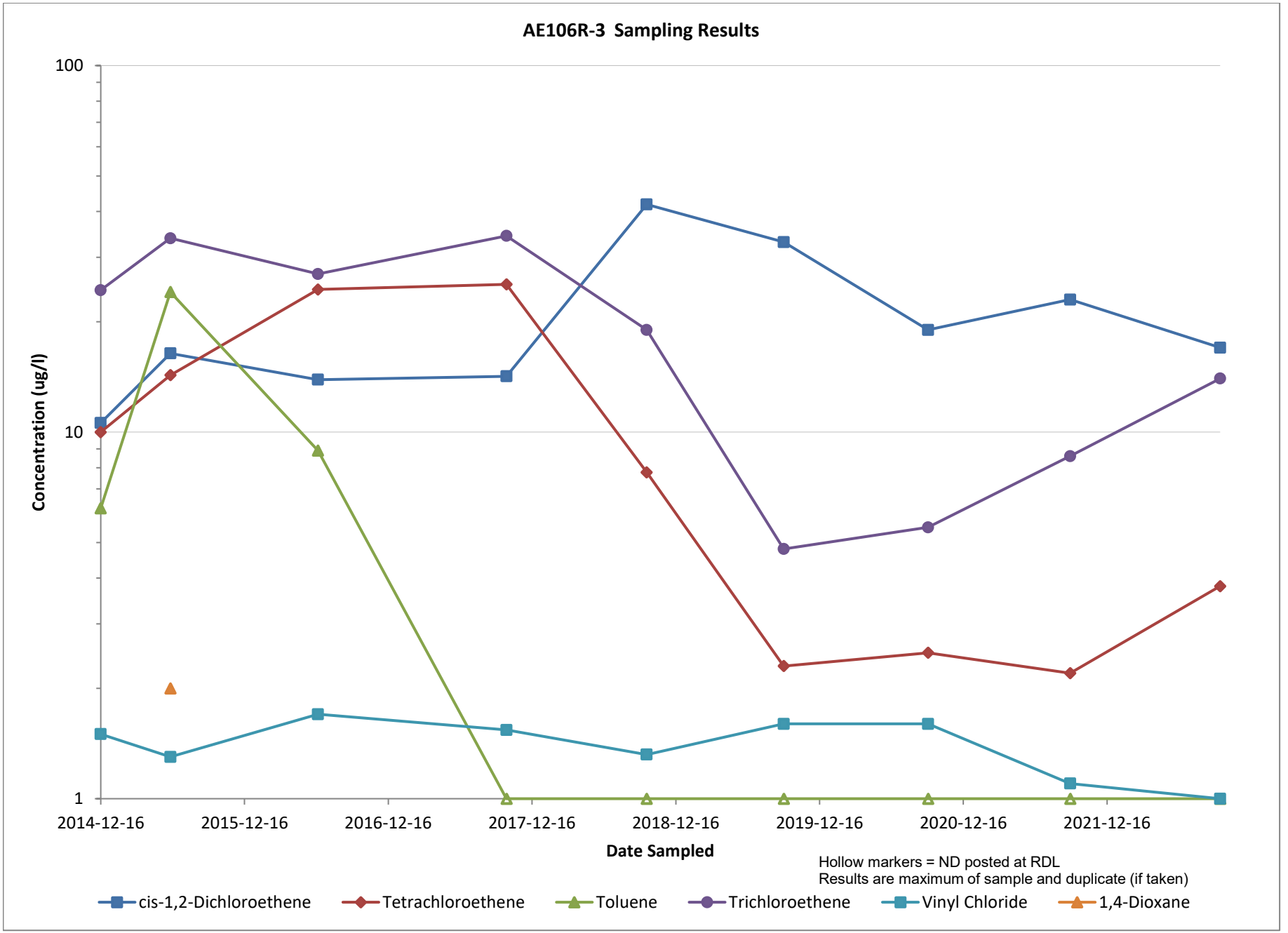

AE105R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

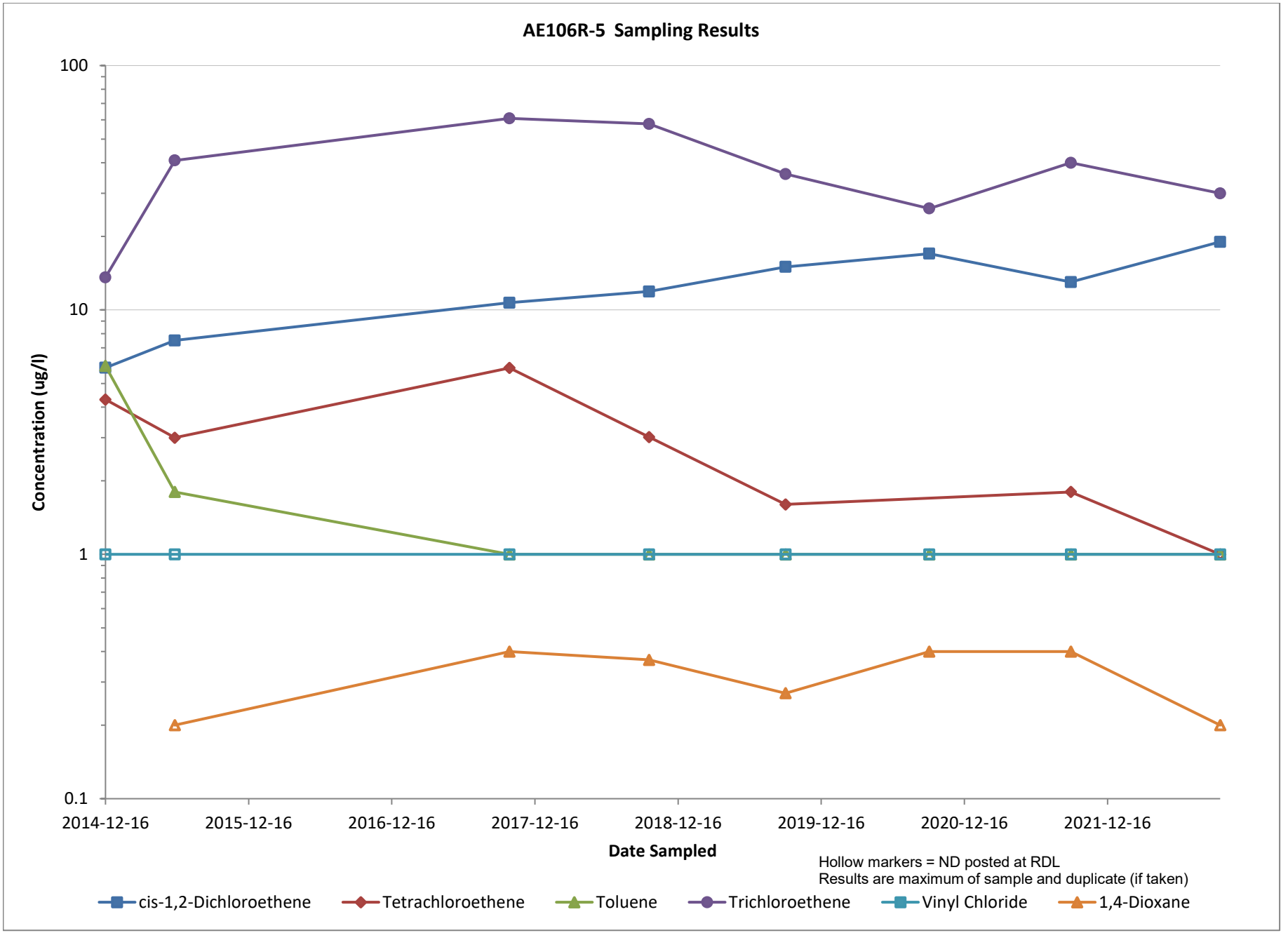

AE105R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

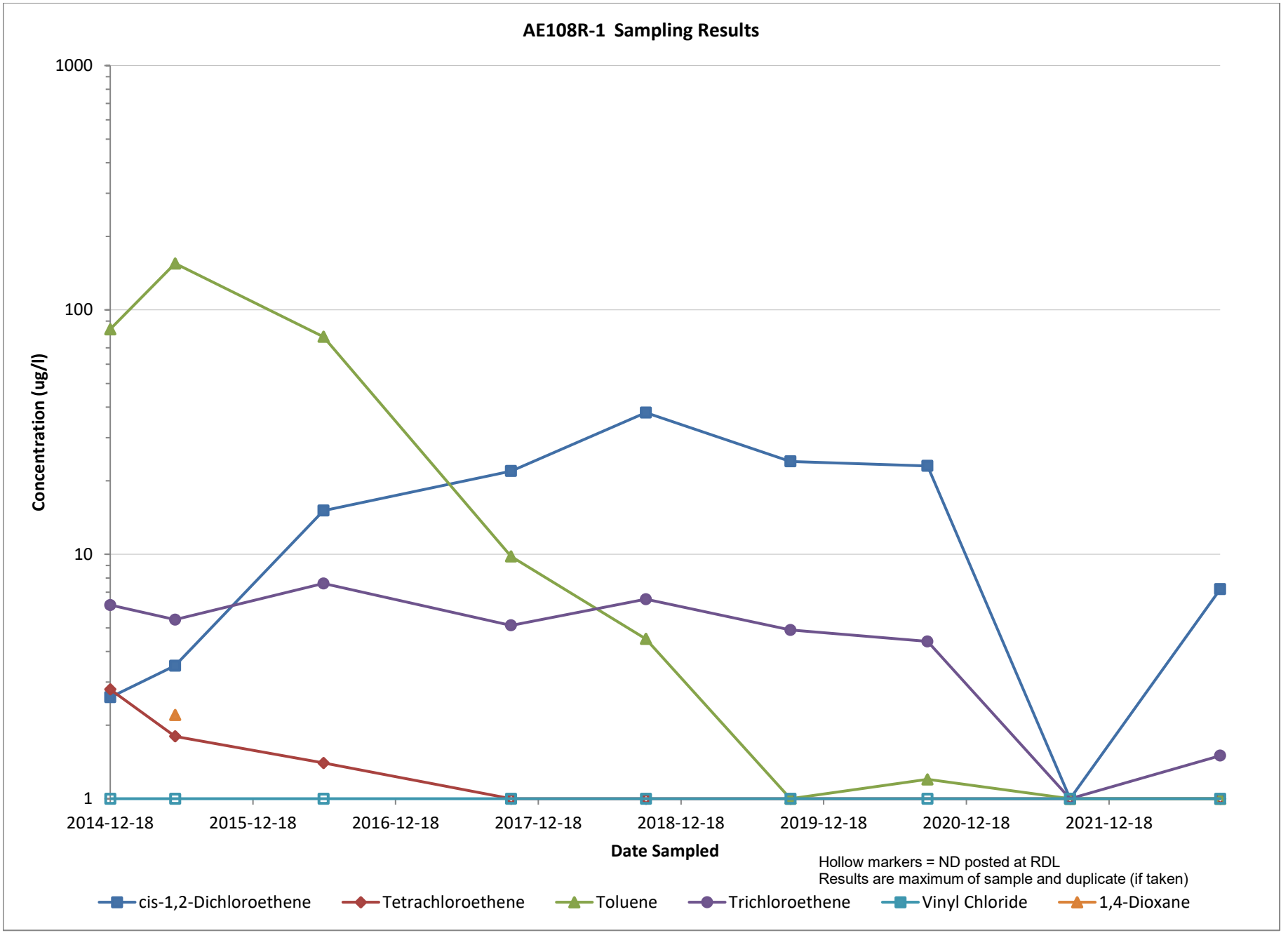

AE105R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

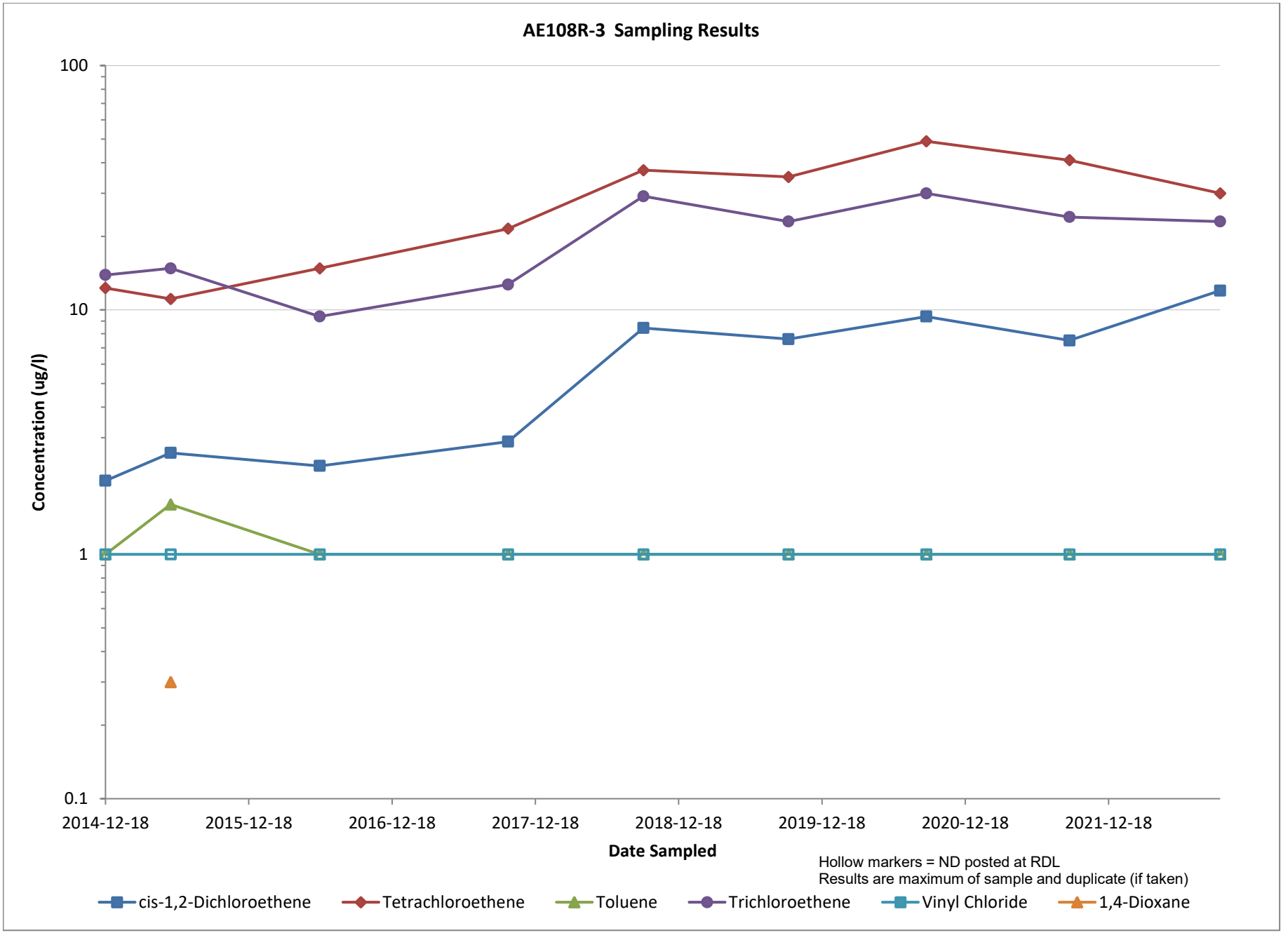

AE106M Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-15
2015-12-15
2016-12-15
2017-12-15
2018-12-15
2019-12-15
2020-12-15
2021-12-15
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

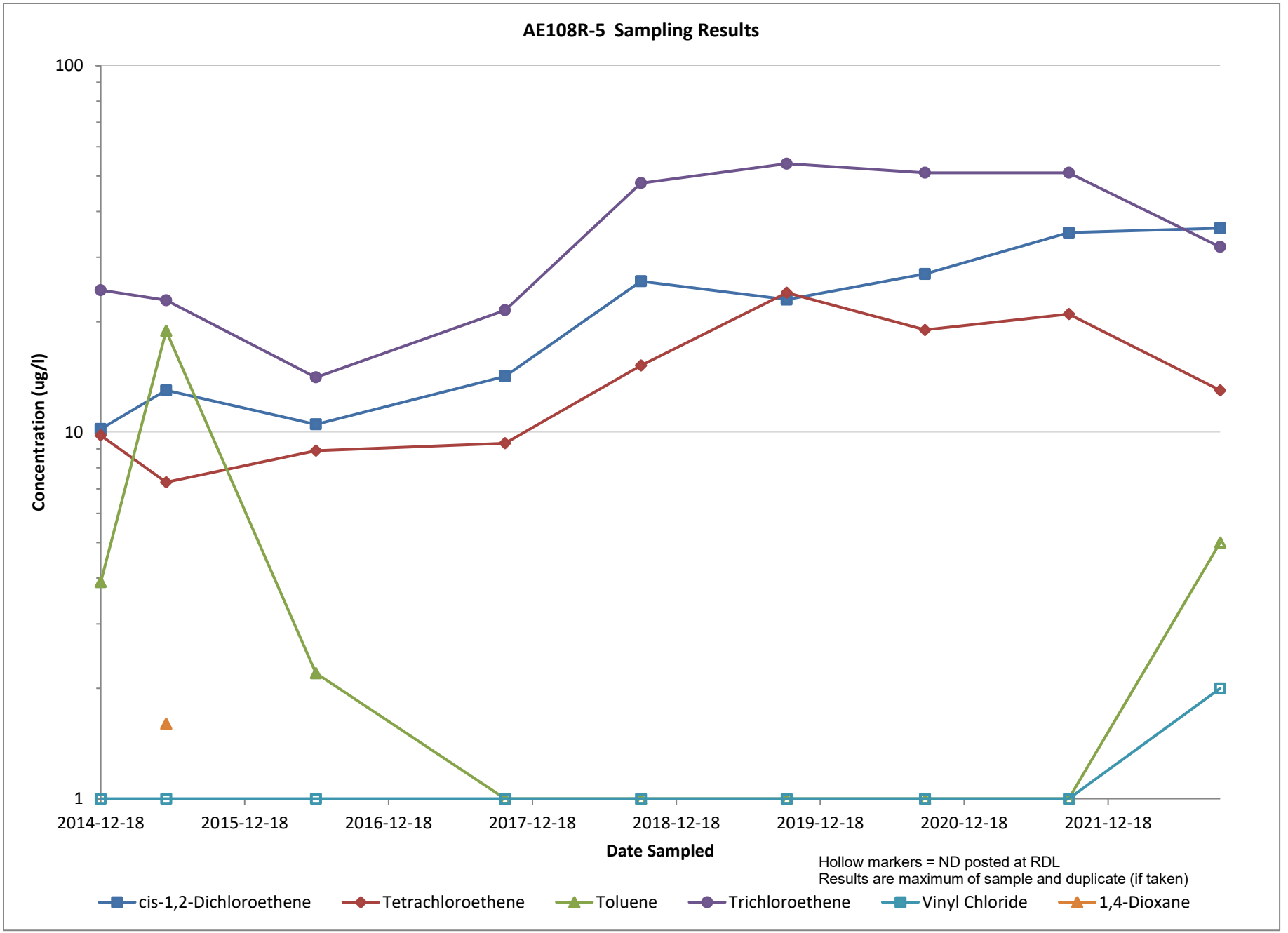

AE106R-1 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

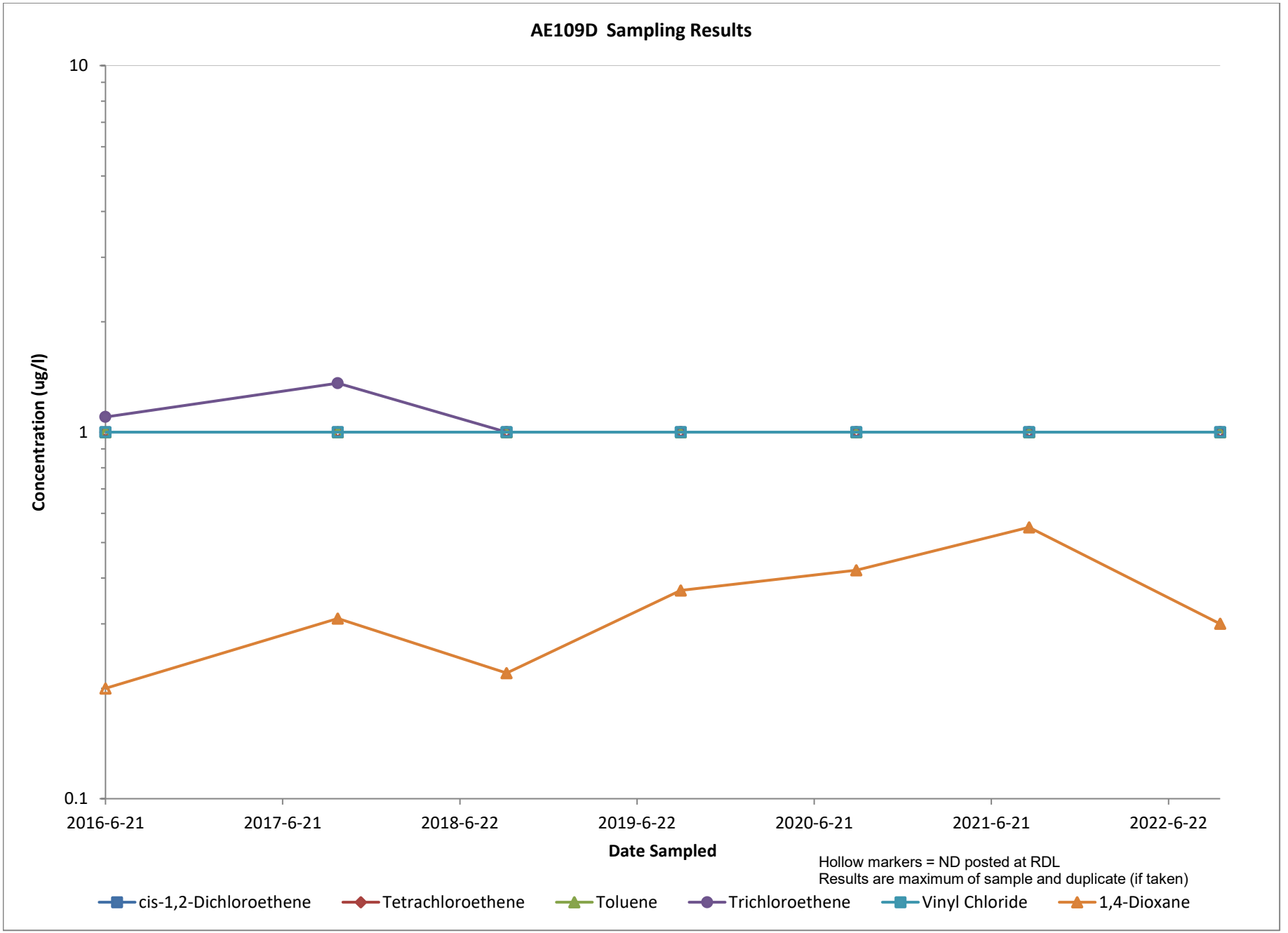

AE106R-3 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

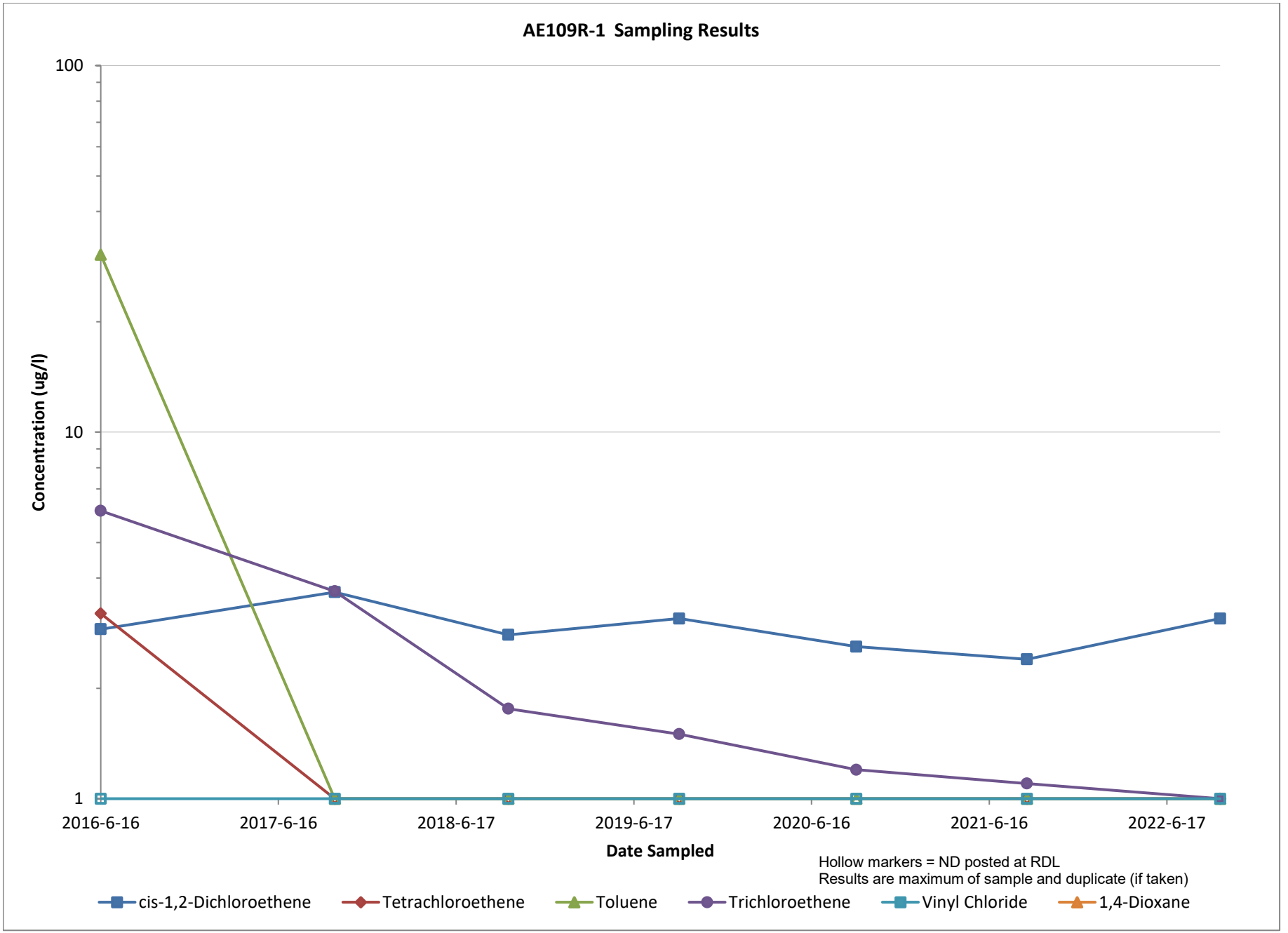

AE106R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

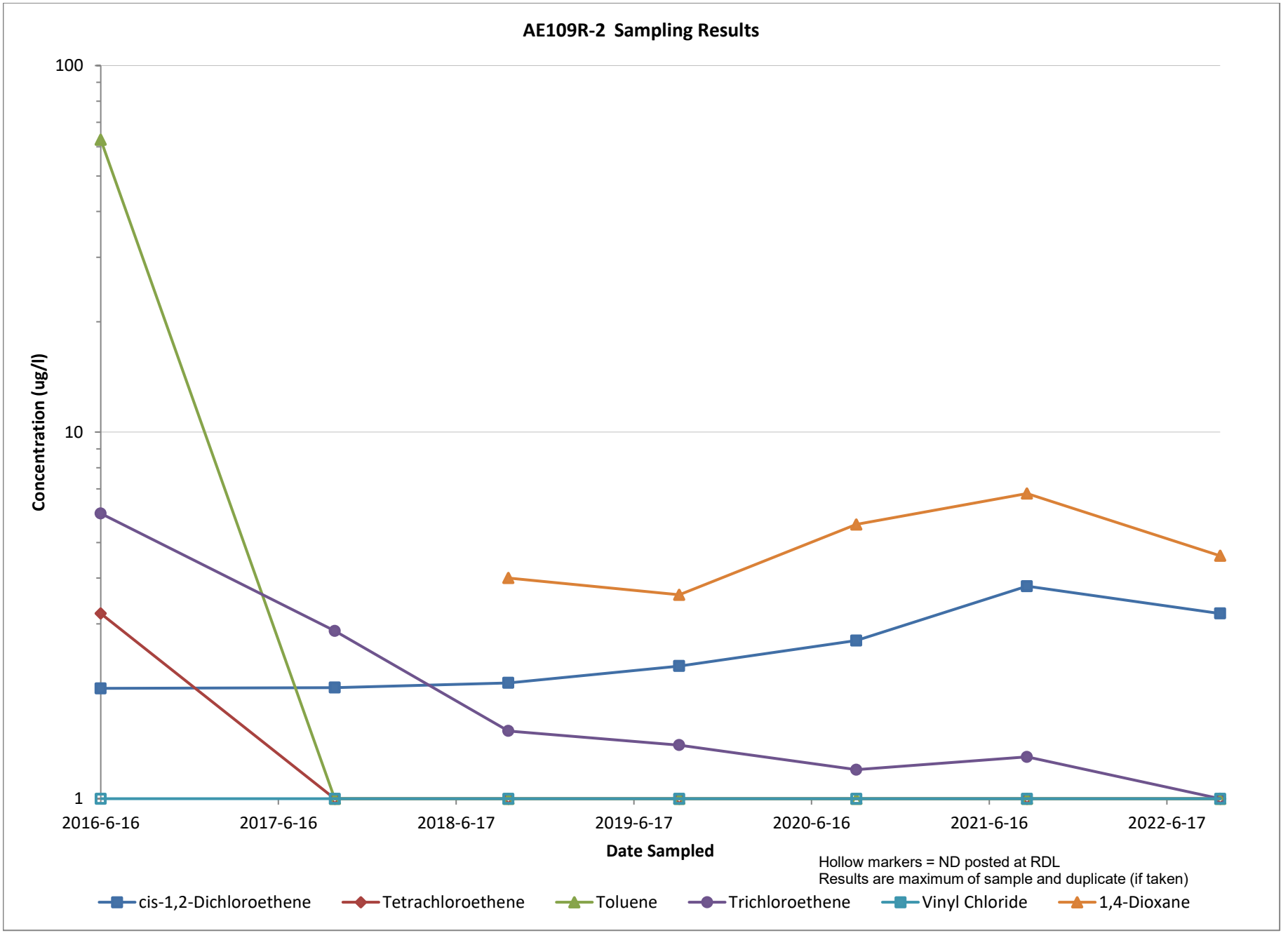

AE108R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

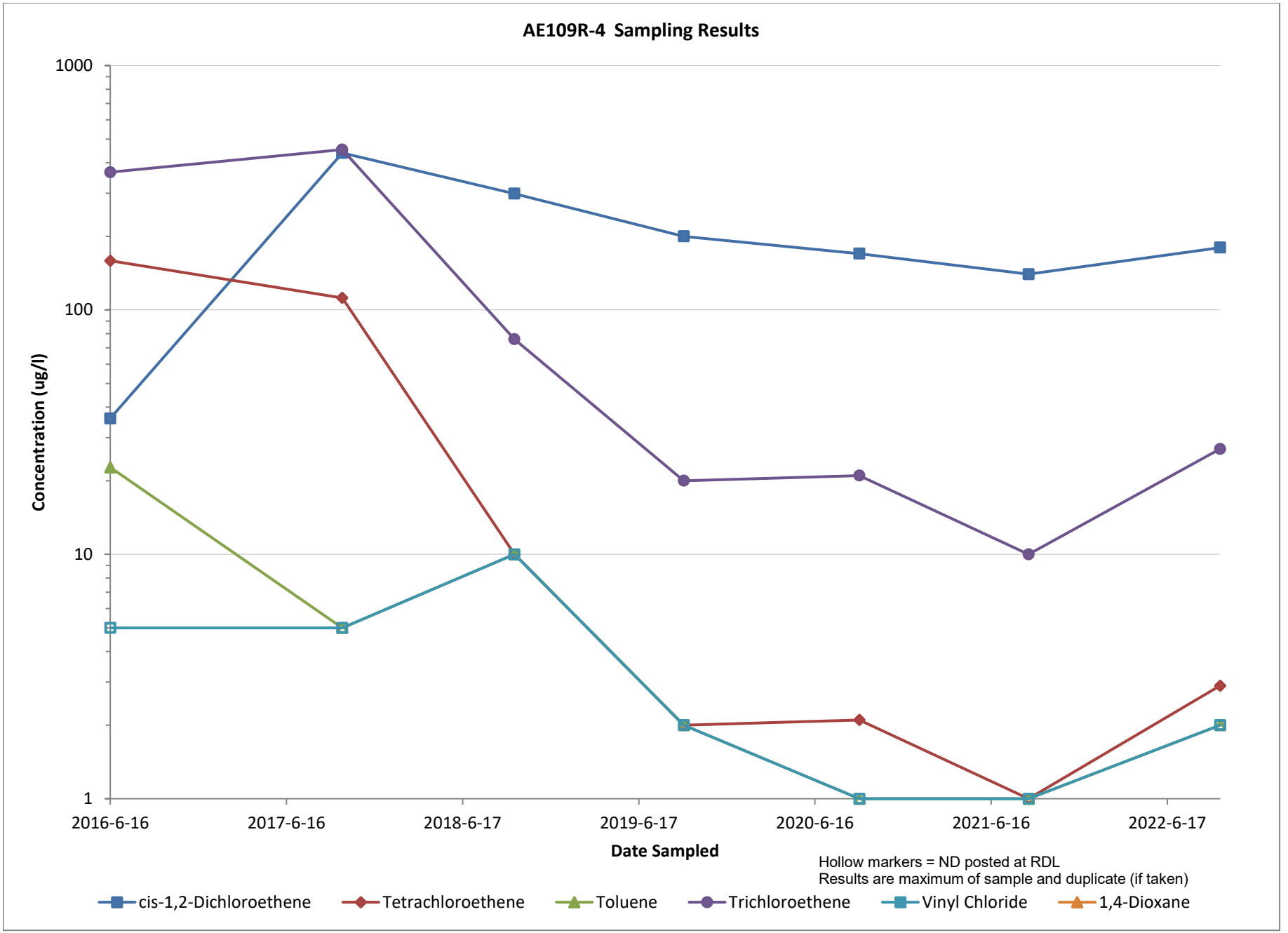

AE108R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

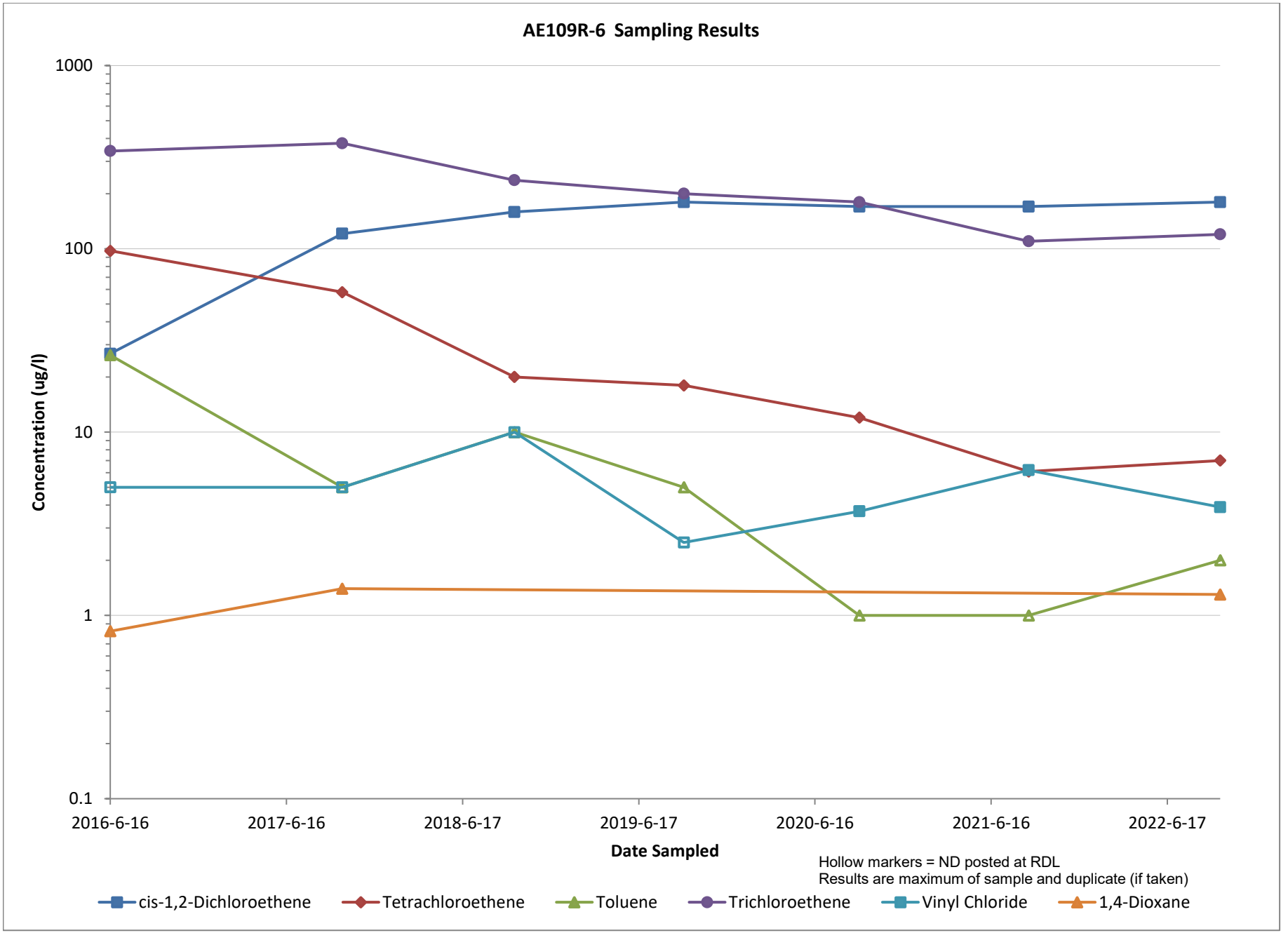

AE108R-5 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-18
2015-12-18
2016-12-18
2017-12-18
2018-12-18
2019-12-18
2020-12-18
2021-12-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

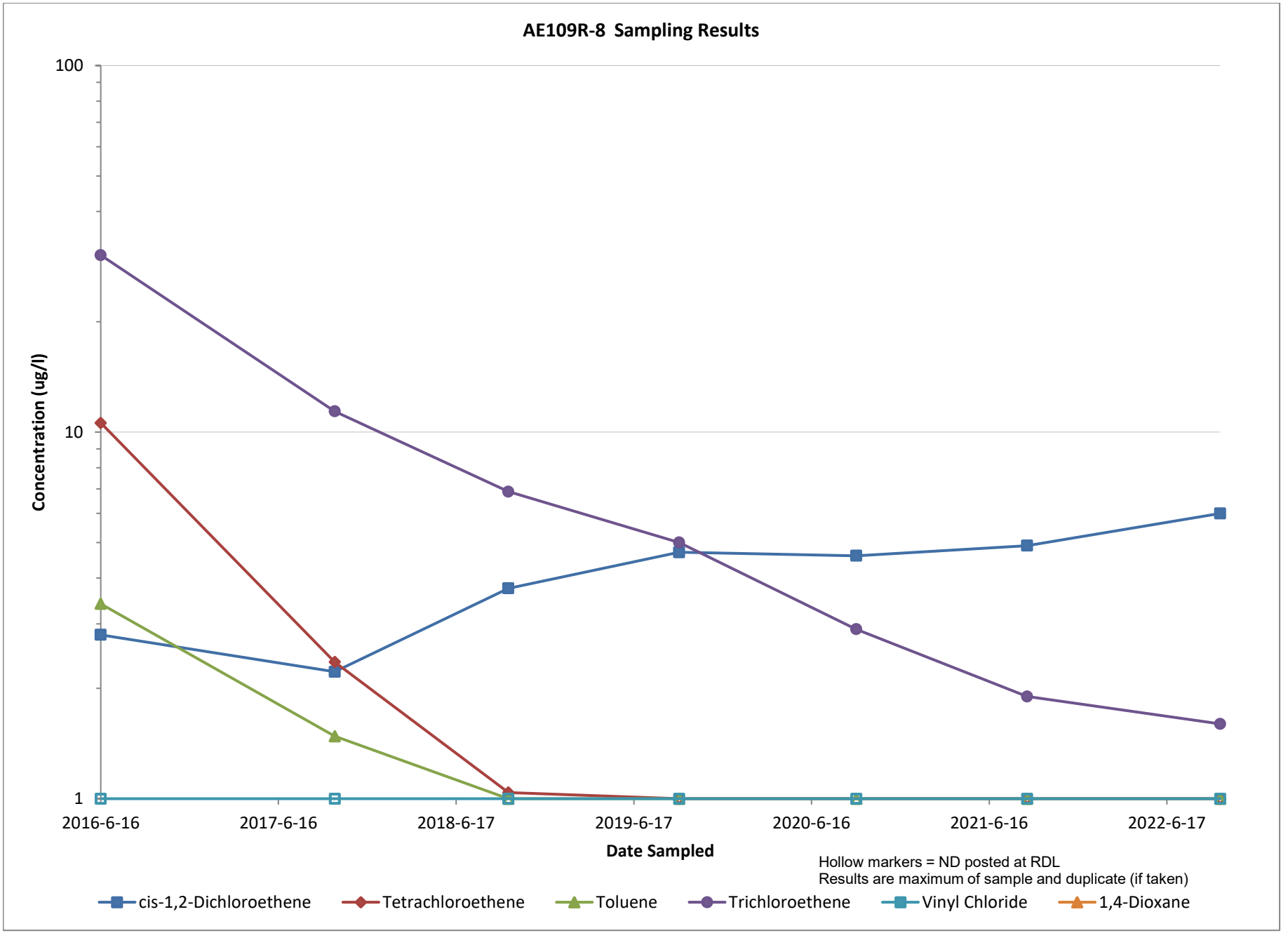

AE109D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-6-21
2017-6-21
2018-6-22
2019-6-22
2020-6-21
2021-6-21
2022-6-22
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

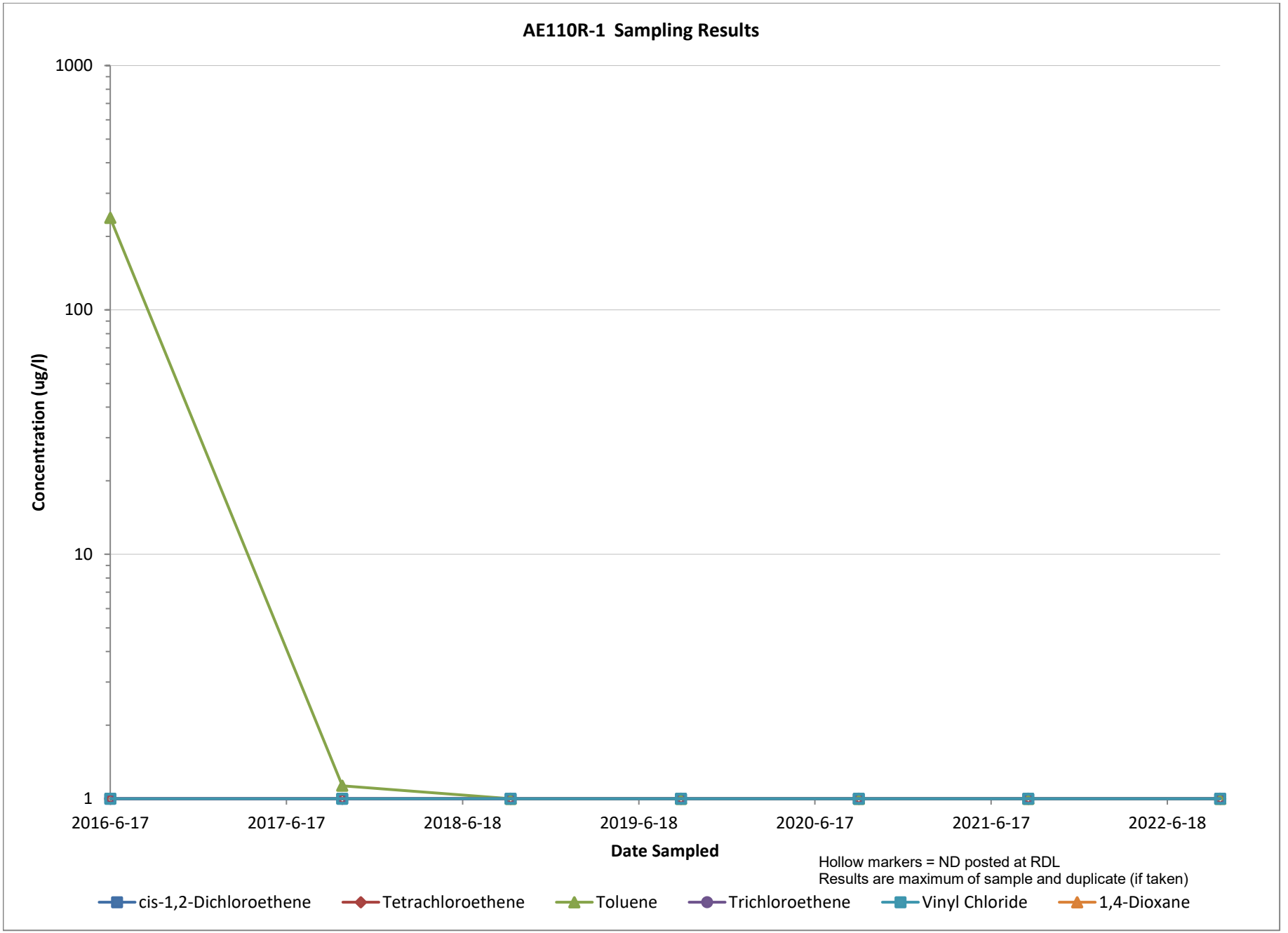

AE109R-1 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

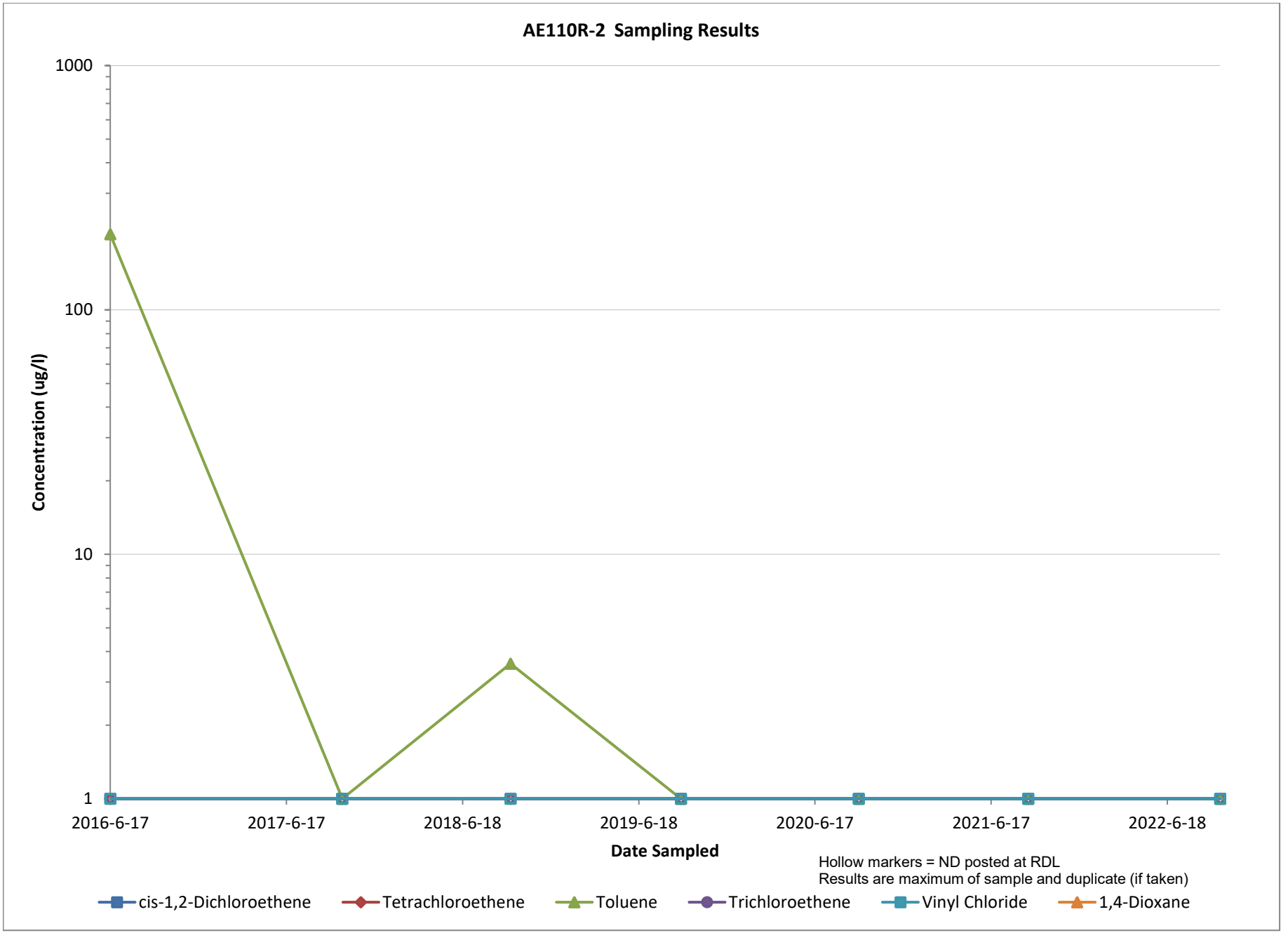

AE109R-2 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

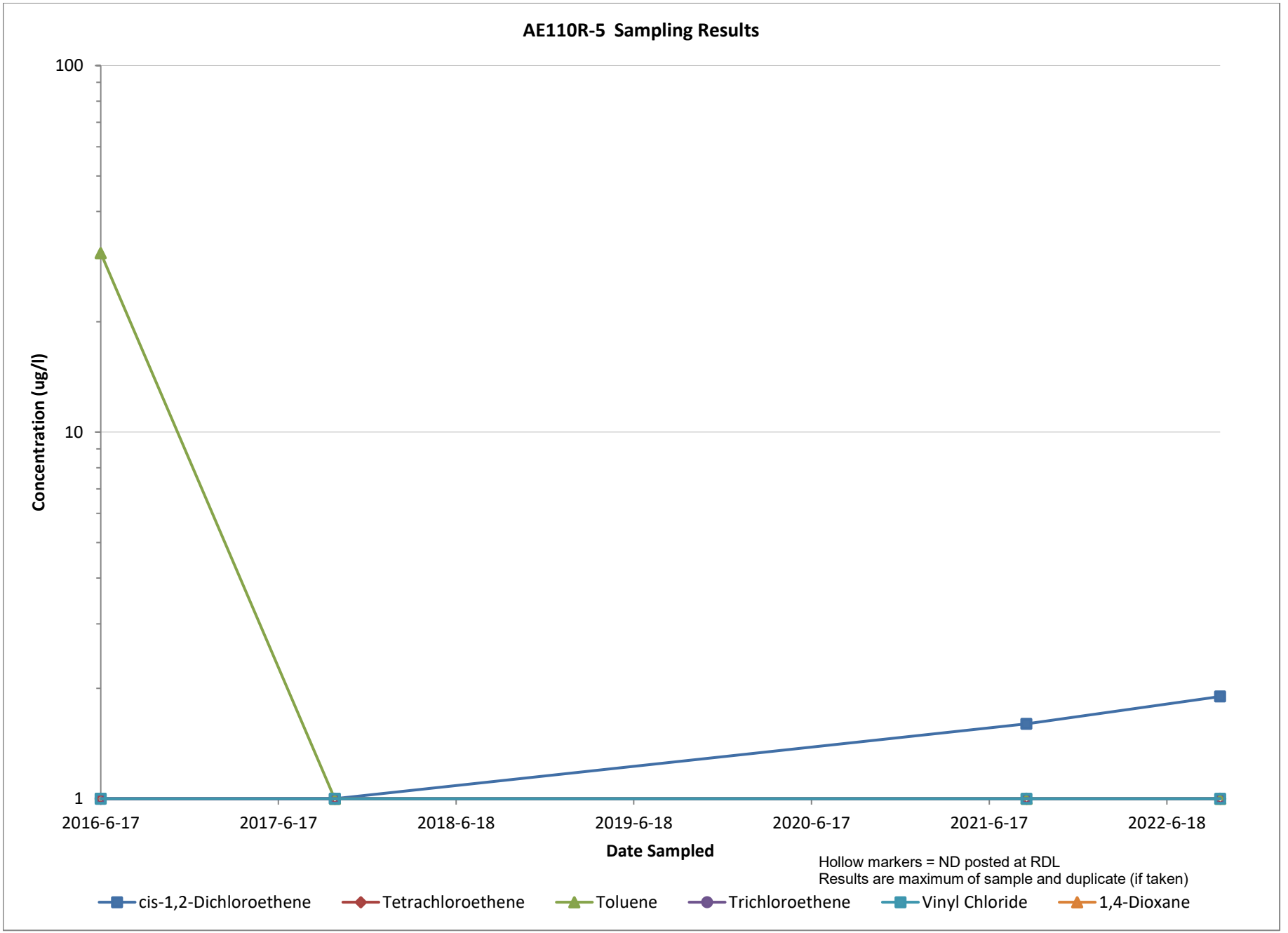

AE109R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

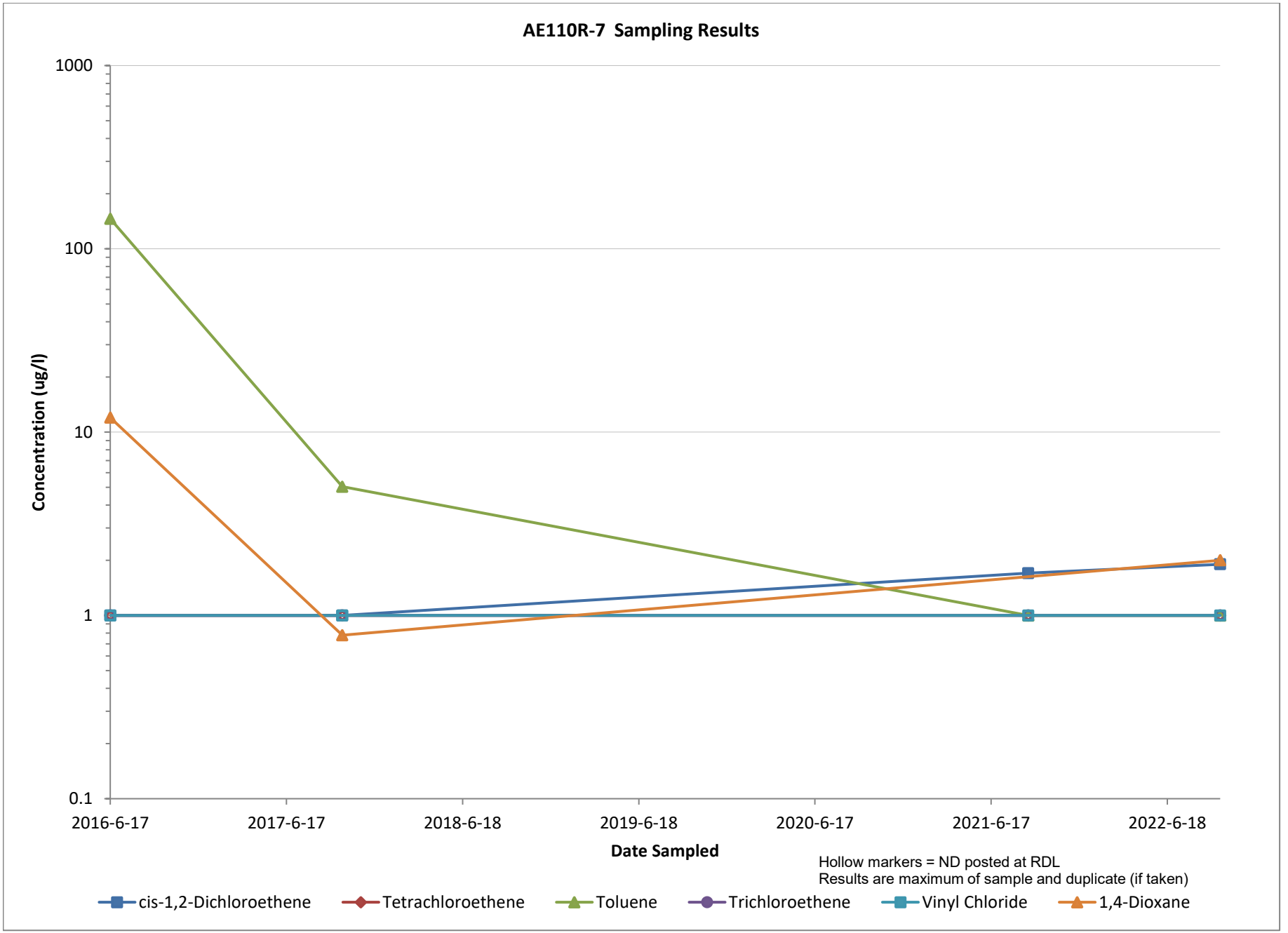

AE109R-6 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

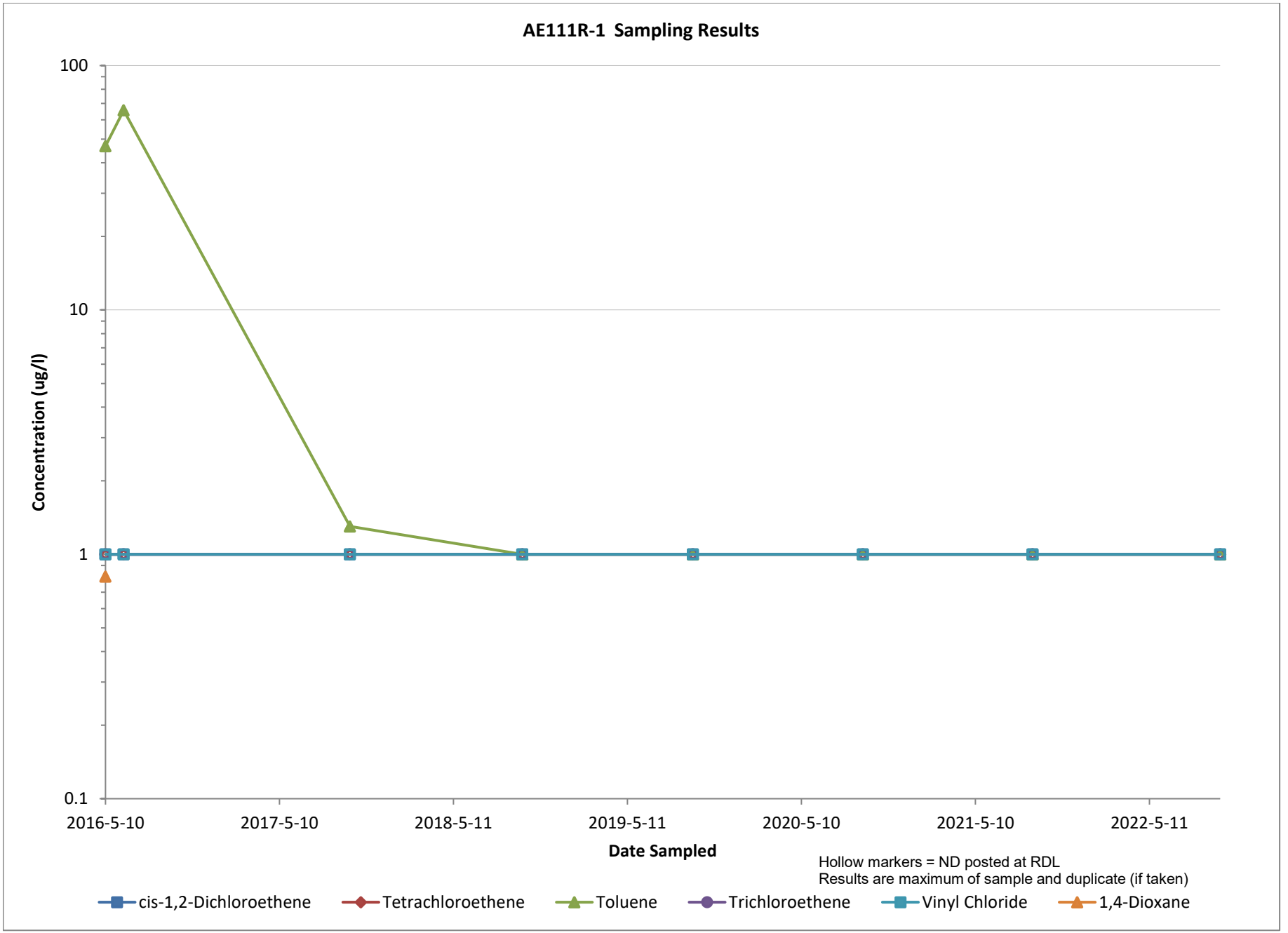

AE109R-8 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-16
2017-6-16
2018-6-17
2019-6-17
2020-6-16
2021-6-16
2022-6-17
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

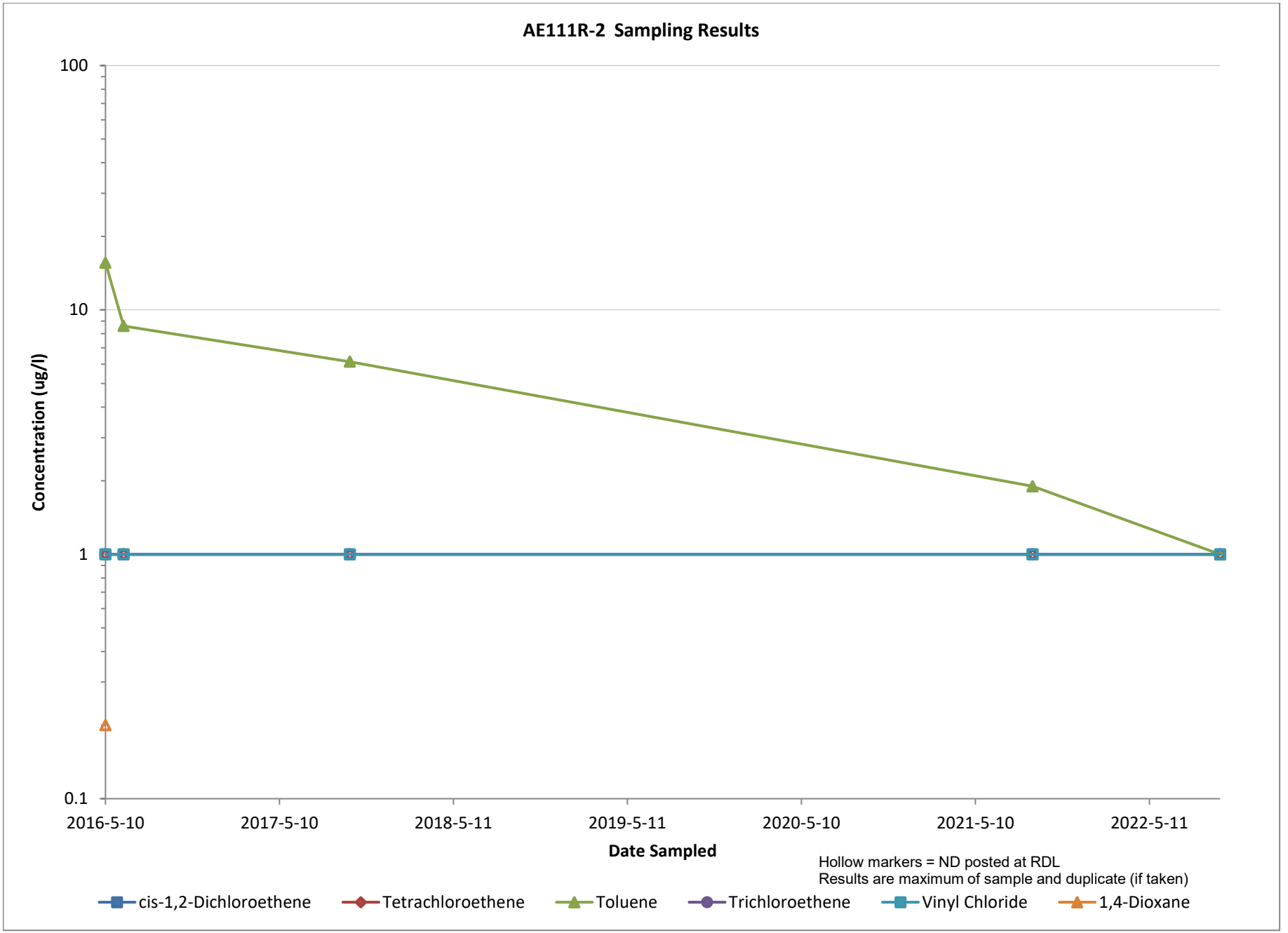

AE110R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

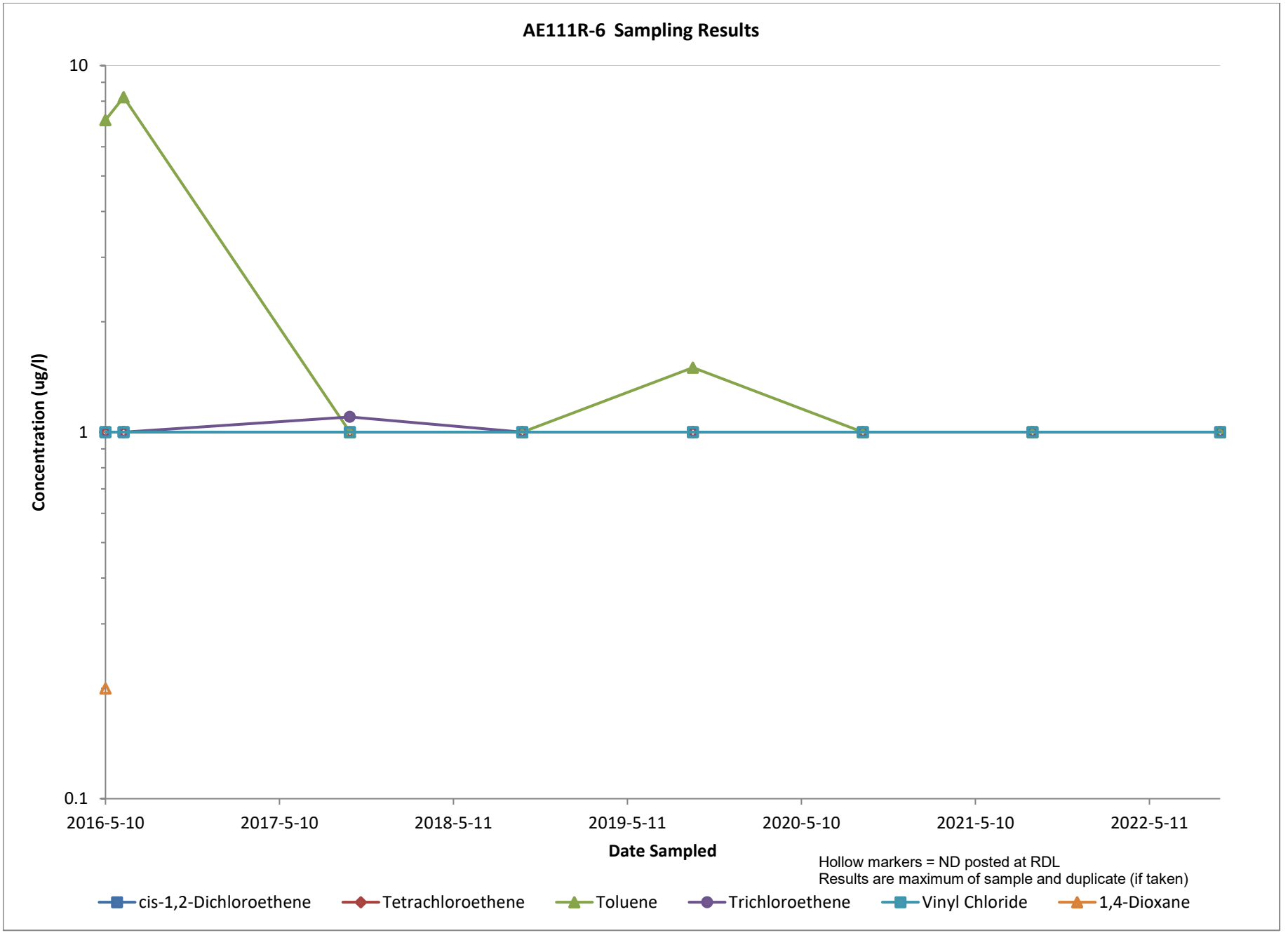

AE110R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

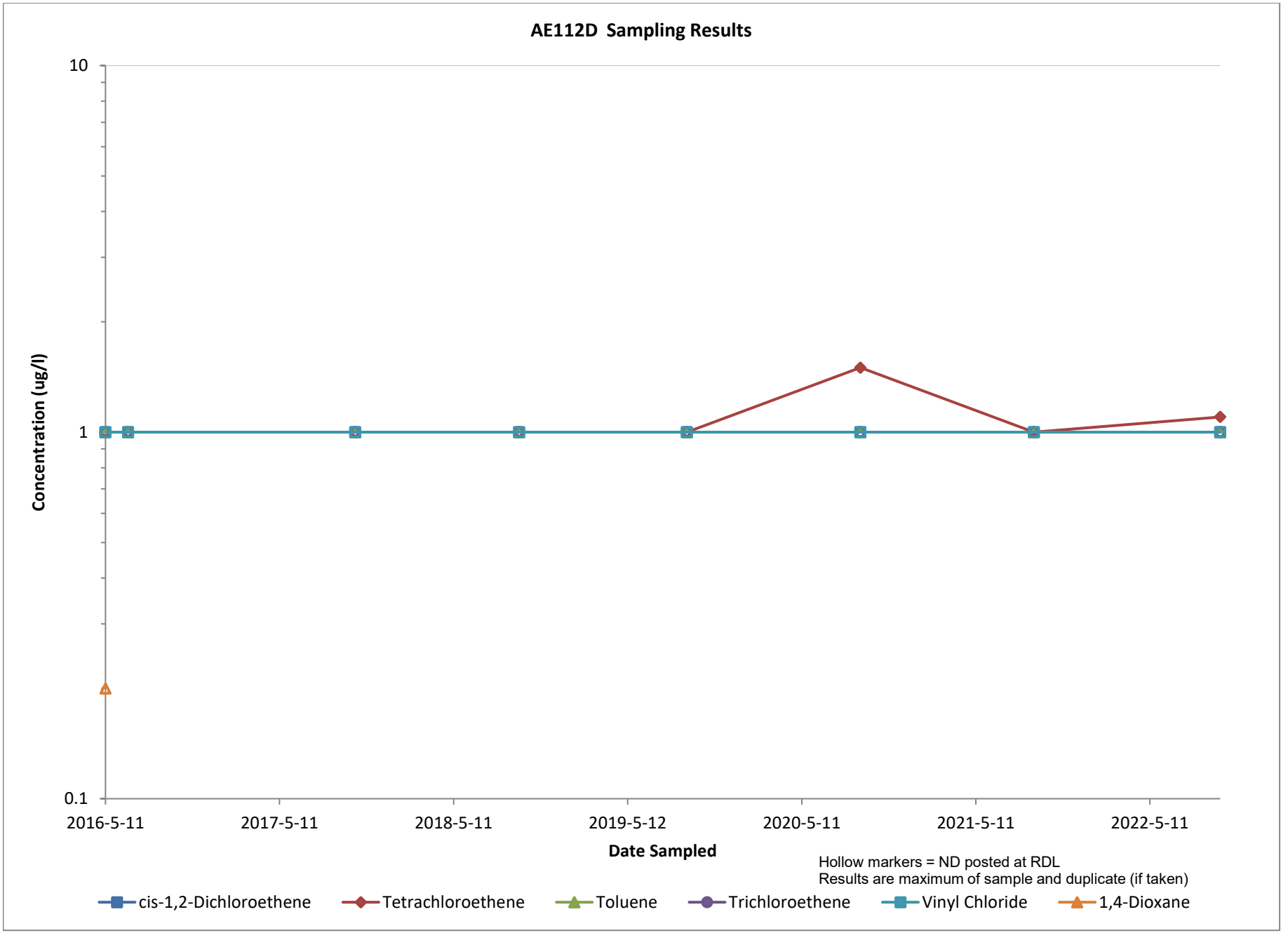

AE110R-5 Sampling Results
100
10
1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

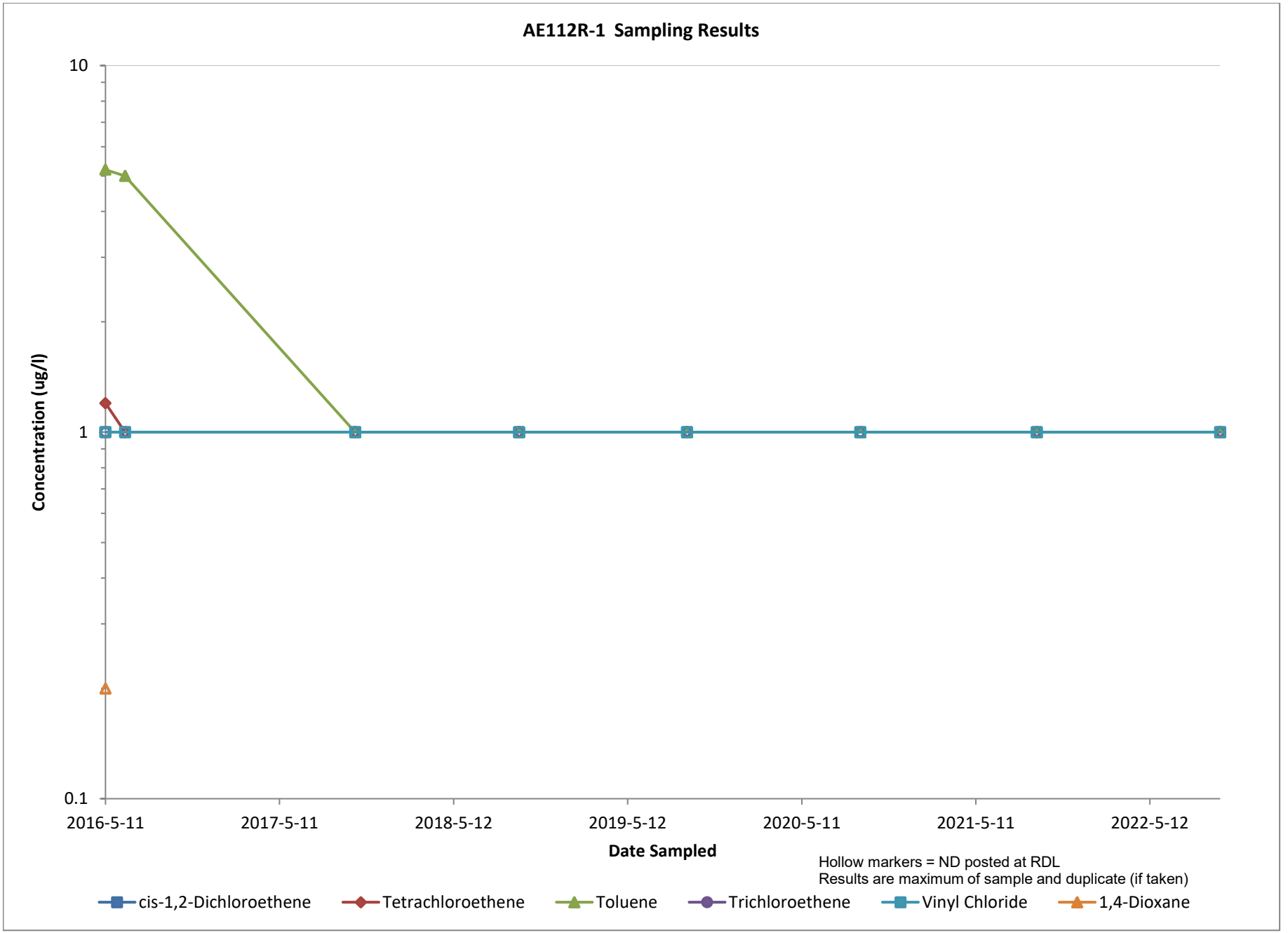

AE110R-7 Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2016-6-17
2017-6-17
2018-6-18
2019-6-18
2020-6-17
2021-6-17
2022-6-18
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

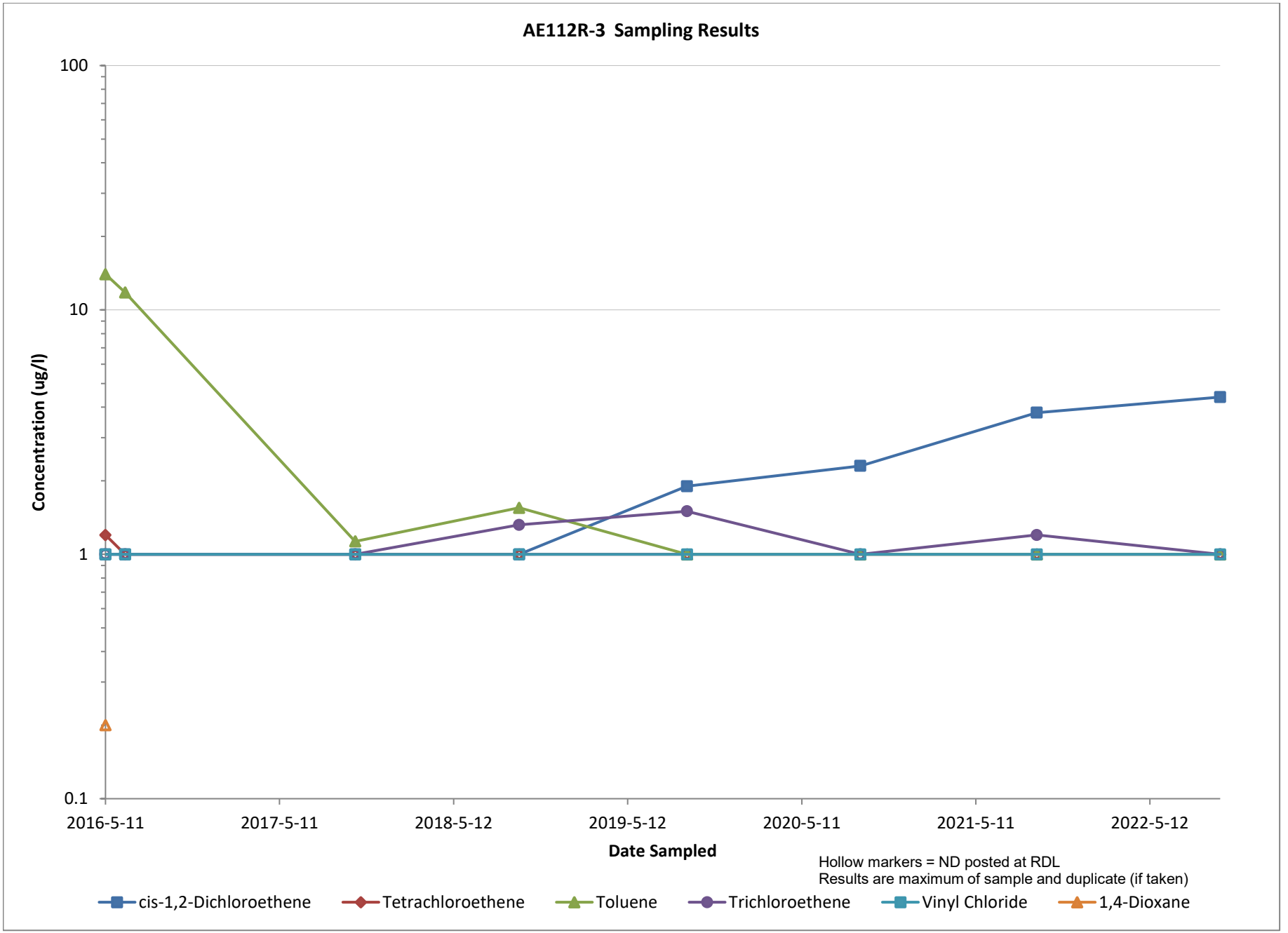

AE111R-1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

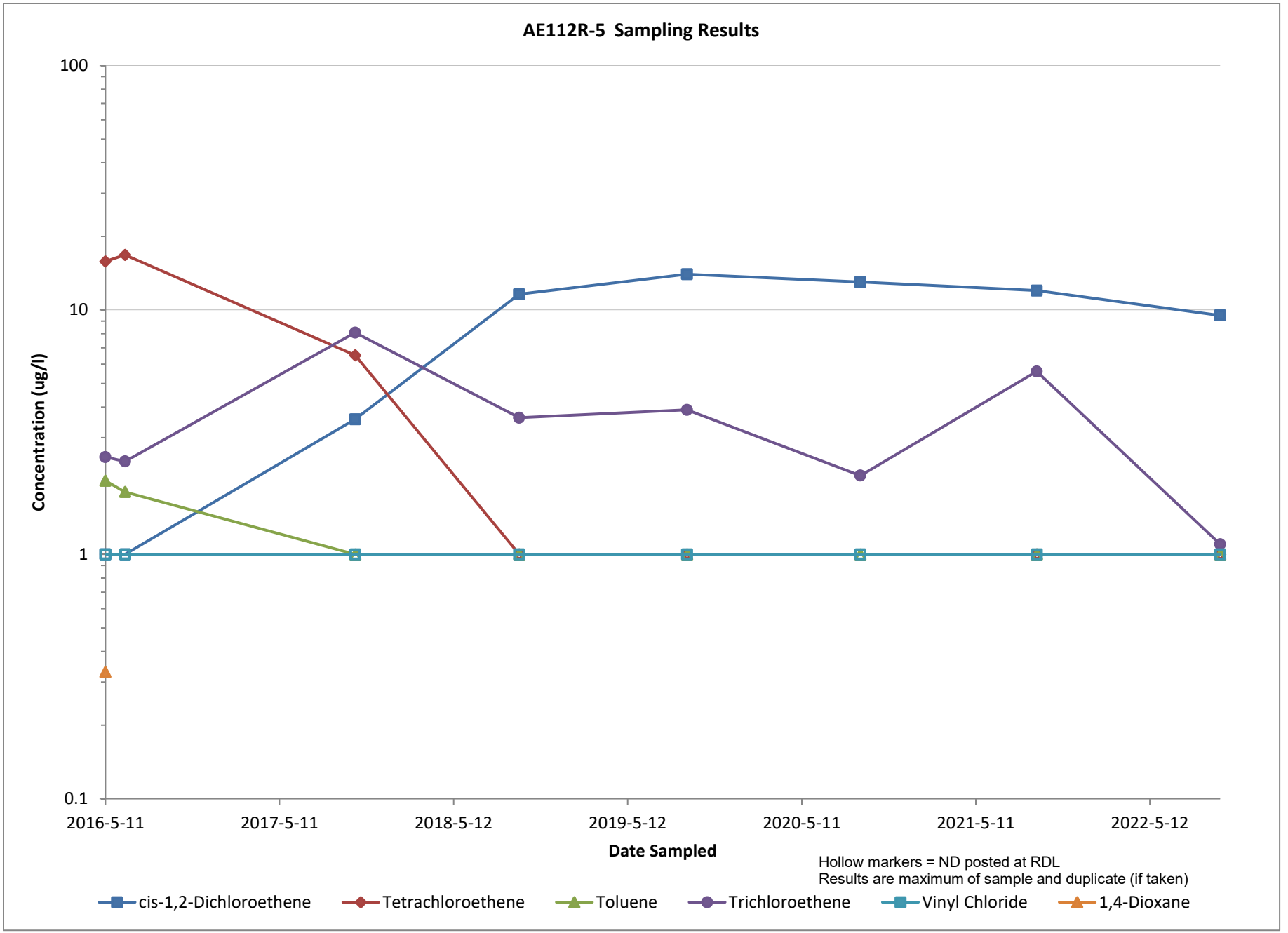

AE111R-2 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

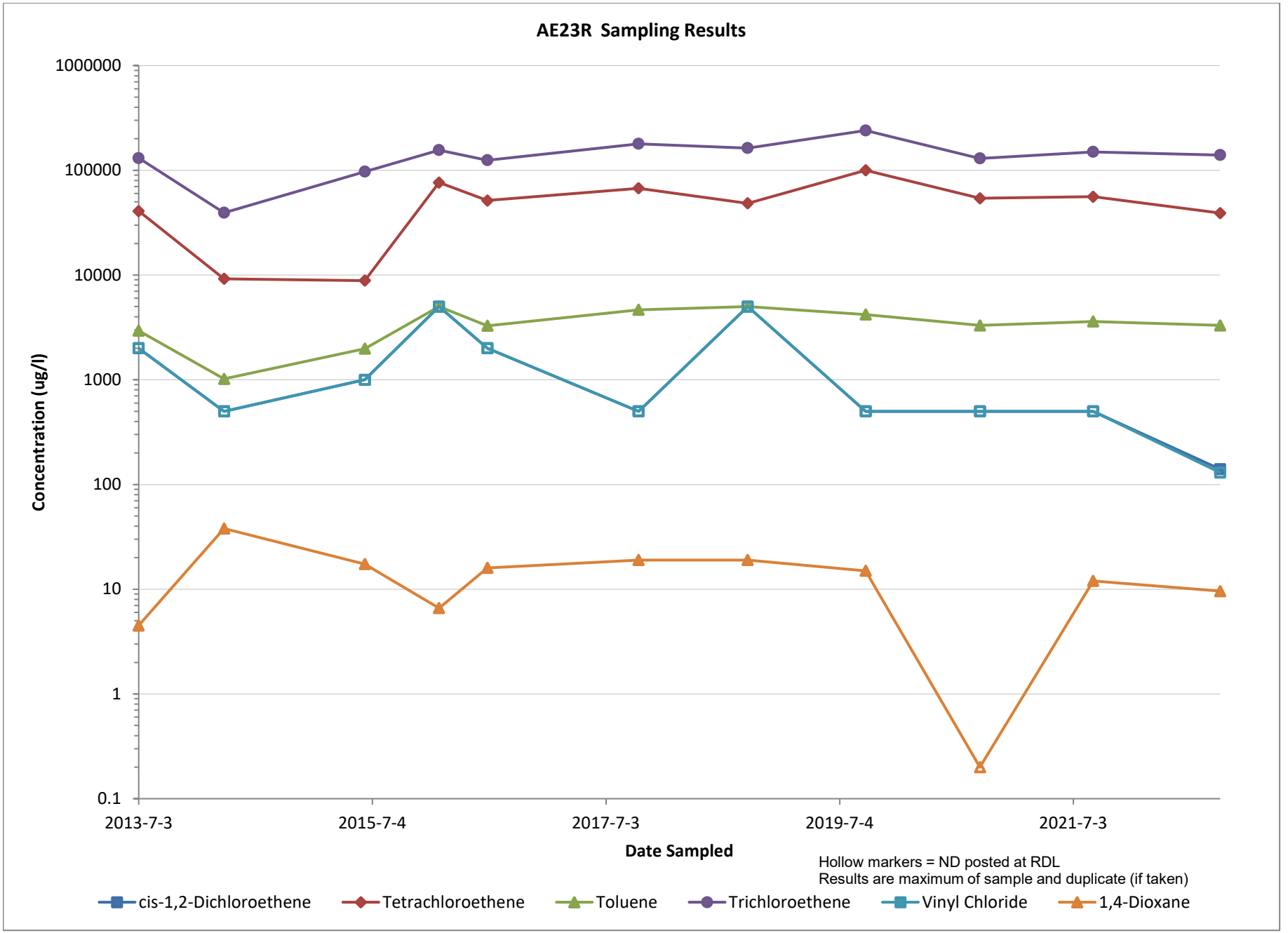

AE111R-6 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-10
2017-5-10
2018-5-11
2019-5-11
2020-5-10
2021-5-10
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

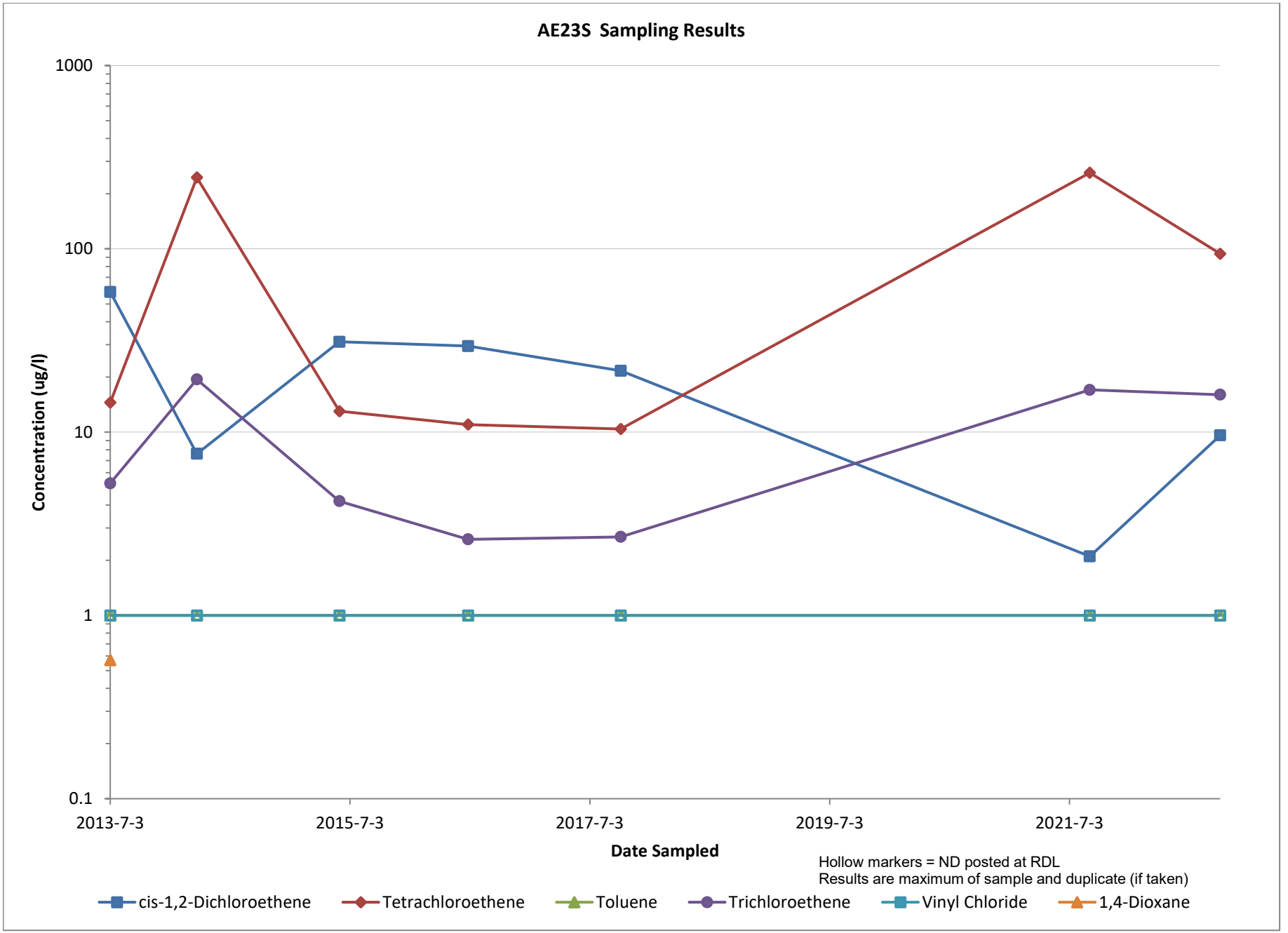

AE112D Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-11
2019-5-12
2020-5-11
2021-5-11
2022-5-11
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

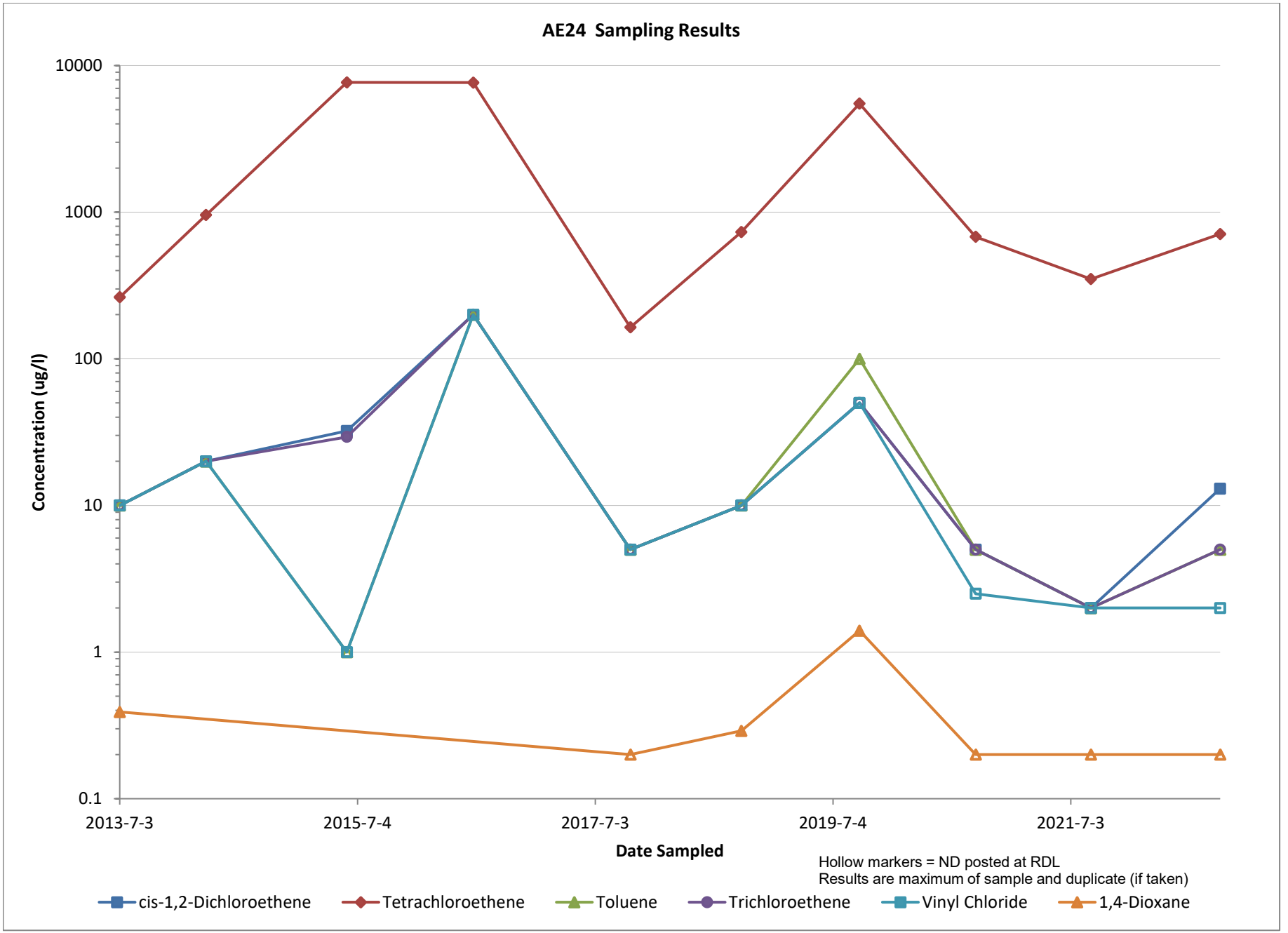

AE112R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
2022-5-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

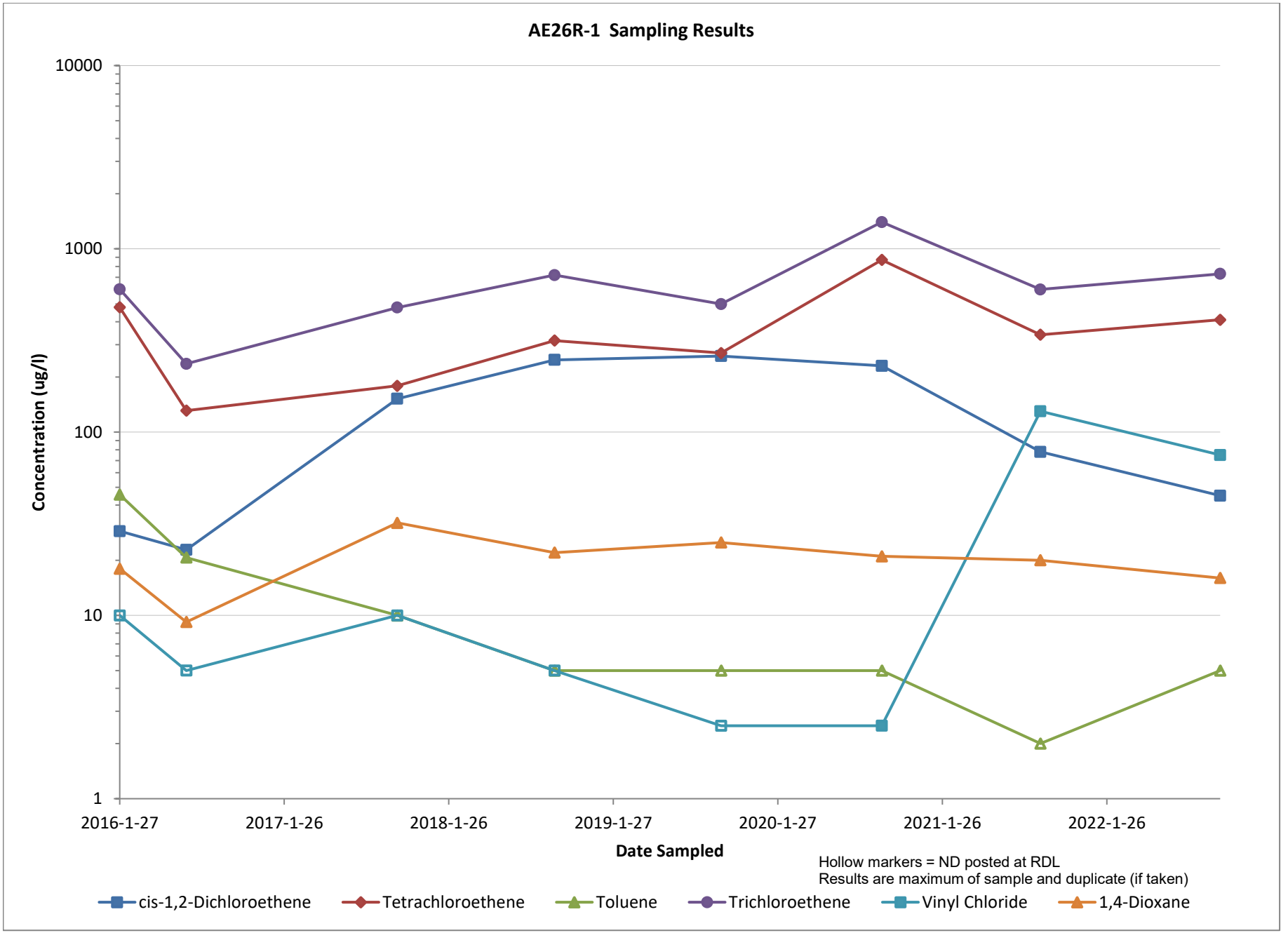

AE112R-3 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
2022-5-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

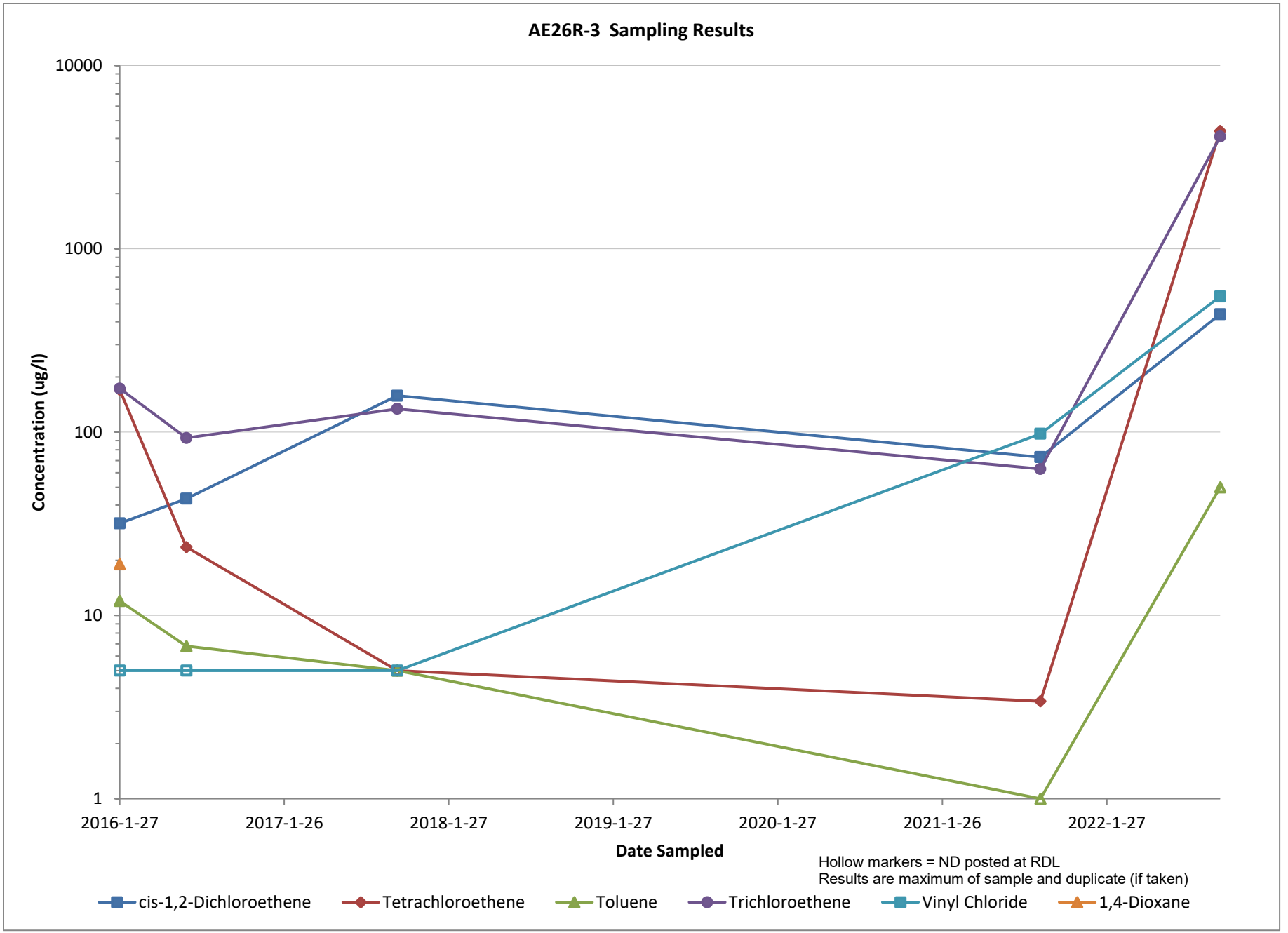

AE112R-5 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2016-5-11
2017-5-11
2018-5-12
2019-5-12
2020-5-11
2021-5-11
2022-5-12
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

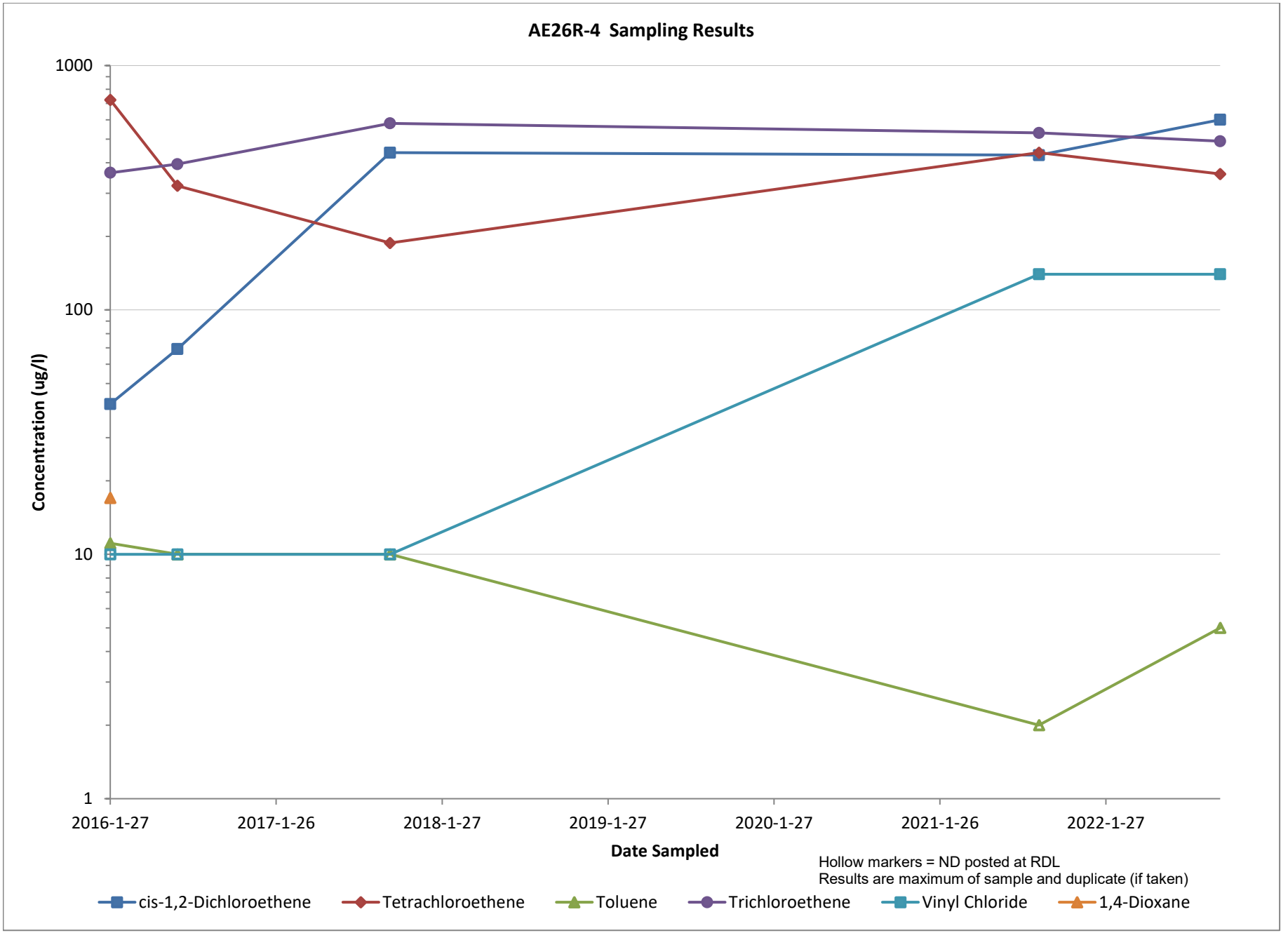

AE23R Sampling Results
1000000
100000
10000
1000
100
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

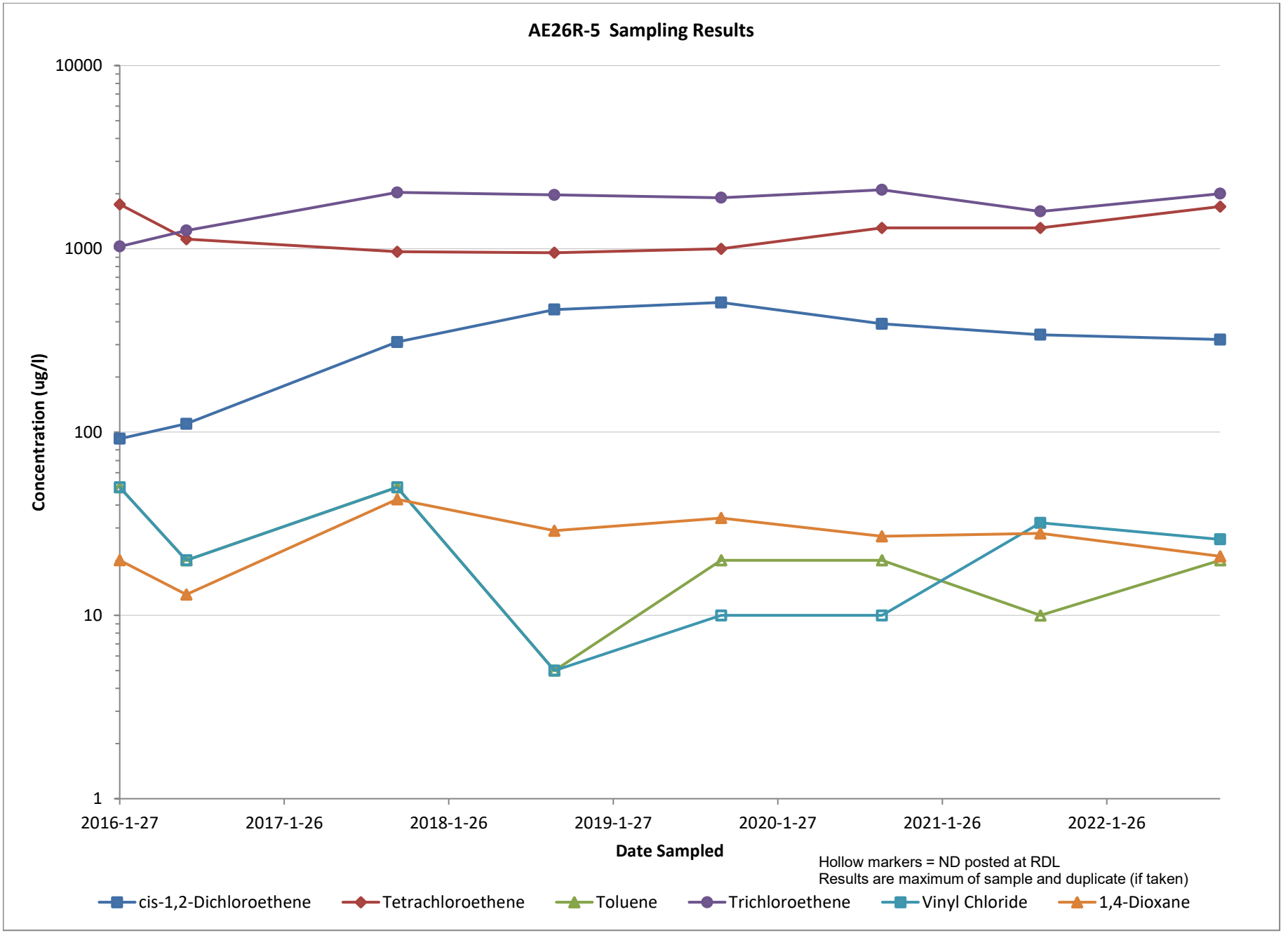

AE23S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-3
2017-7-3
2019-7-3
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

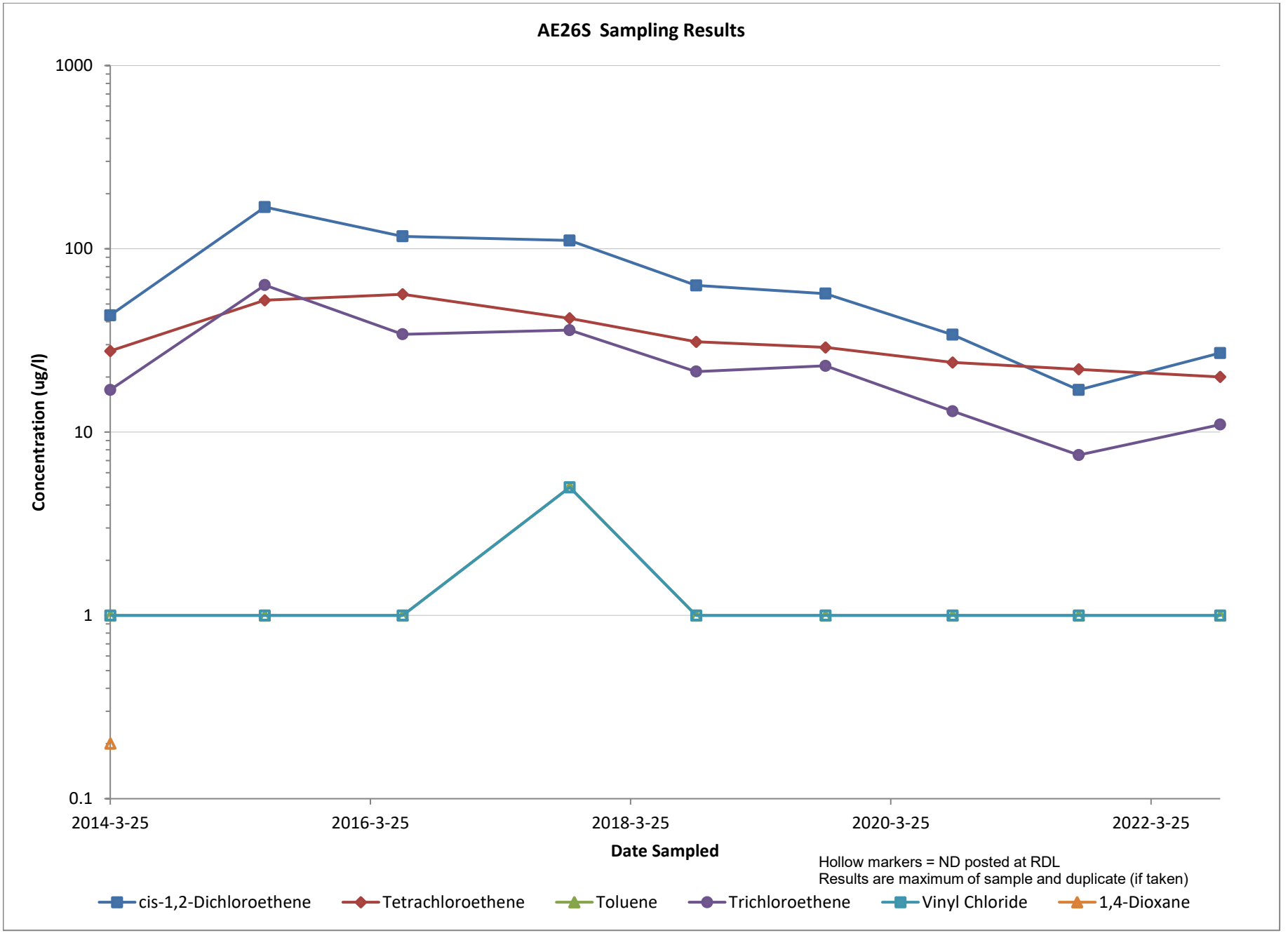

AE24 Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
2013-7-3
2015-7-4
2017-7-3
2019-7-4
2021-7-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

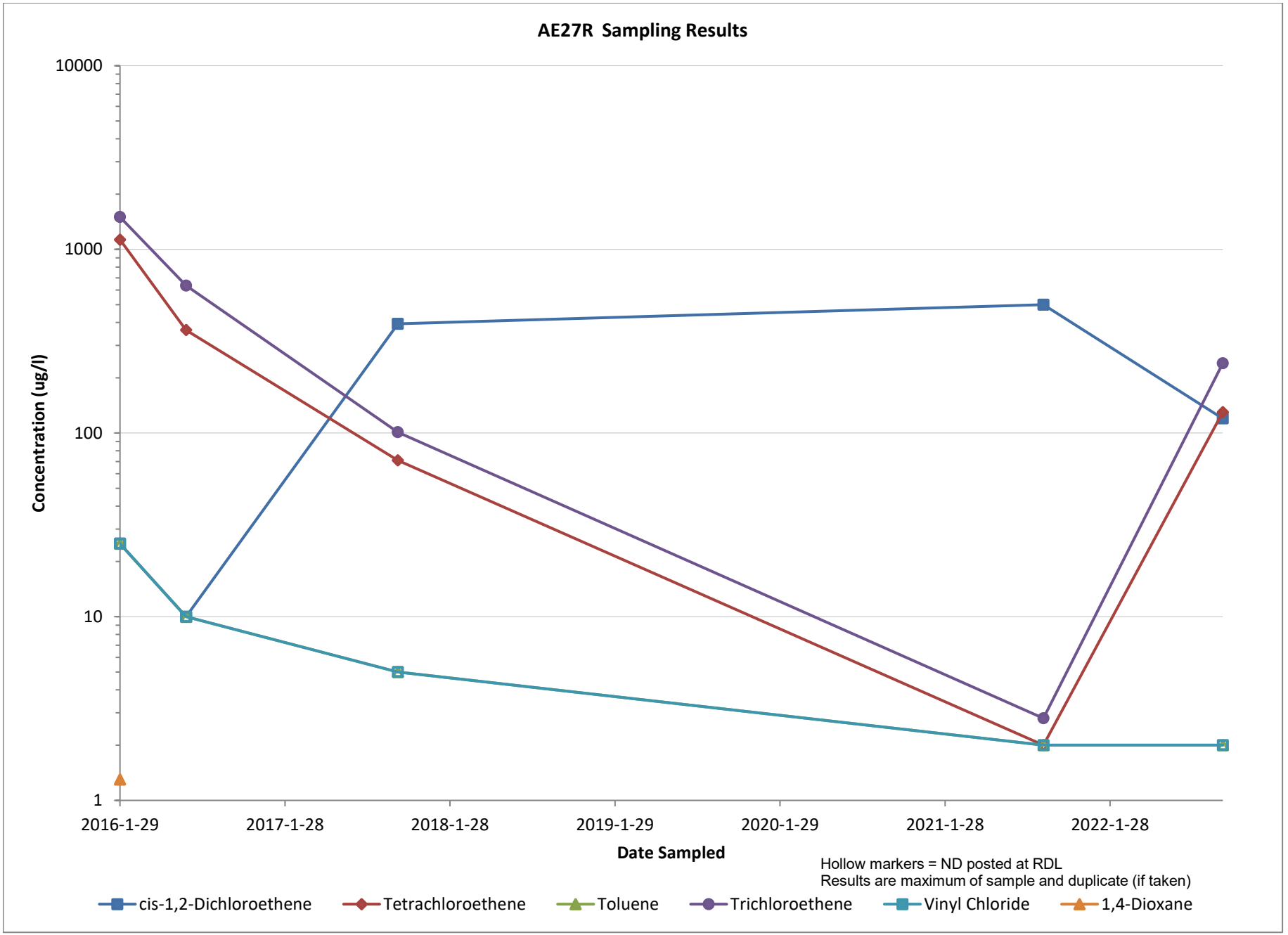

AE26R-1 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

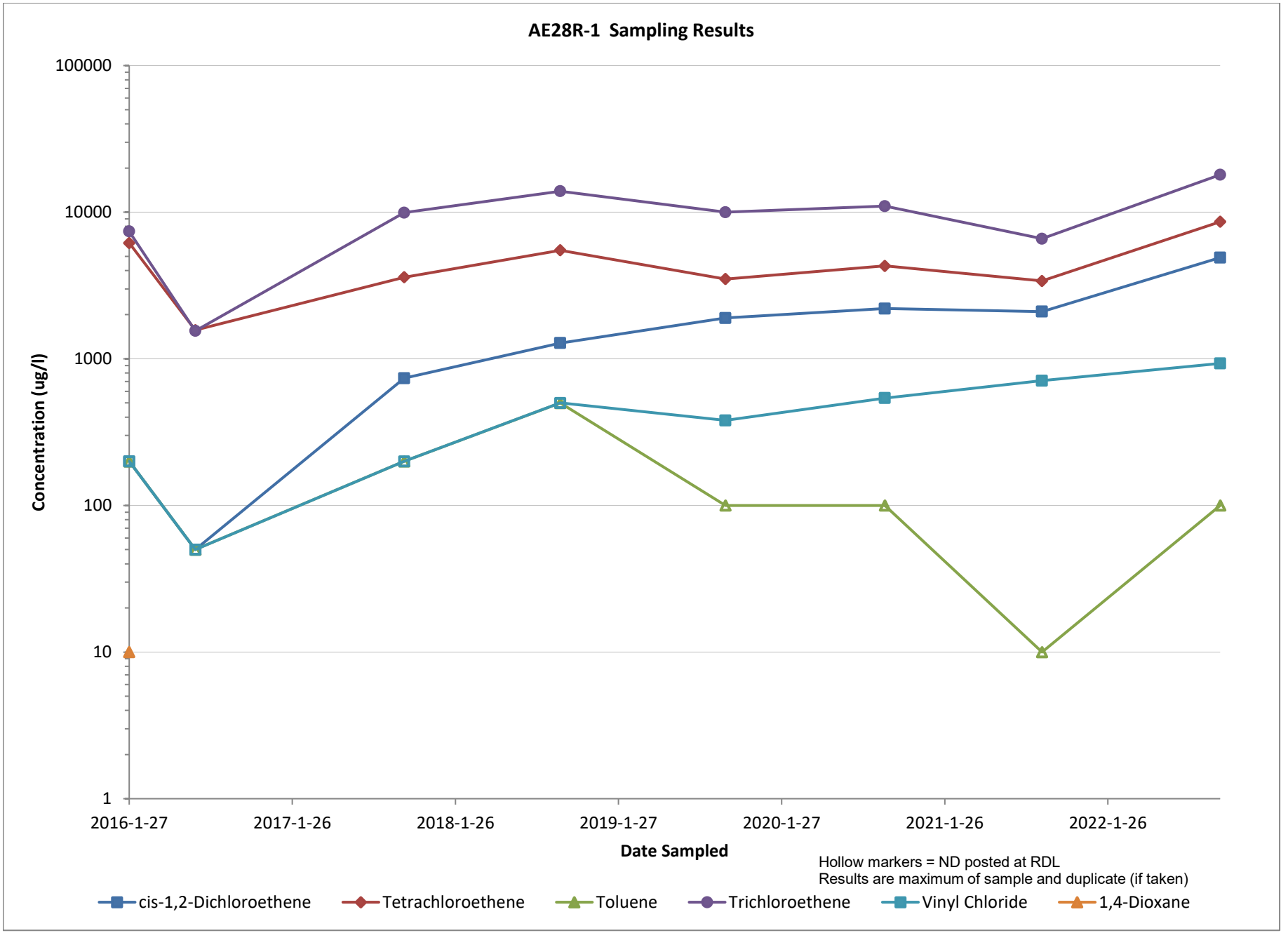

AE26R-3 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

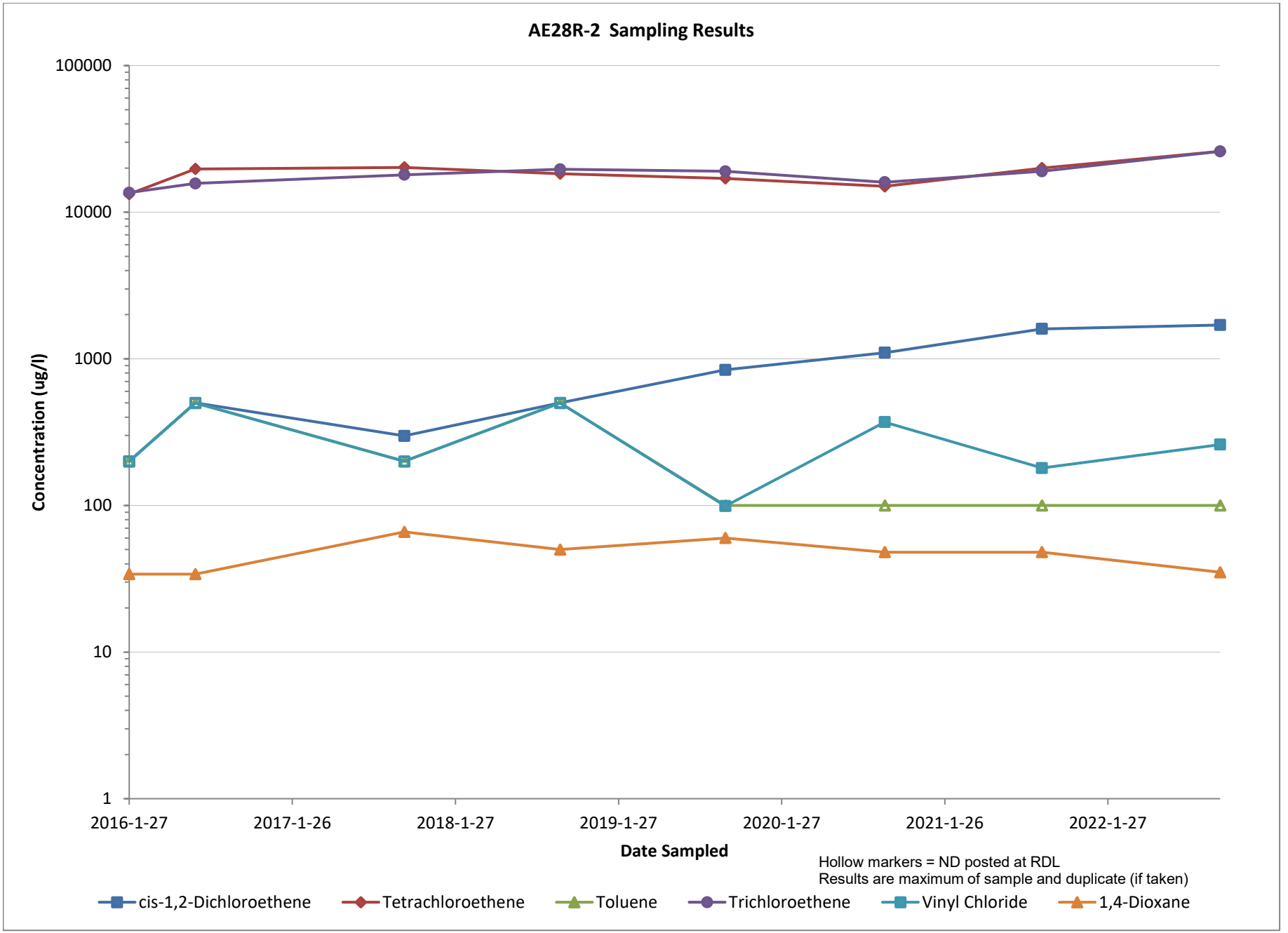

AE26R-4 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

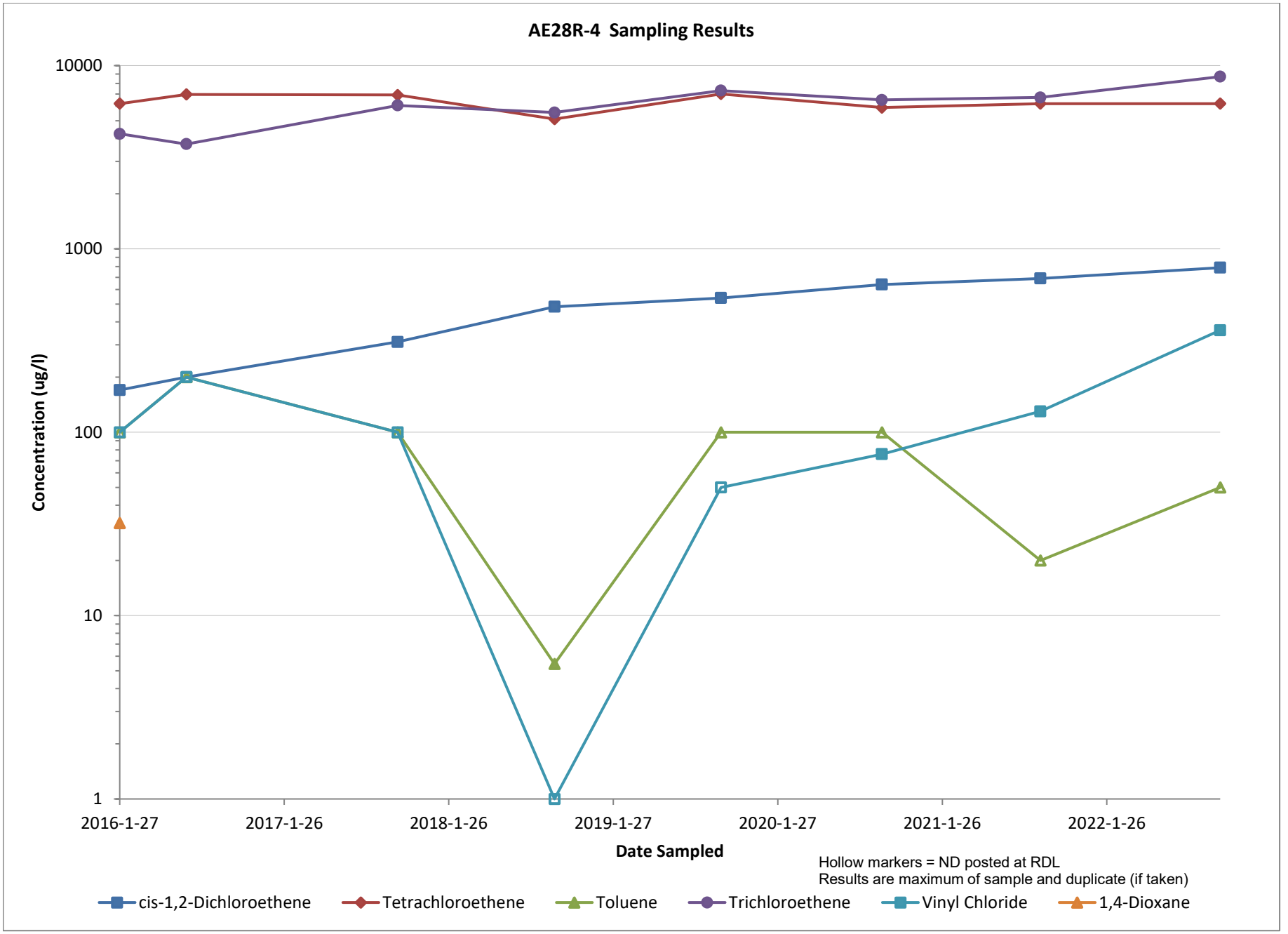

AE26R-5 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

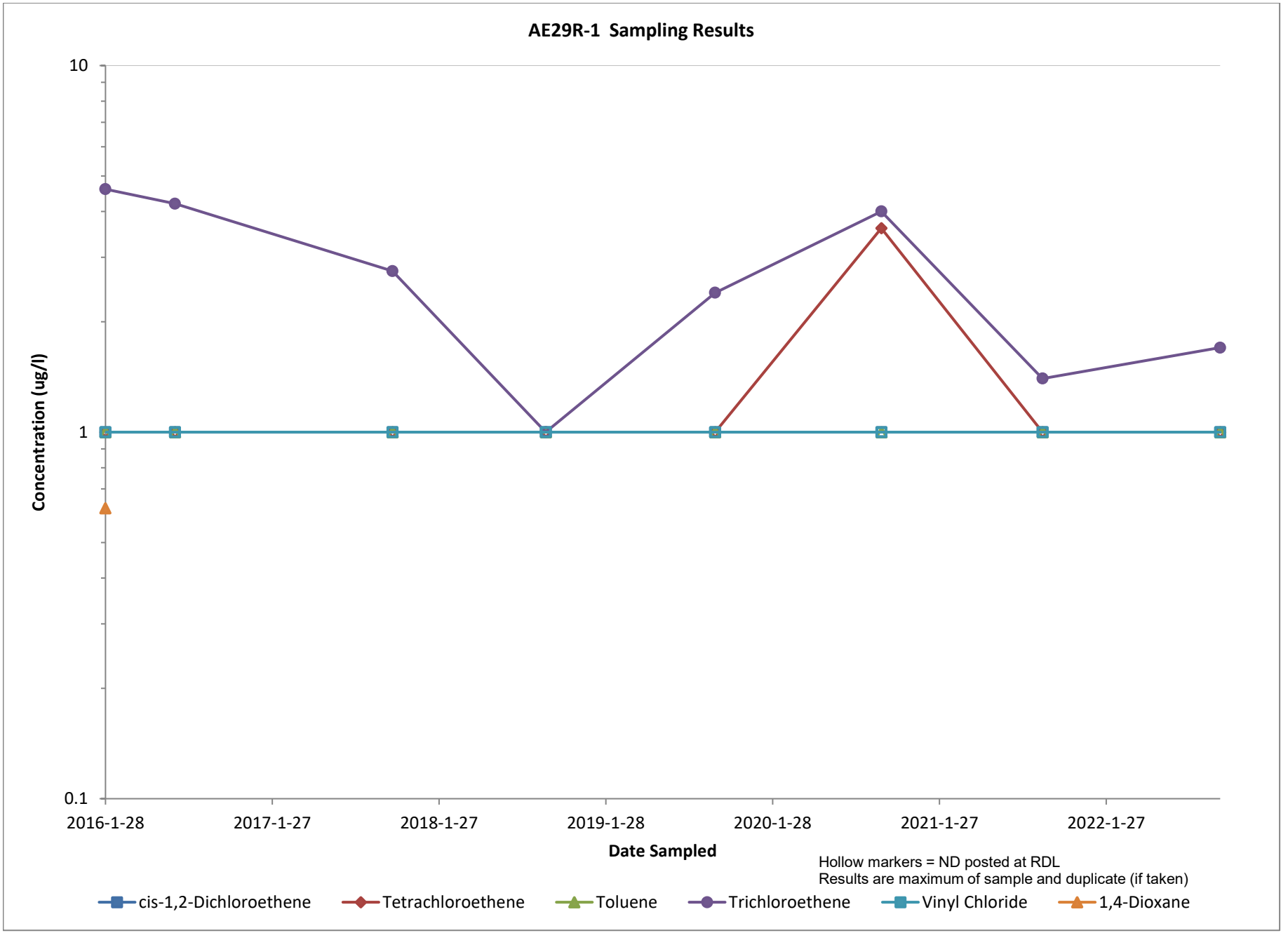

AE26S Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
2014-3-25
2016-3-25
2018-3-25
2020-3-25
2022-3-25
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

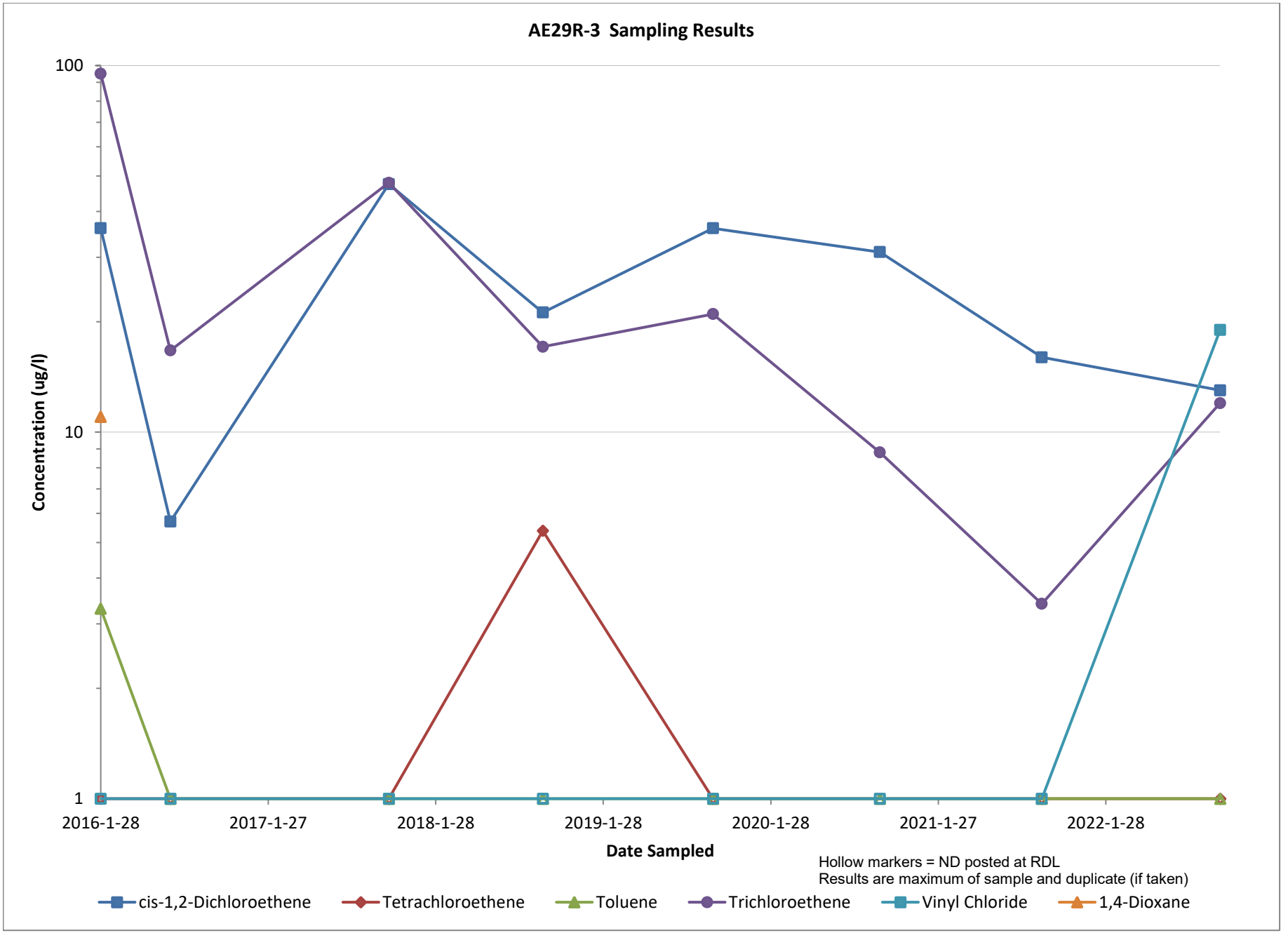

AE27R Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-29
2017-1-28
2018-1-28
2019-1-29
2020-1-29
2021-1-28
2022-1-28
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

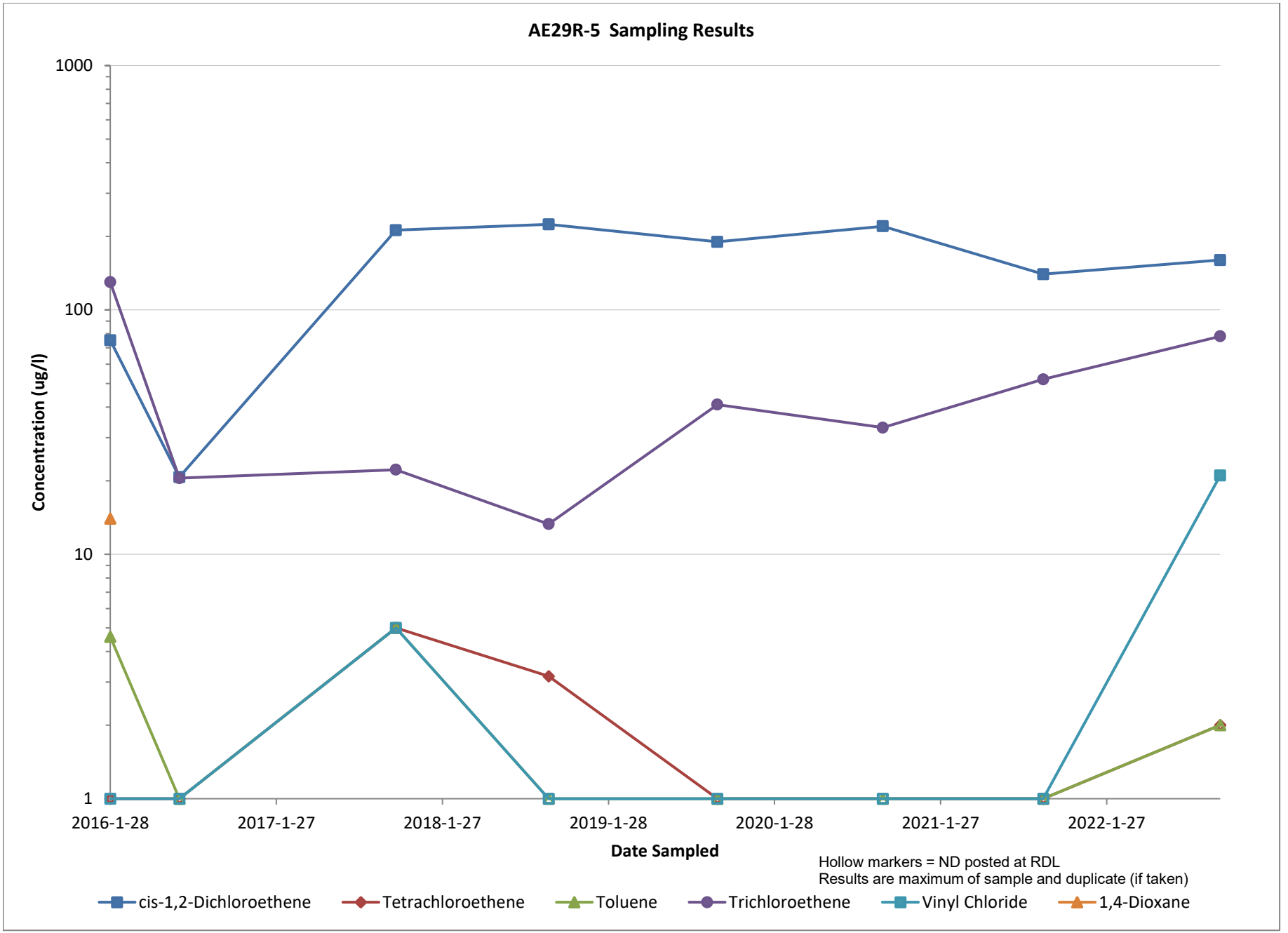

AE28R-1 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

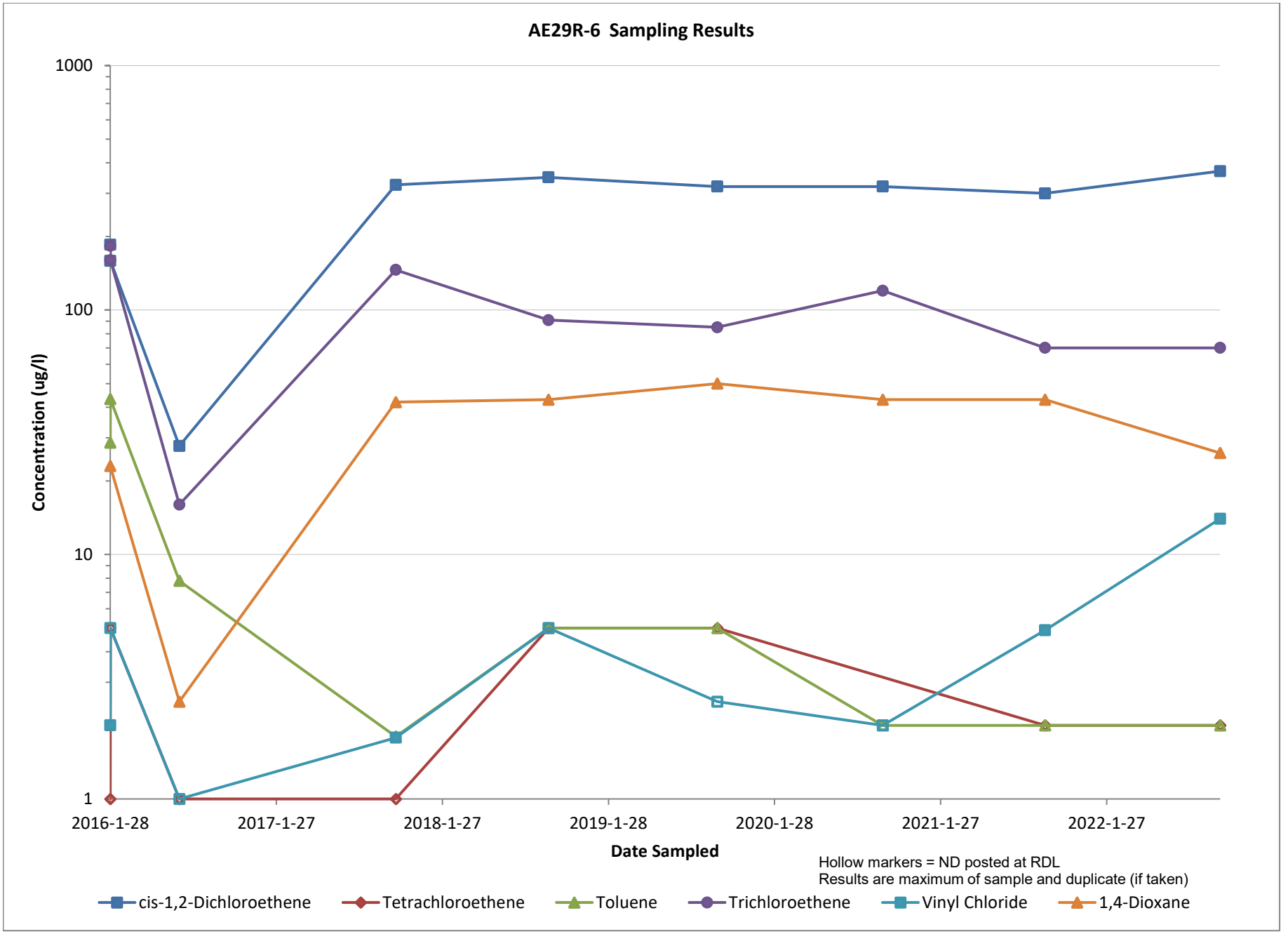

AE28R-2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-27
2019-1-27
2020-1-27
2021-1-26
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

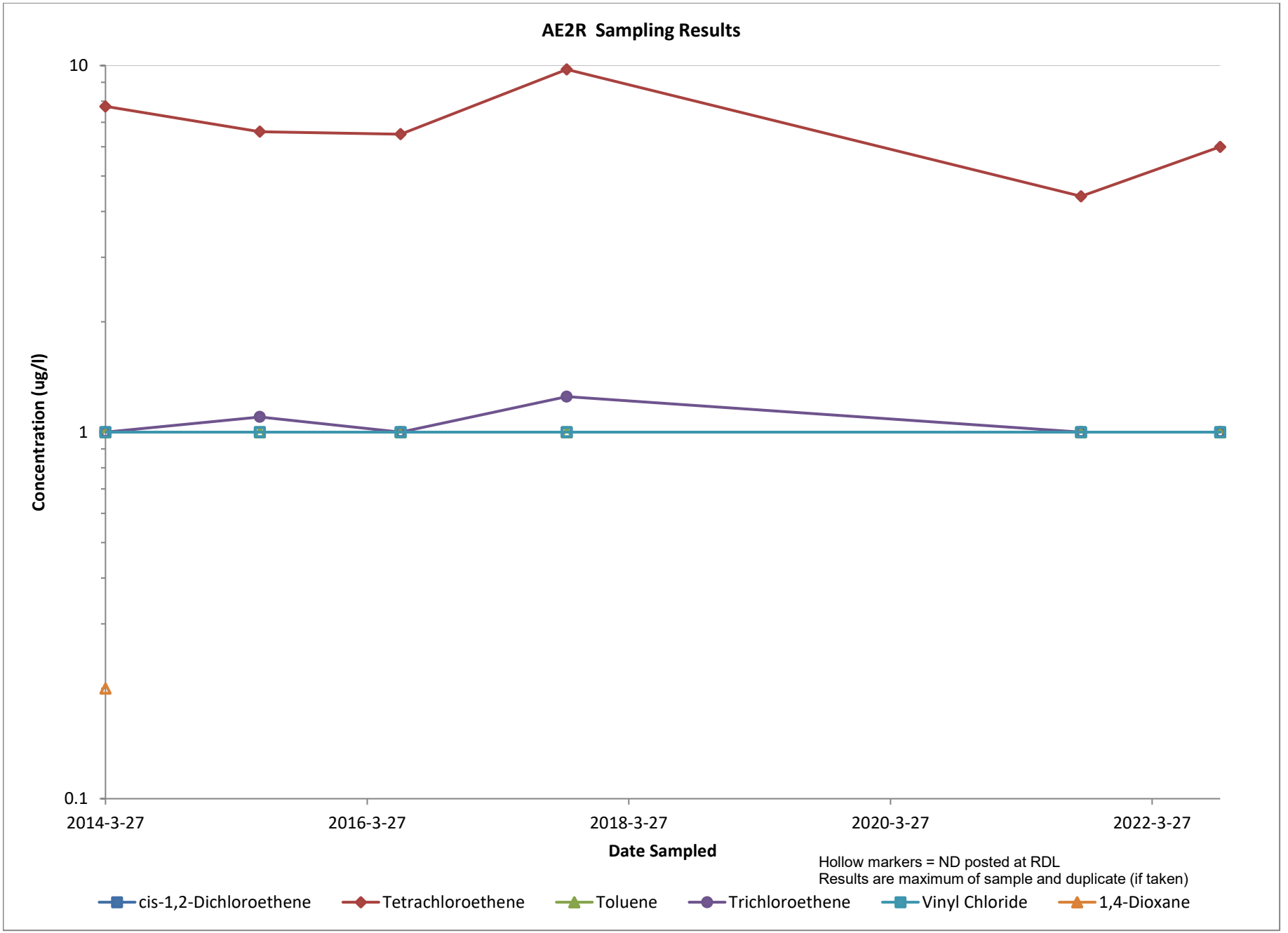

AE28R-4 Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
2016-1-27
2017-1-26
2018-1-26
2019-1-27
2020-1-27
2021-1-26
2022-1-26
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

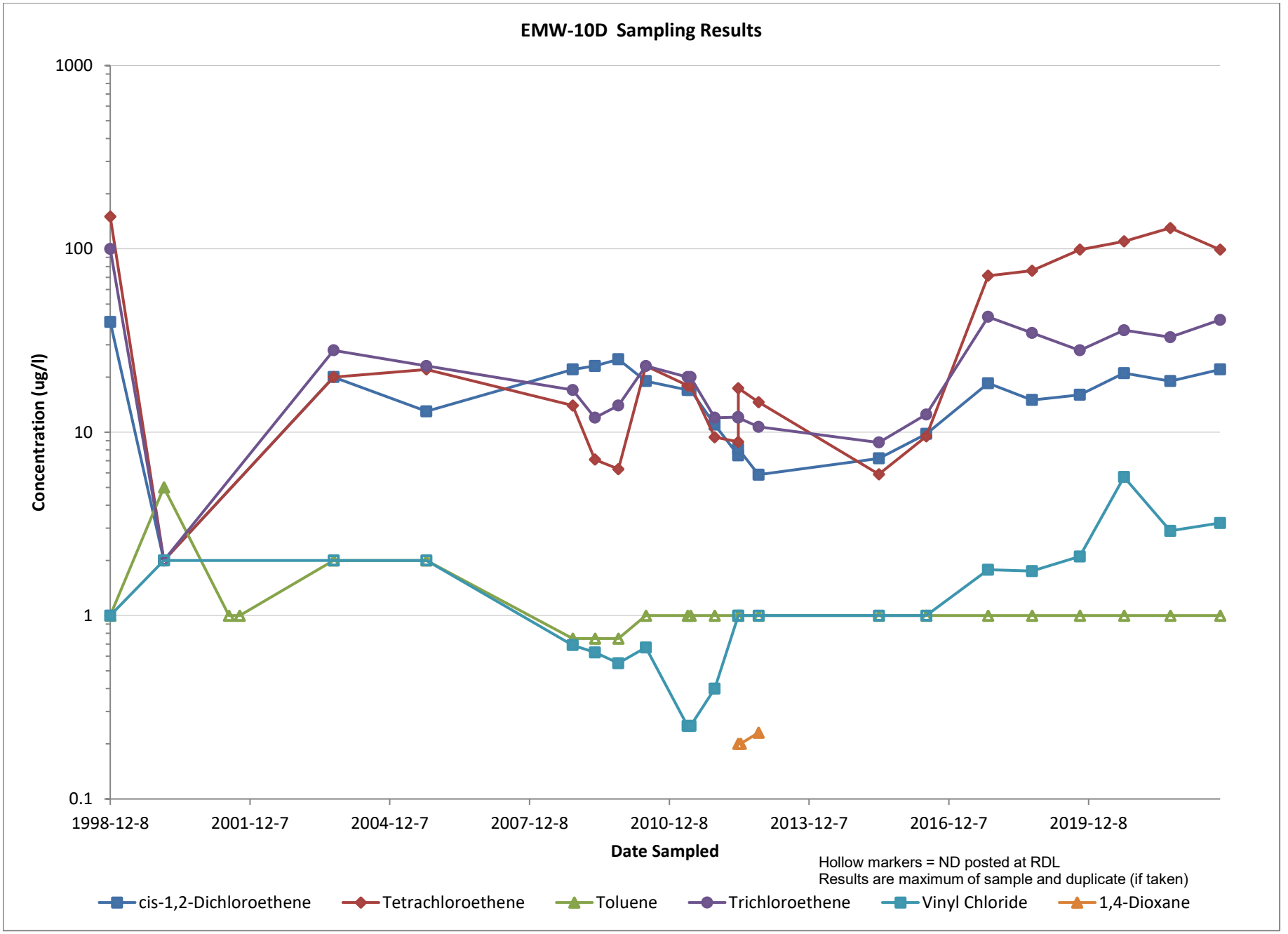

AE29R-1 Sampling Results
10
1
0.1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

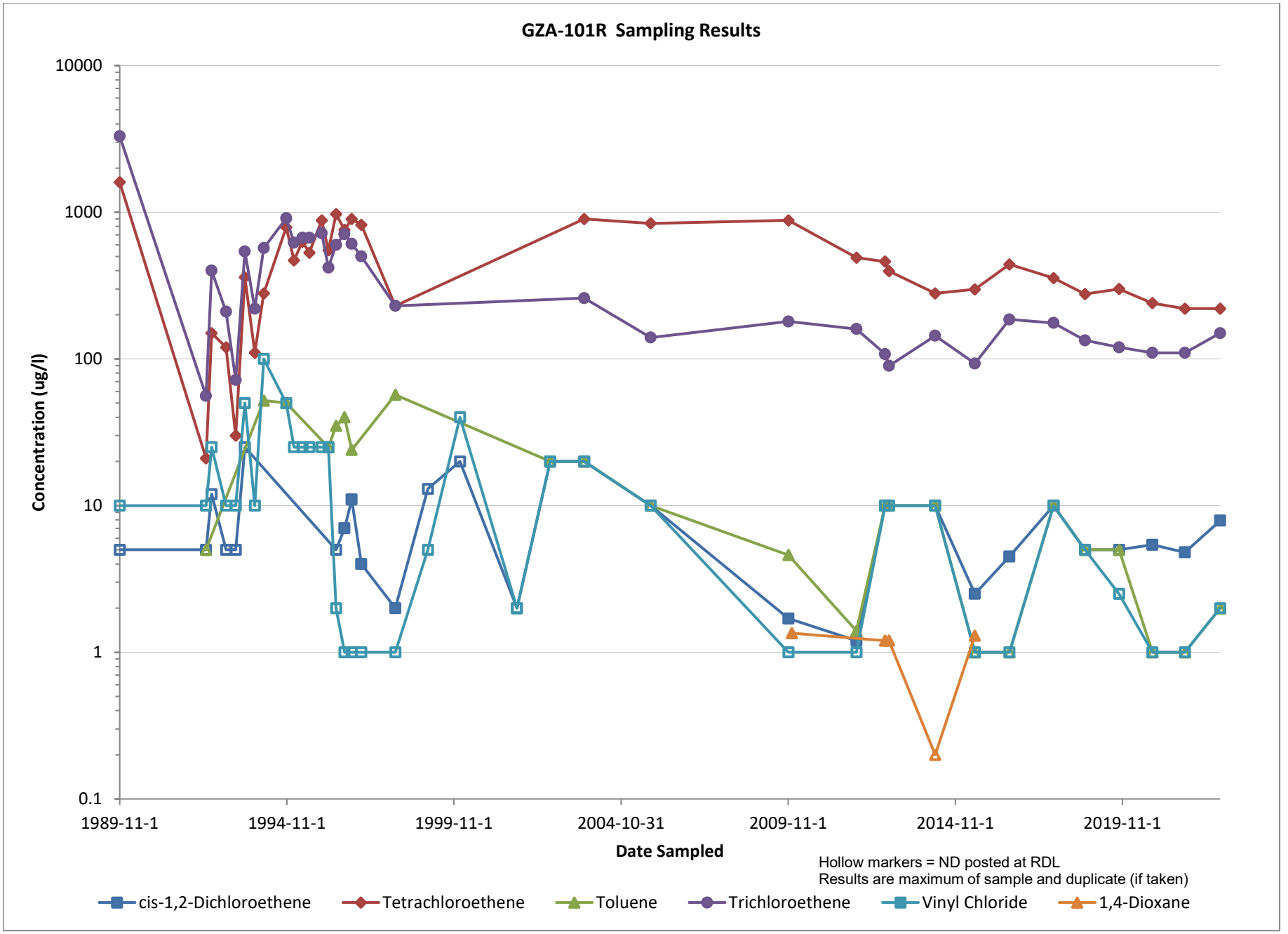

AE29R-3 Sampling Results
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-28
2019-1-28
2020-1-28
2021-1-27
2022-1-28
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

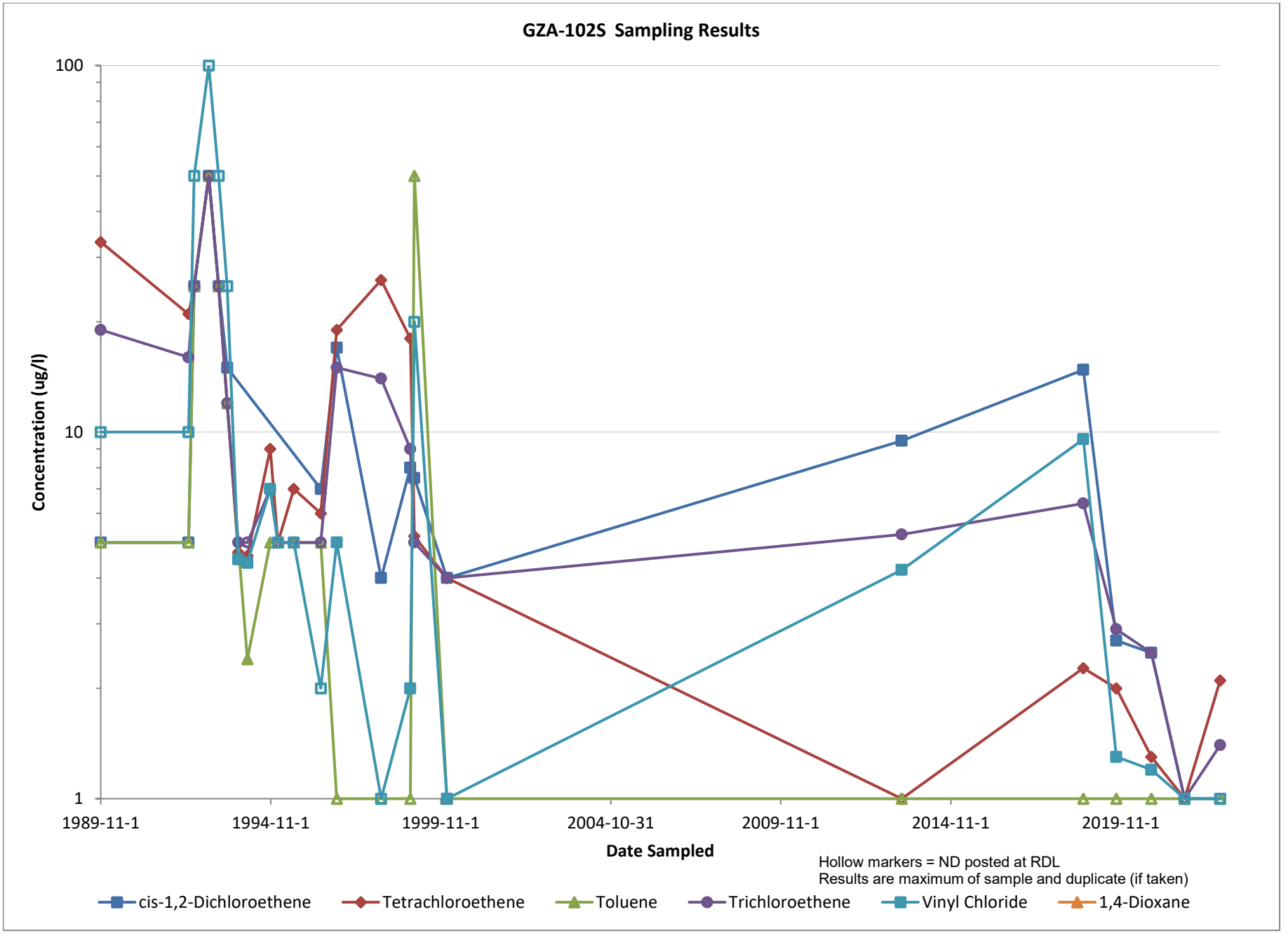

AE29R-5 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

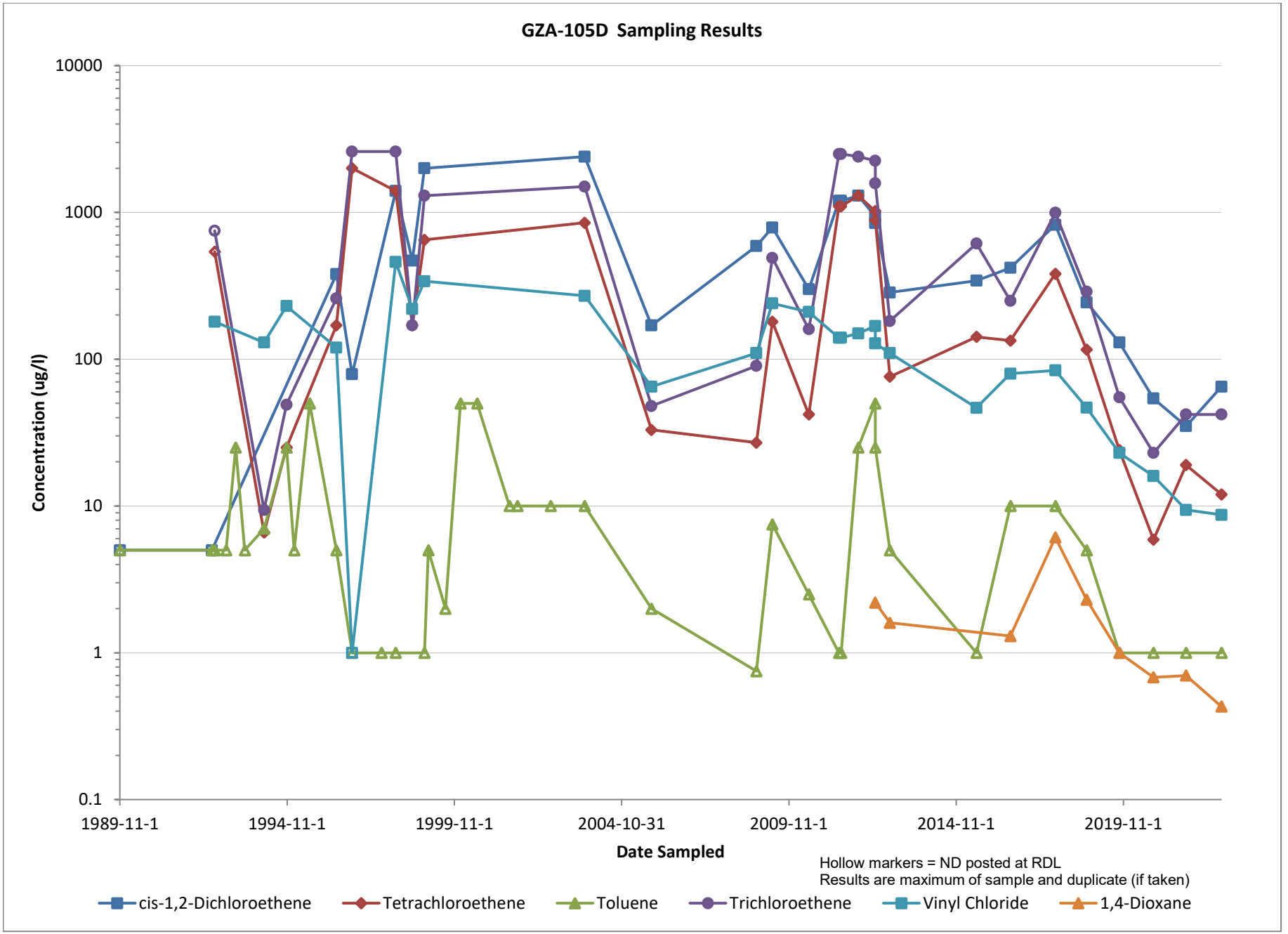

AE29R-6 Sampling Results
1000
100
10
1
Concentration (ug/l)
2016-1-28
2017-1-27
2018-1-27
2019-1-28
2020-1-28
2021-1-27
2022-1-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

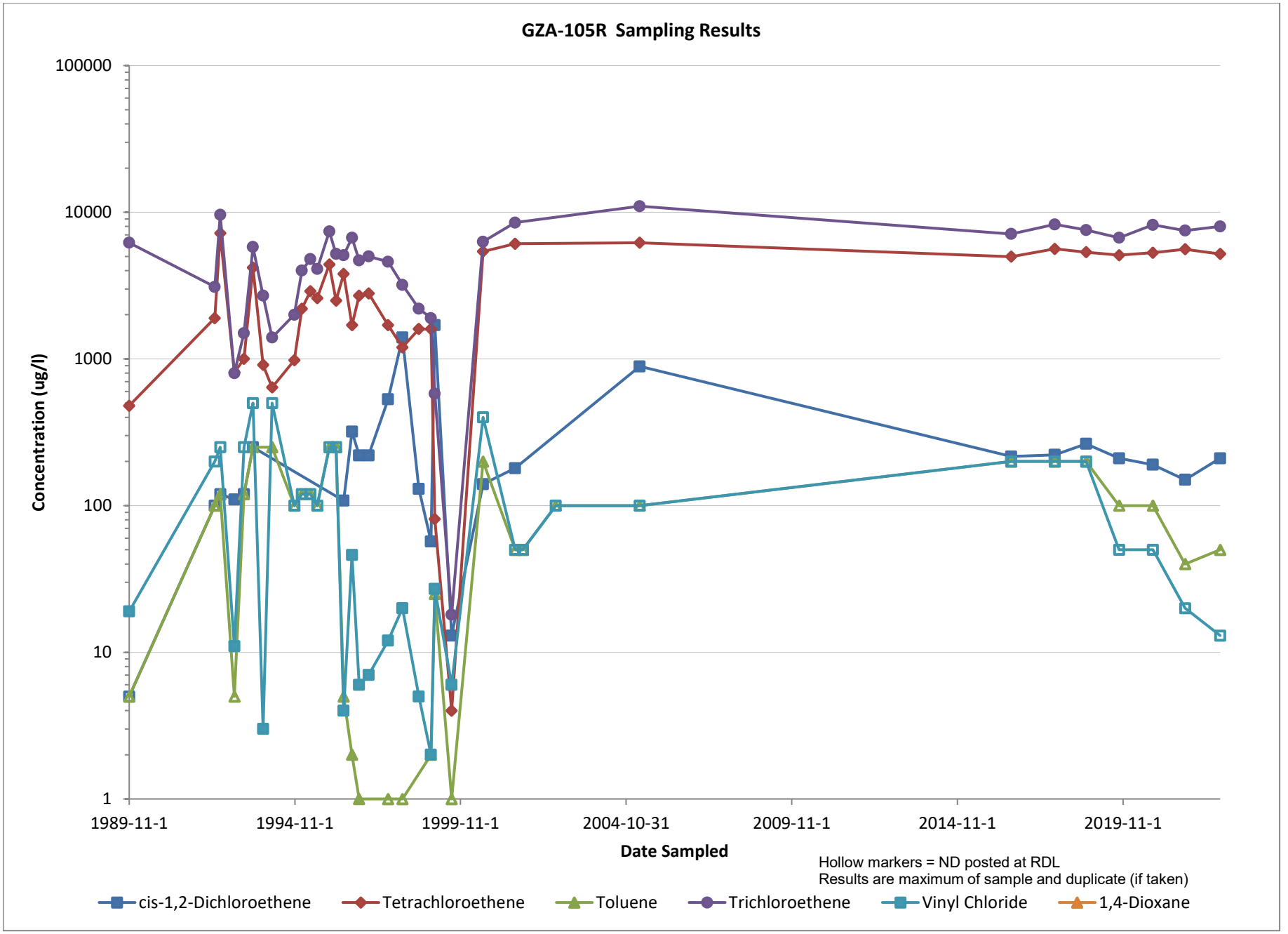

AE2R Sampling Results
10
1
0.1
Concentration (ug/l)
2014-3-27
2016-3-27
2018-3-27
2020-3-27
2022-3-27
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

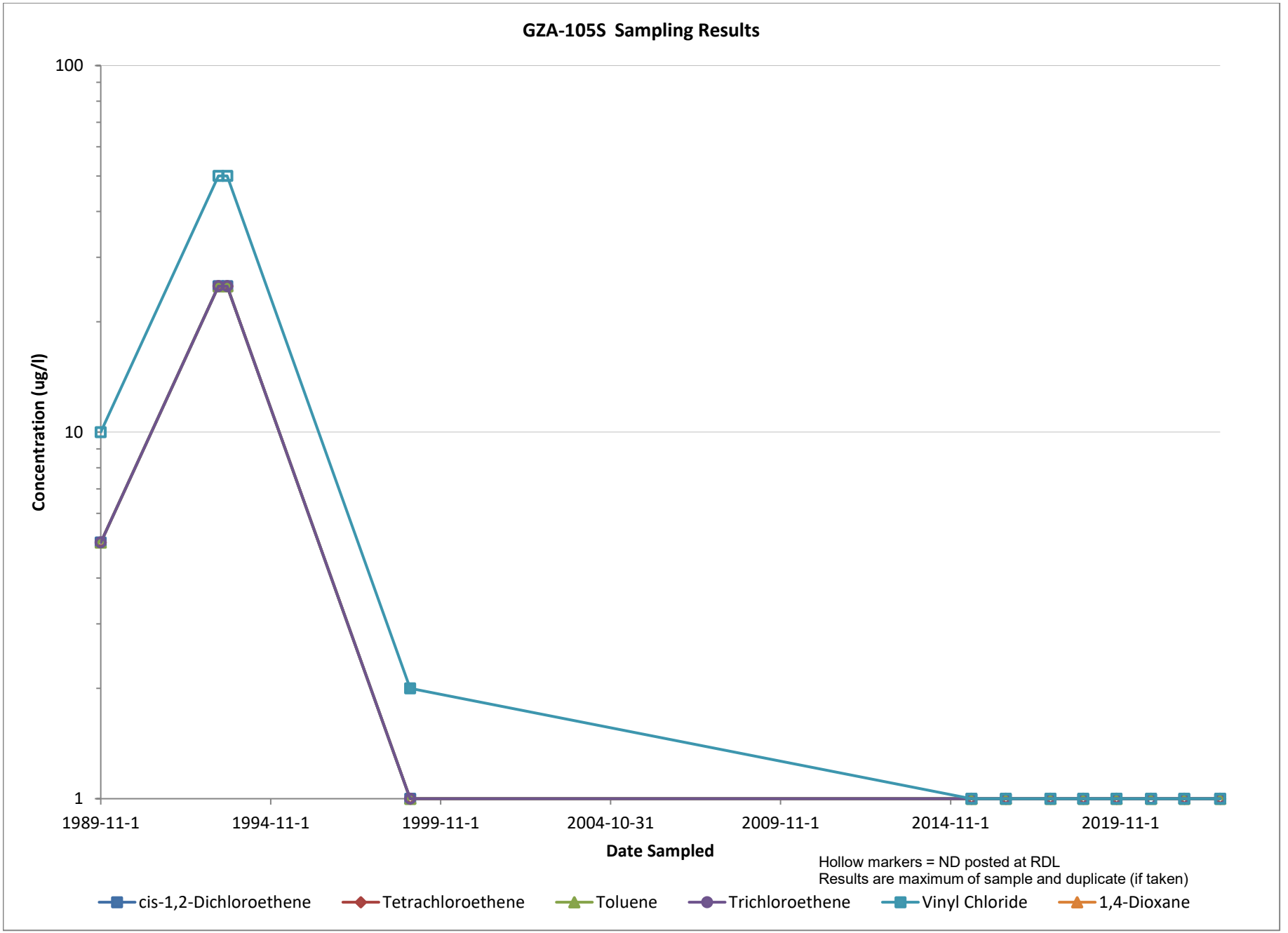

EMW-10D Sampling Results
1000
100
10
1
0.1
Concentration (ug/l)
1998-12-8
2001-12-7
2004-12-7
2007-12-8
2010-12-8
2013-12-7
2016-12-7
2019-12-8
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

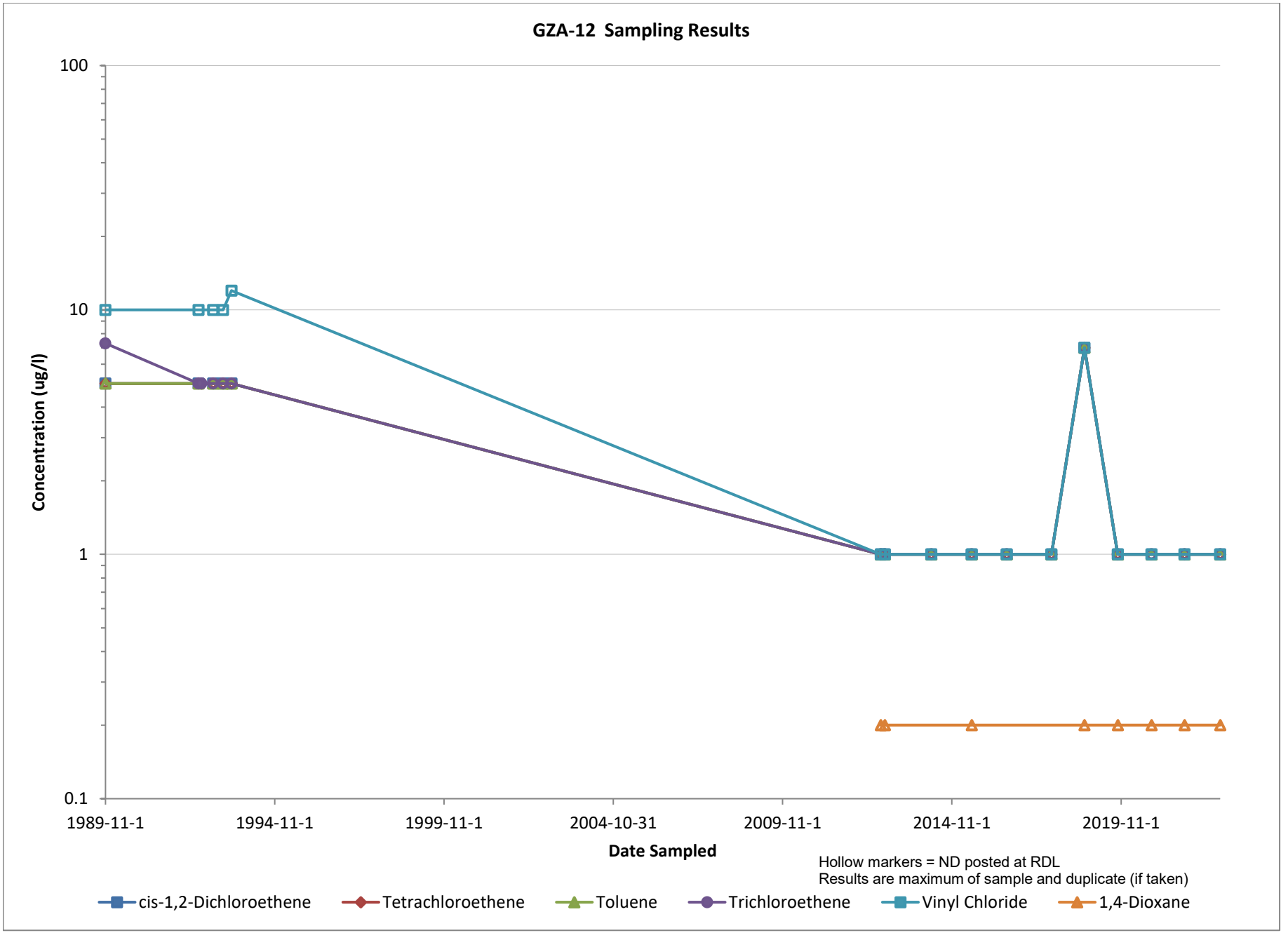

GZA-101R Sampling Results
10000
1000
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

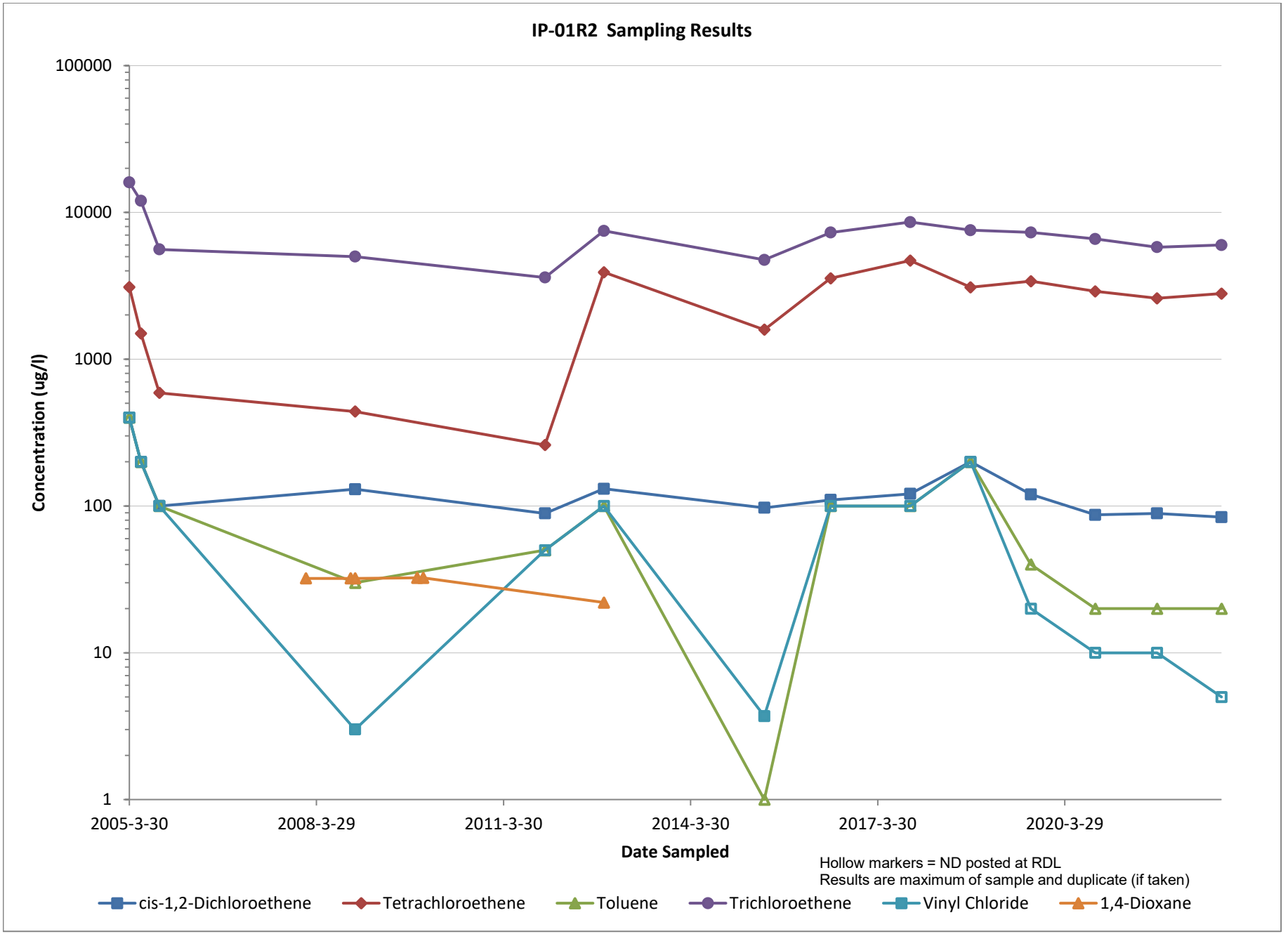

GZA-102S Sampling Results
100
10
1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

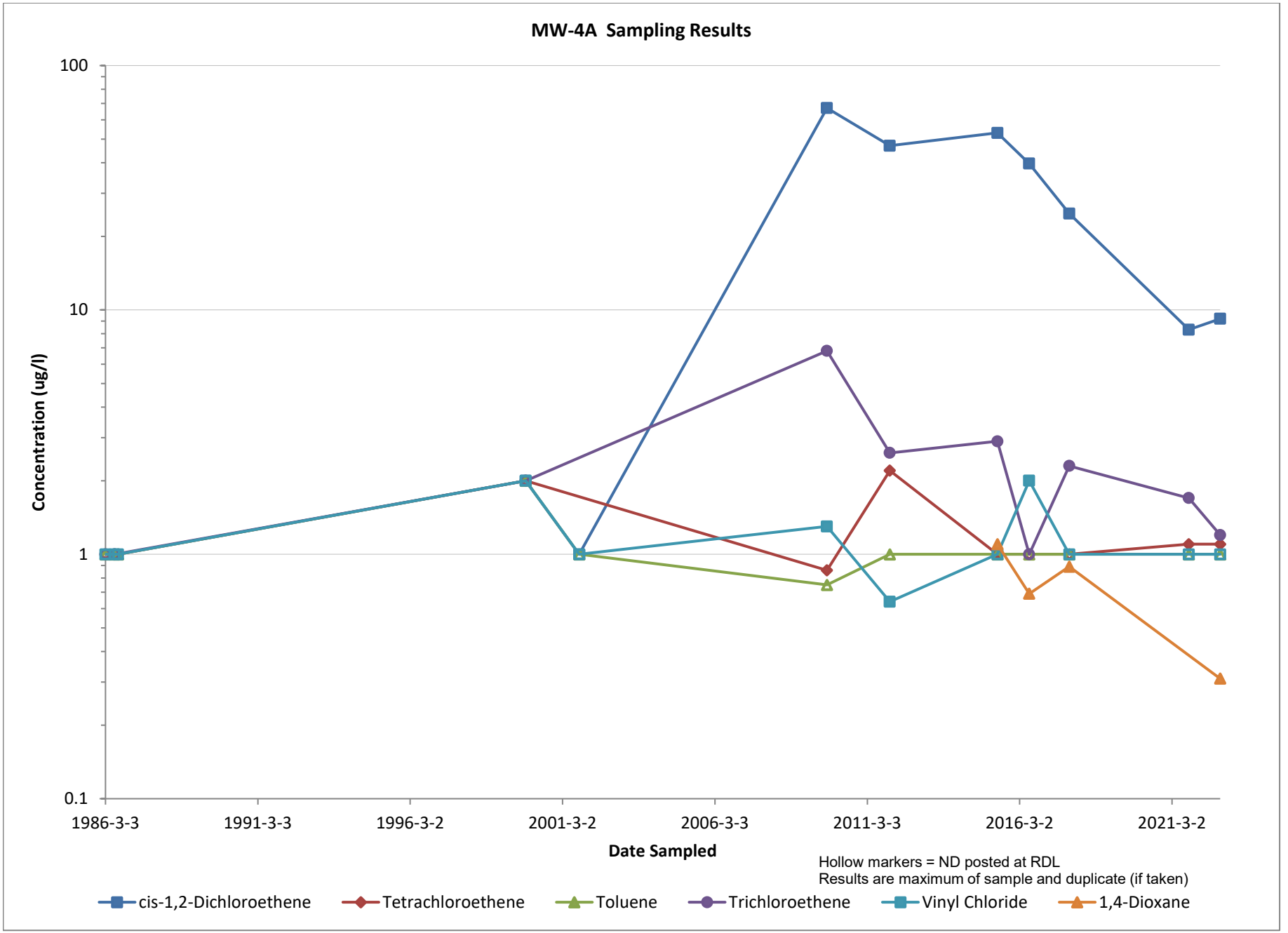

GZA-105D Sampling Results
Concentration (ug/l)
10000
1000
100
10
1
0.1
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

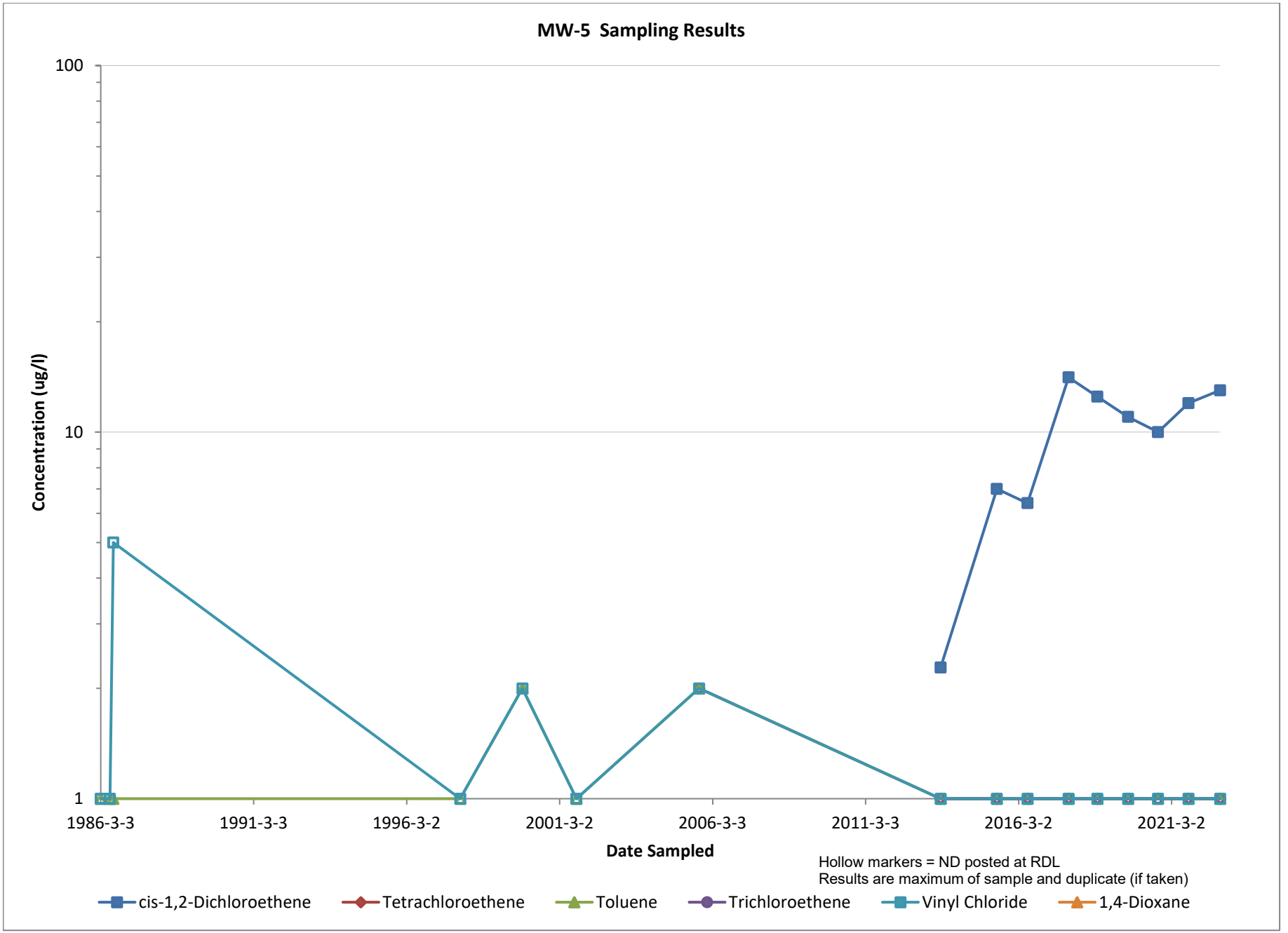

GZA-105R Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

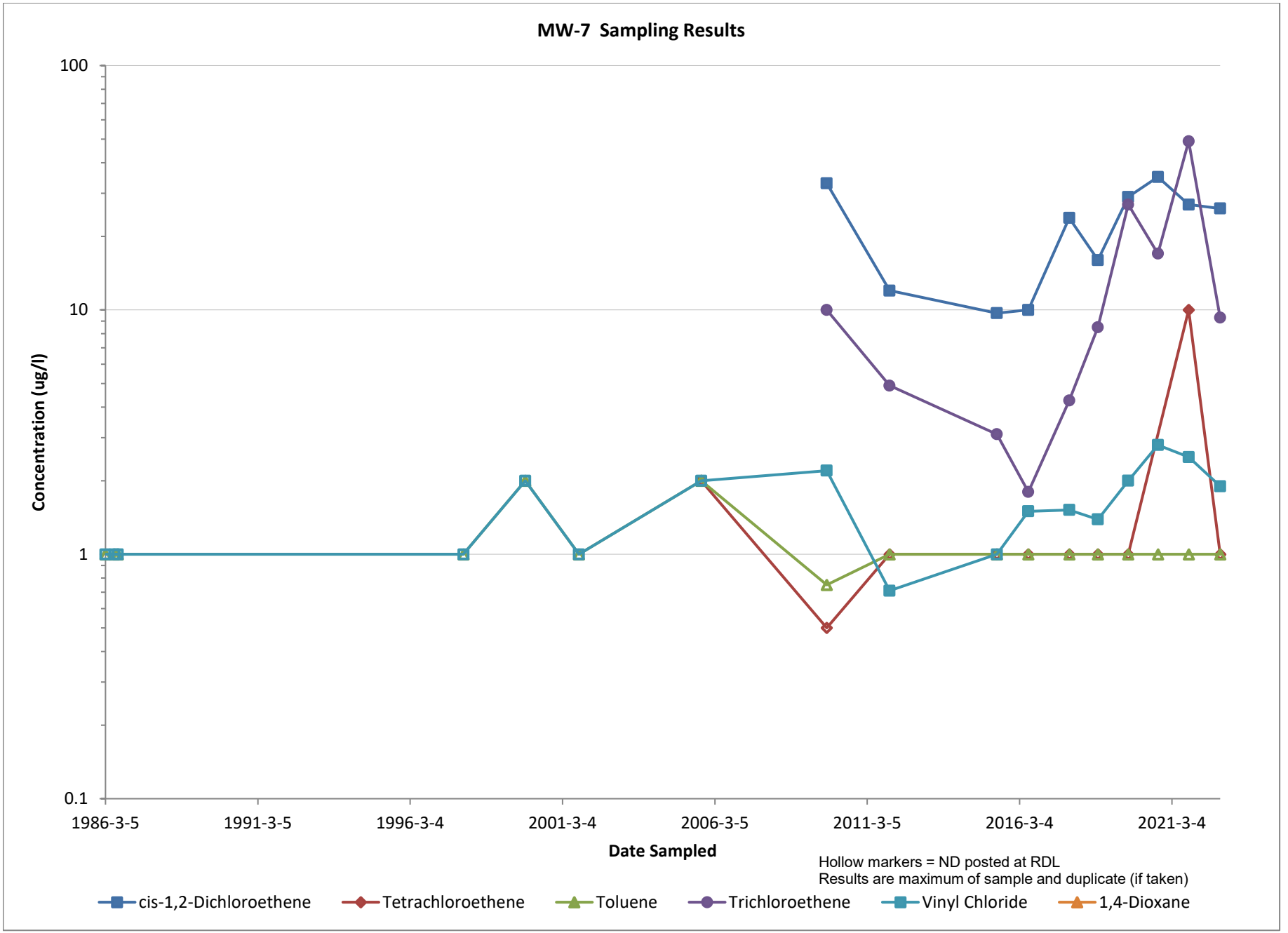

GZA-105S Sampling Results
100
10
1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

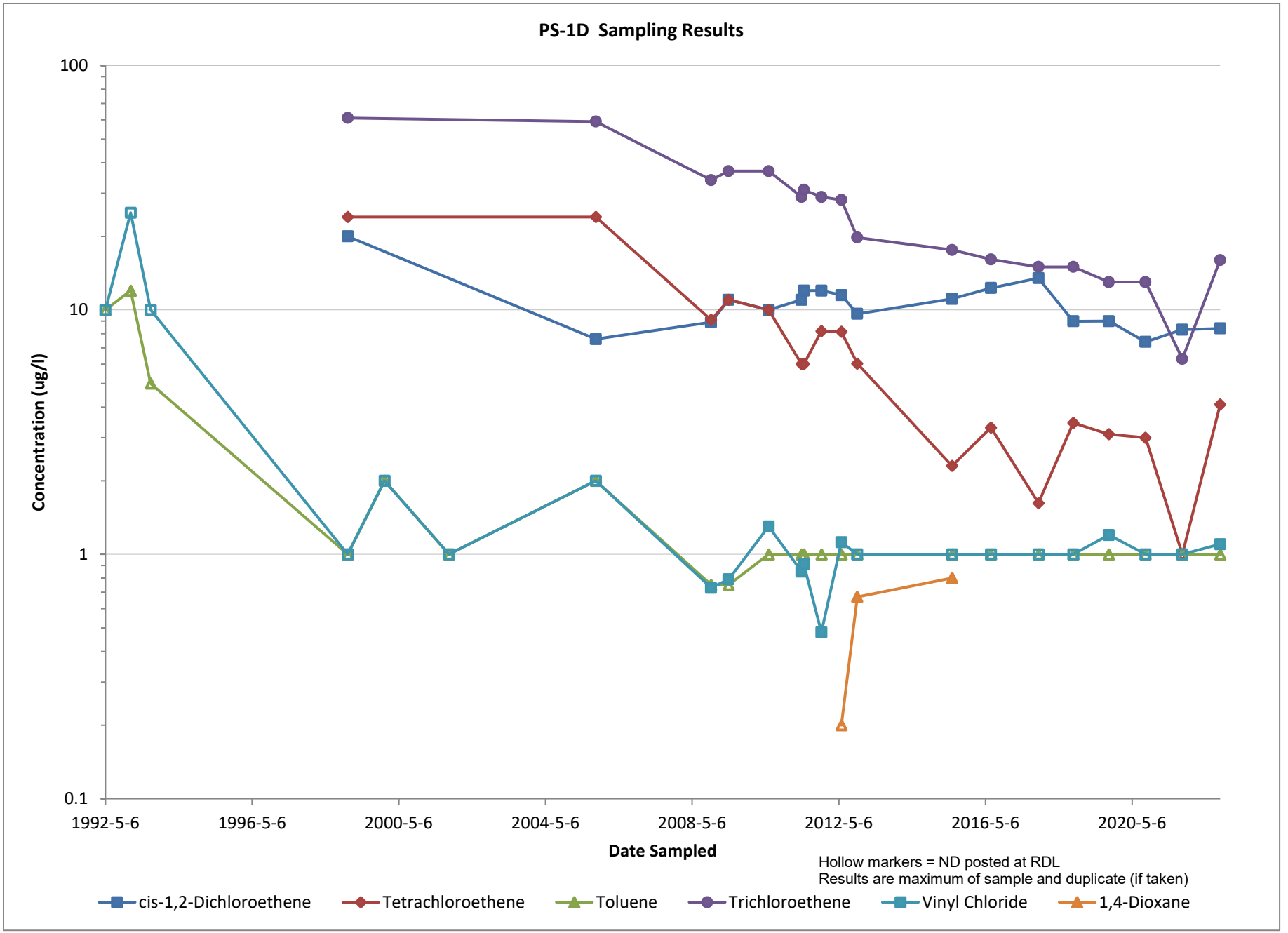

GZA-12 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1989-11-1
1994-11-1
1999-11-1
2004-10-31
2009-11-1
2014-11-1
2019-11-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

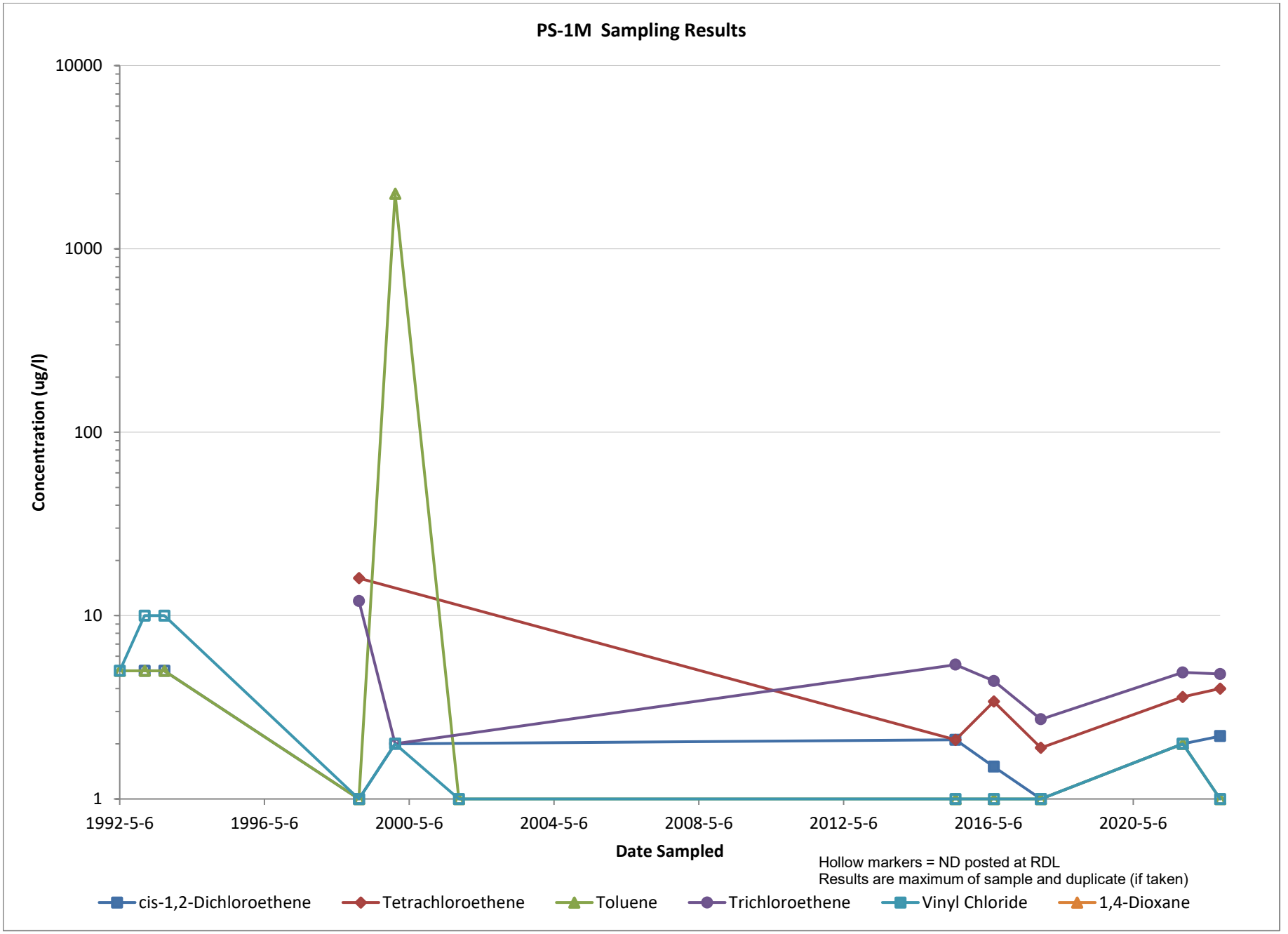

IP-01R2 Sampling Results
100000
10000
1000
100
10
1
Concentration (ug/l)
2005-3-30
2008-3-29
2011-3-30
2014-3-30
2017-3-30
2020-3-29
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

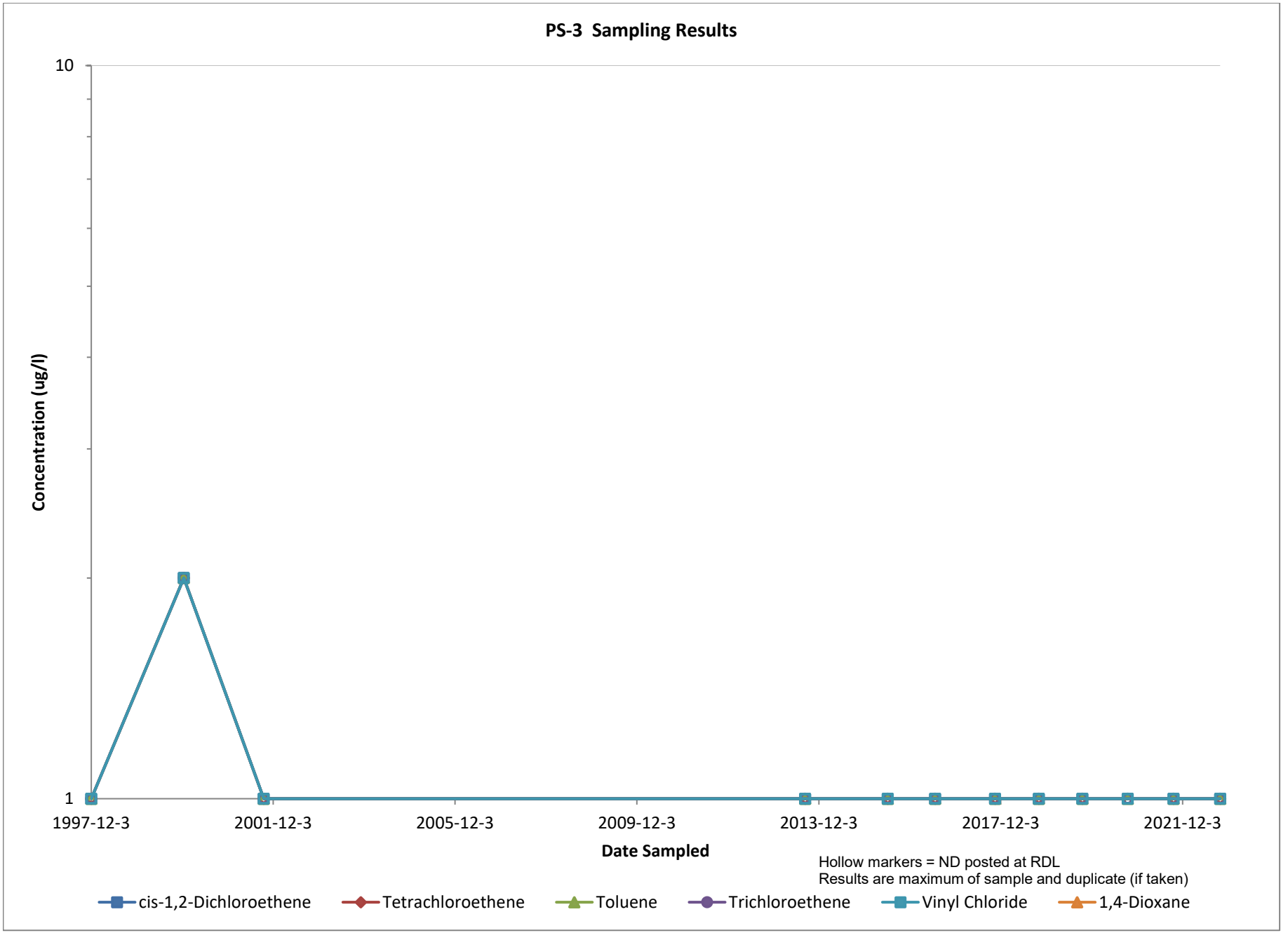

MW-4A Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

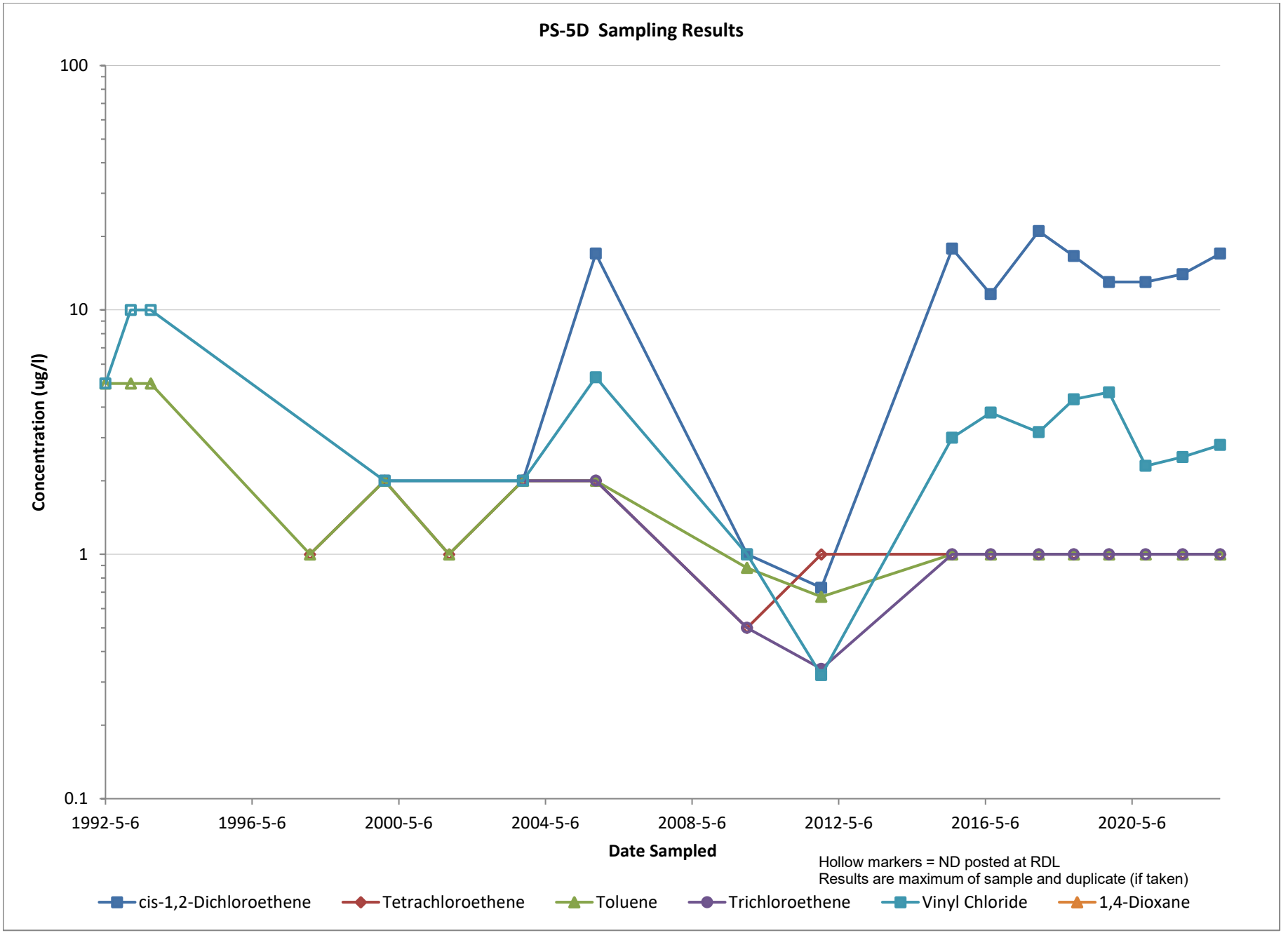

MW-5 Sampling Results
100
10
1
Concentration (ug/l)
1986-3-3
1991-3-3
1996-3-2
2001-3-2
2006-3-3
2011-3-3
2016-3-2
2021-3-2
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

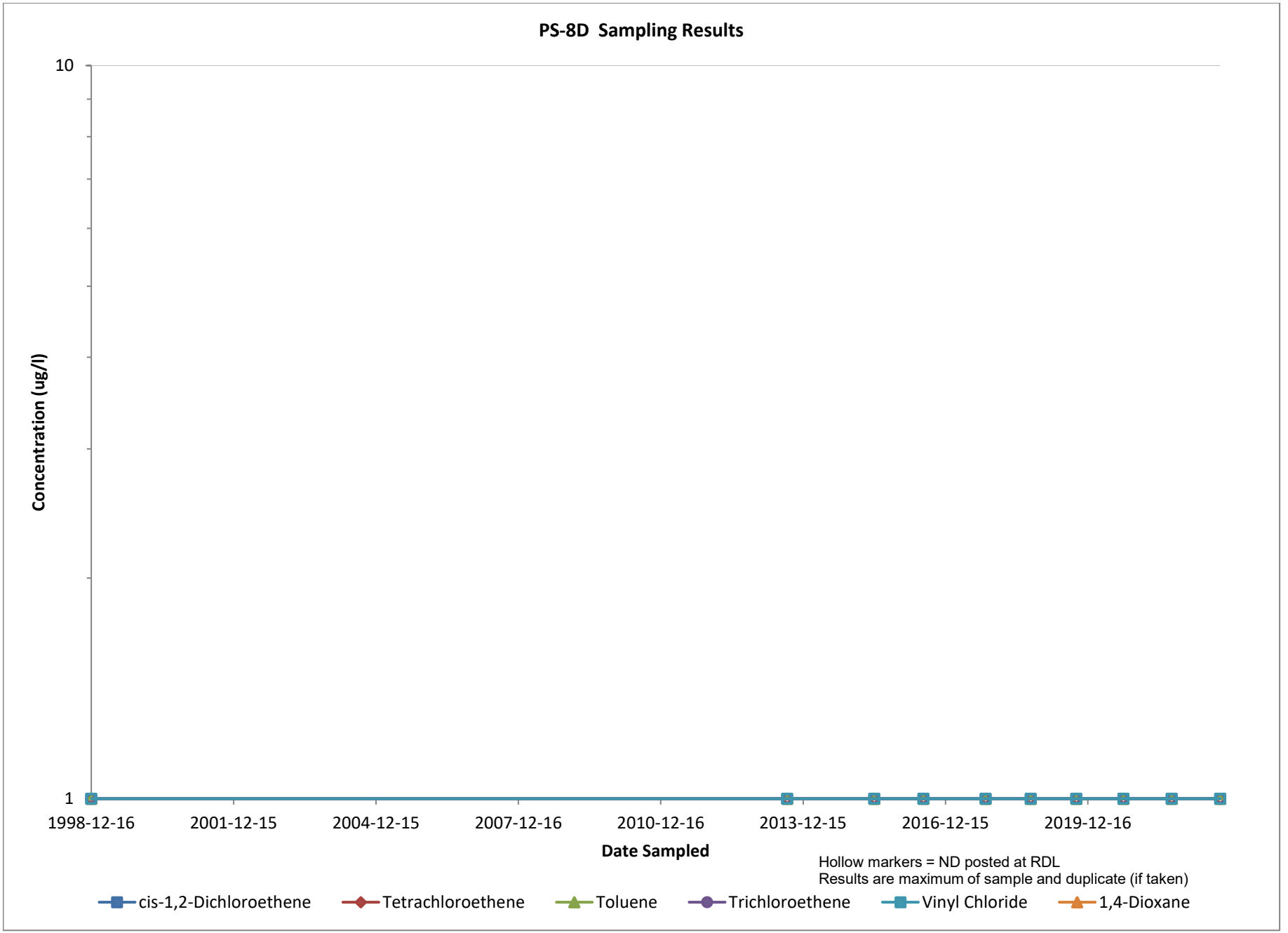

MW-7 Sampling Results
100
10
1
0.1
Concentration (ug/l)
1986-3-5
1991-3-5
1996-3-4
2001-3-4
2006-3-5
2011-3-5
2016-3-4
2021-3-4
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

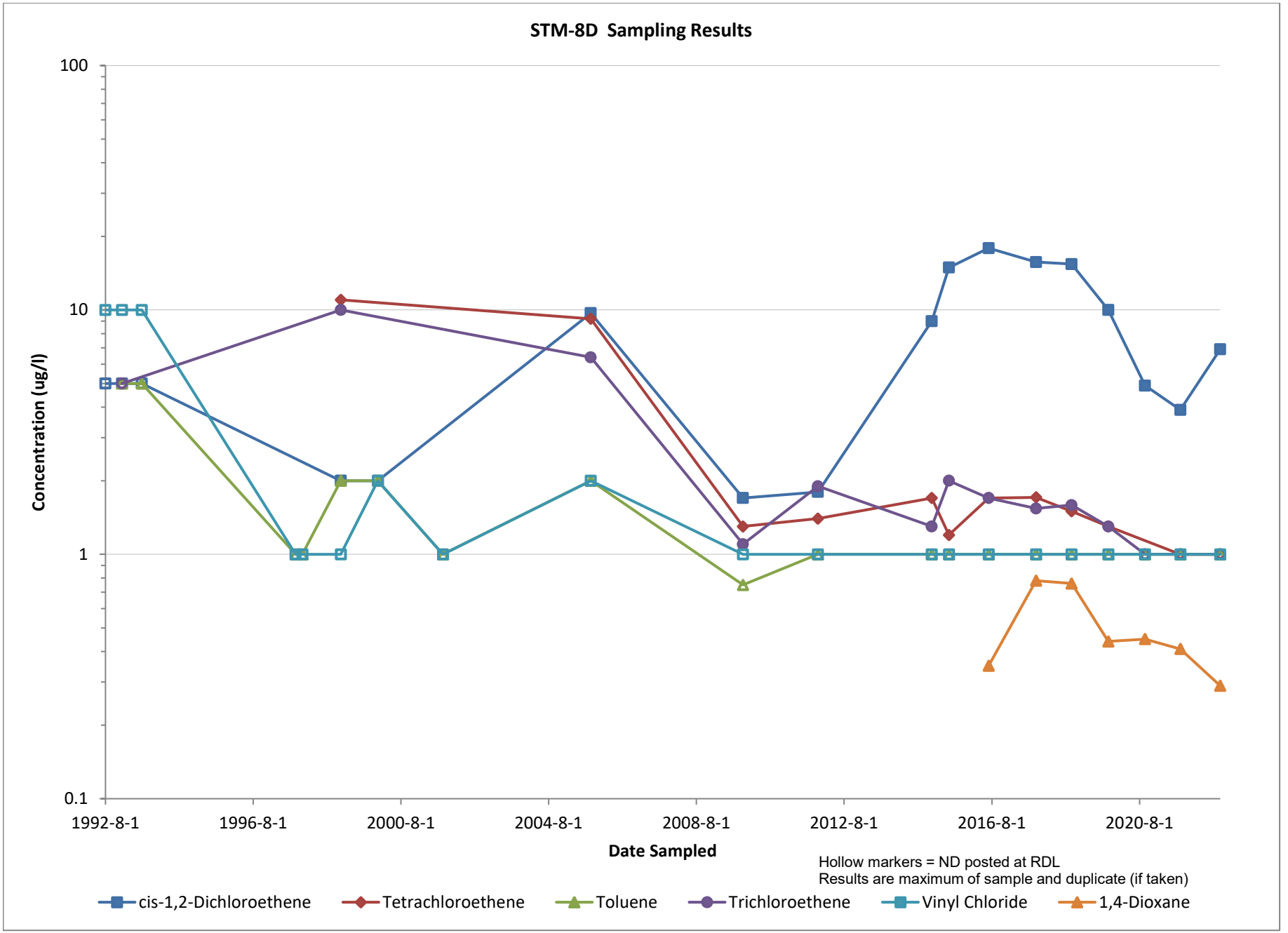

PS-1D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

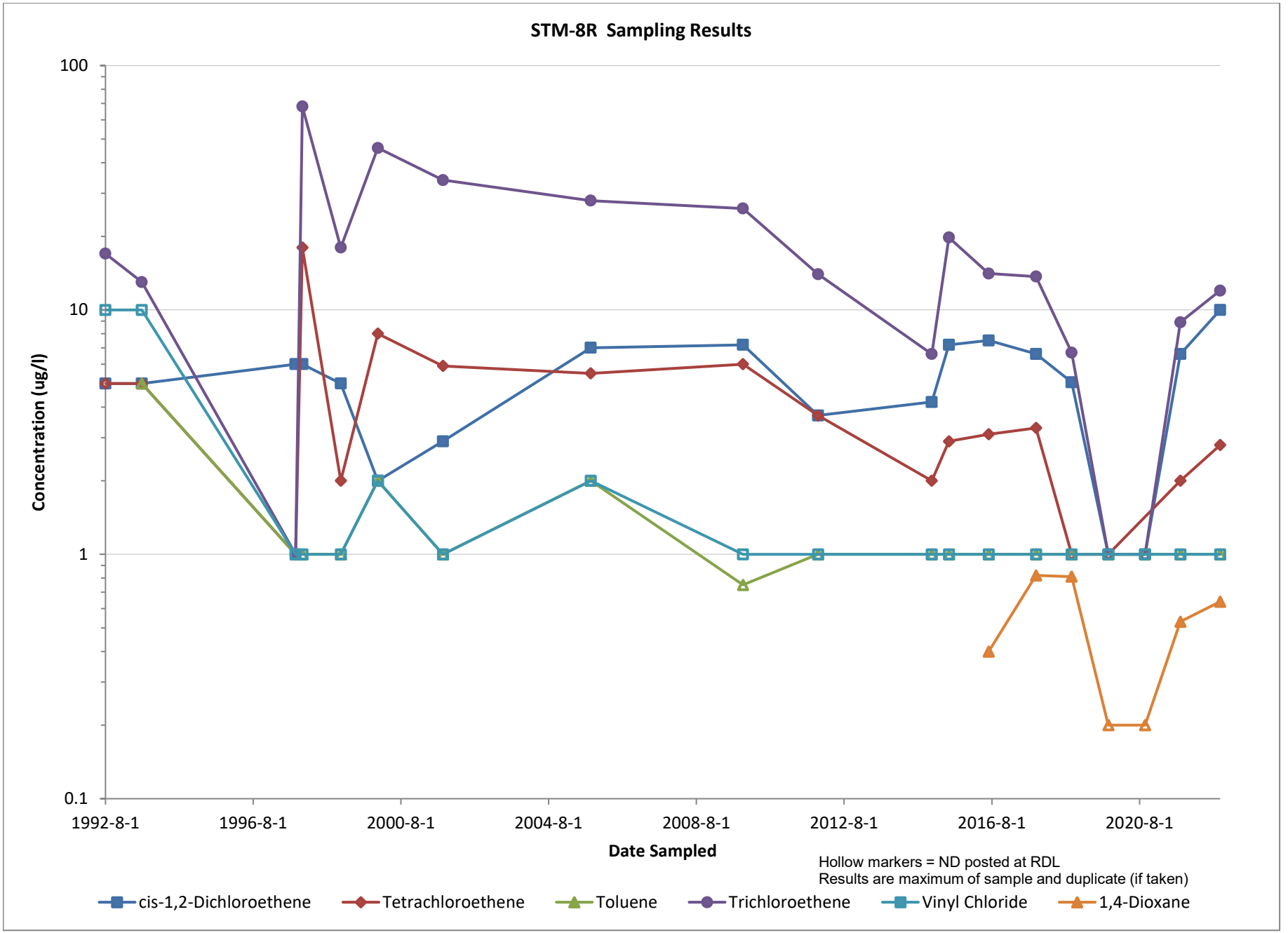

PS-1M Sampling Results
10000
1000
100
10
1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

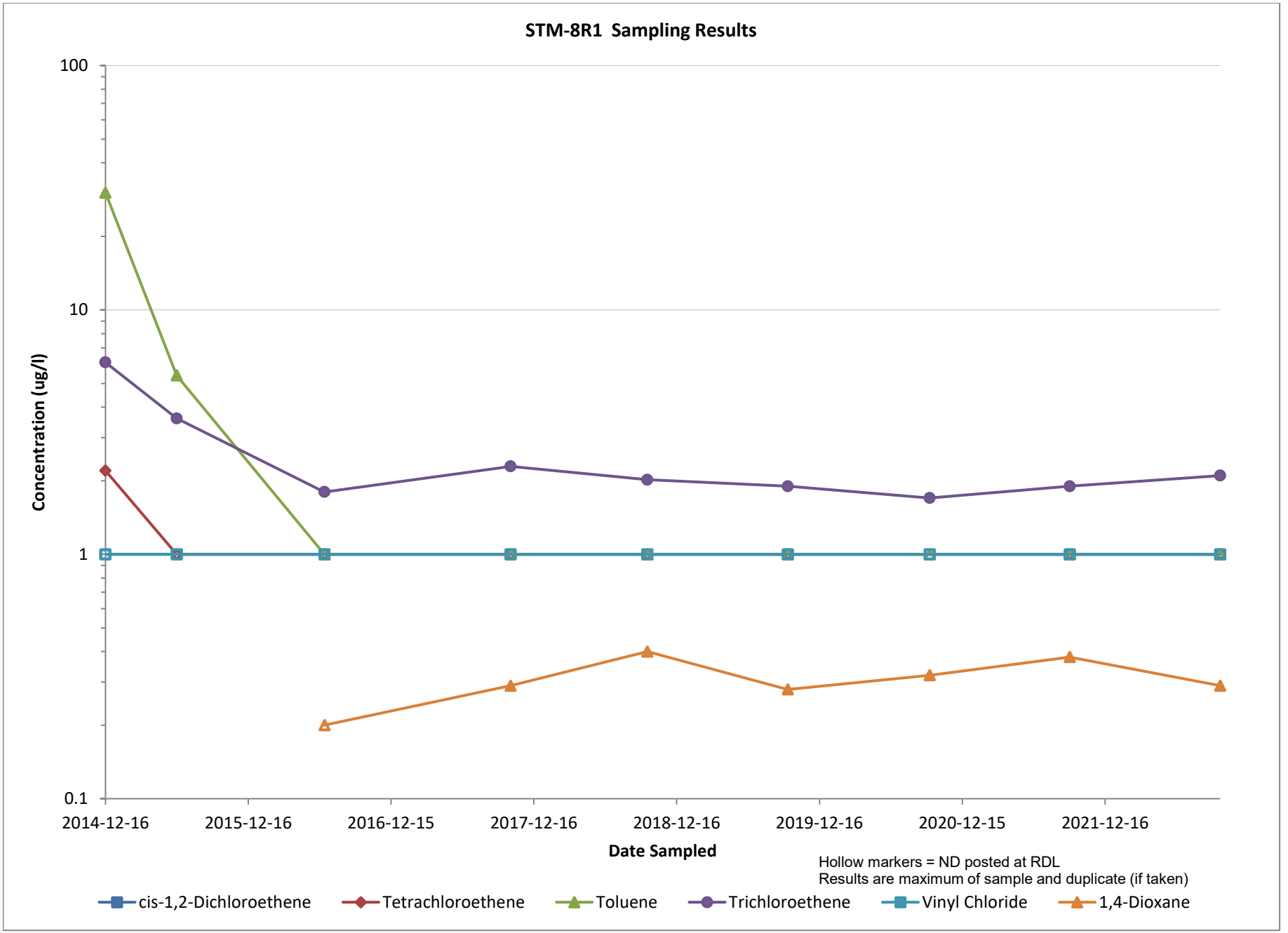

PS-3 Sampling Results
10
1
Concentration (ug/l)
1997-12-3
2001-12-3
2005-12-3
2009-12-3
2013-12-3
2017-12-3
2021-12-3
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

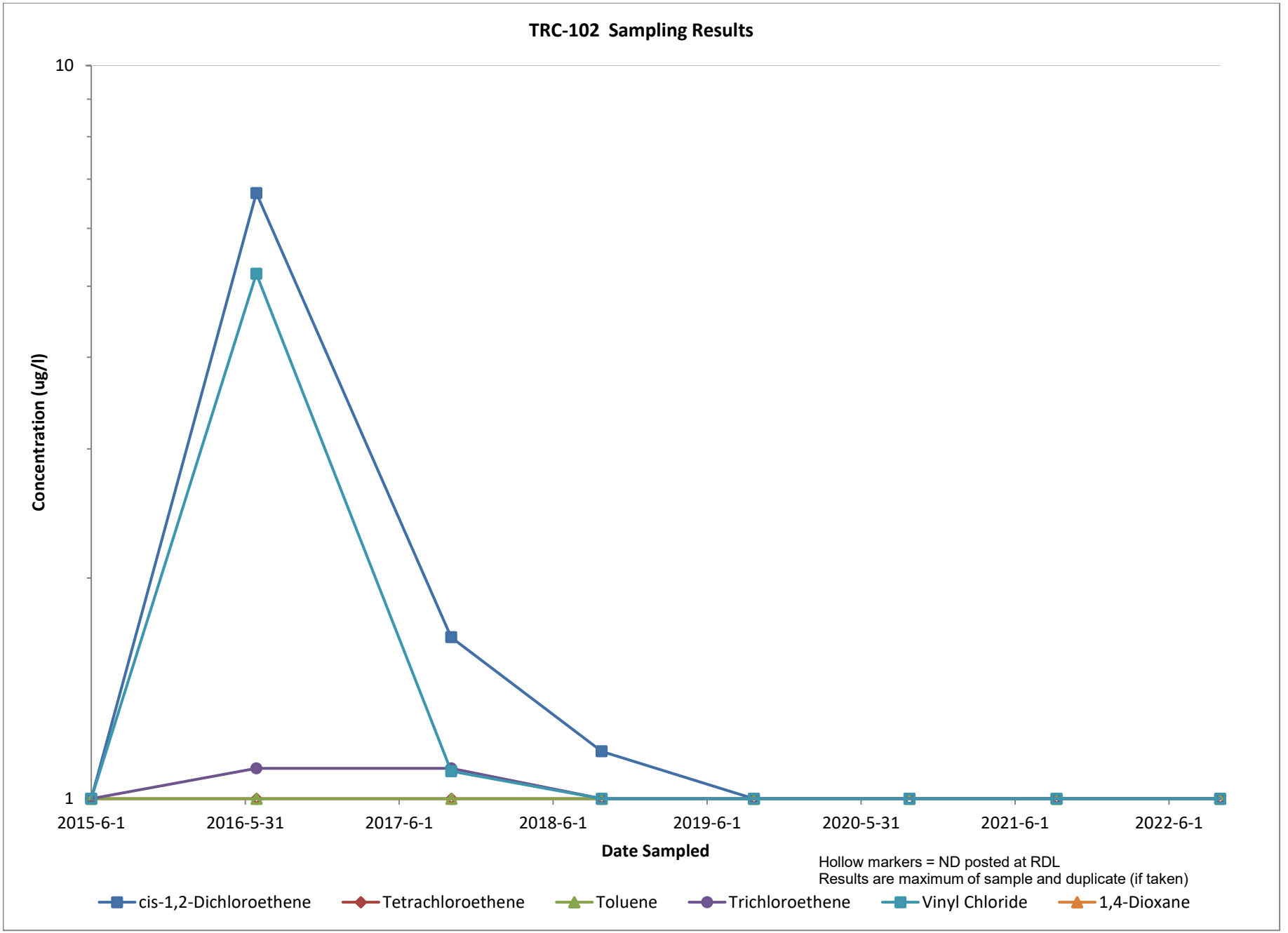

PS-5D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-5-6
1996-5-6
2000-5-6
2004-5-6
2008-5-6
2012-5-6
2016-5-6
2020-5-6
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

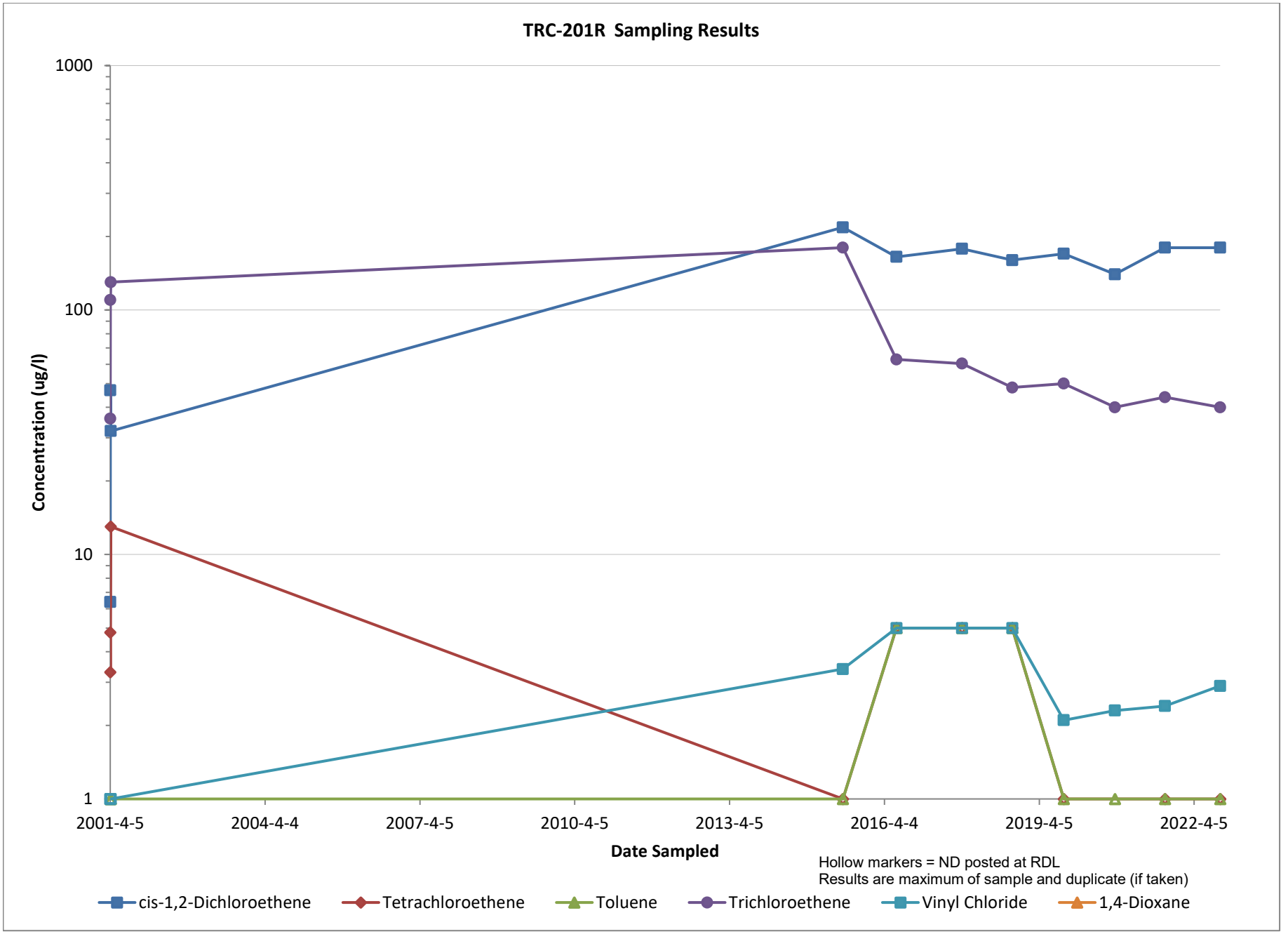

PS-8D Sampling Results
10
1
Concentration (ug/l)
1998-12-16
2001-12-15
2004-12-15
2007-12-16
2010-12-16
2013-12-15
2016-12-15
2019-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

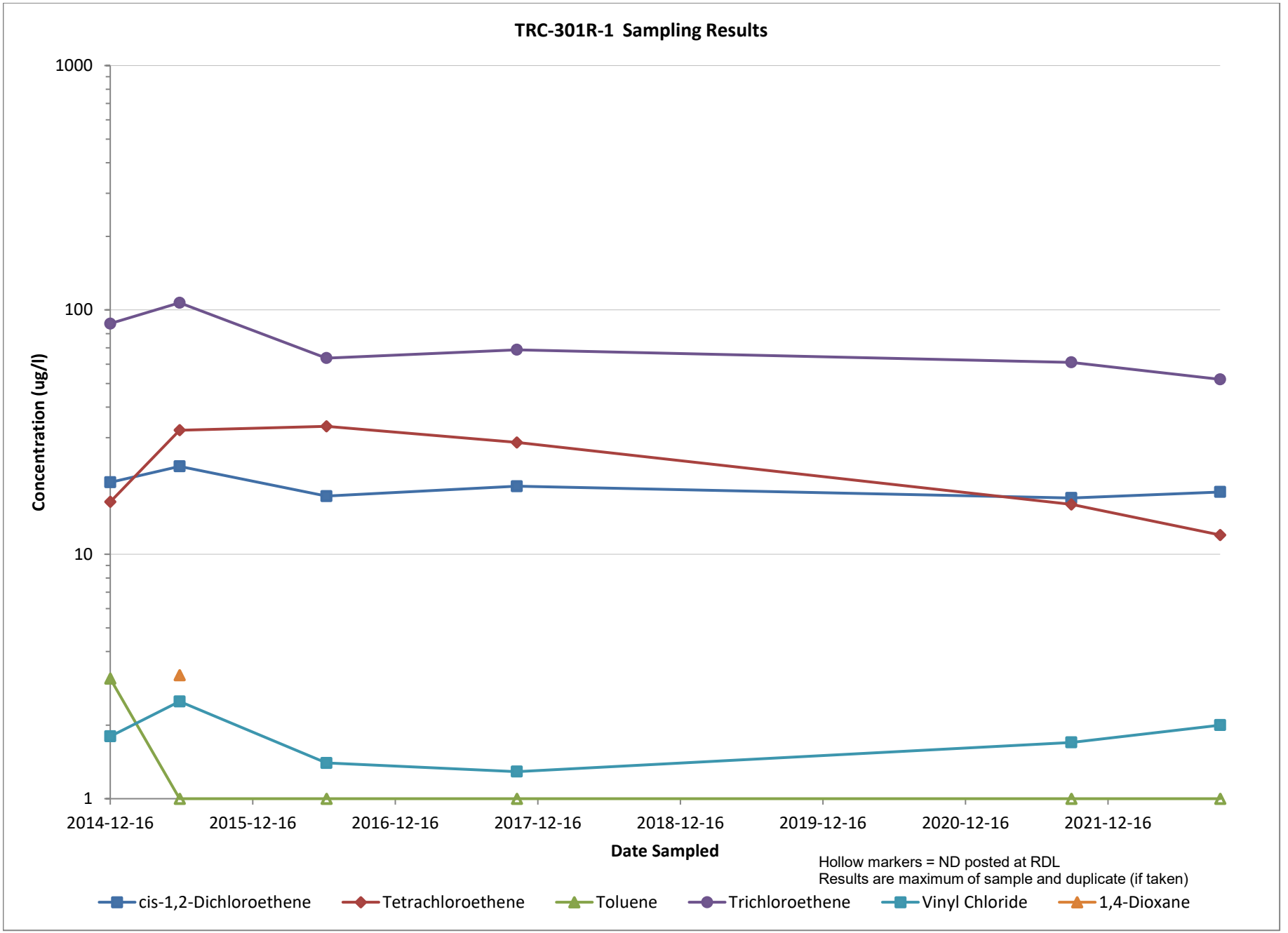

STM-8D Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

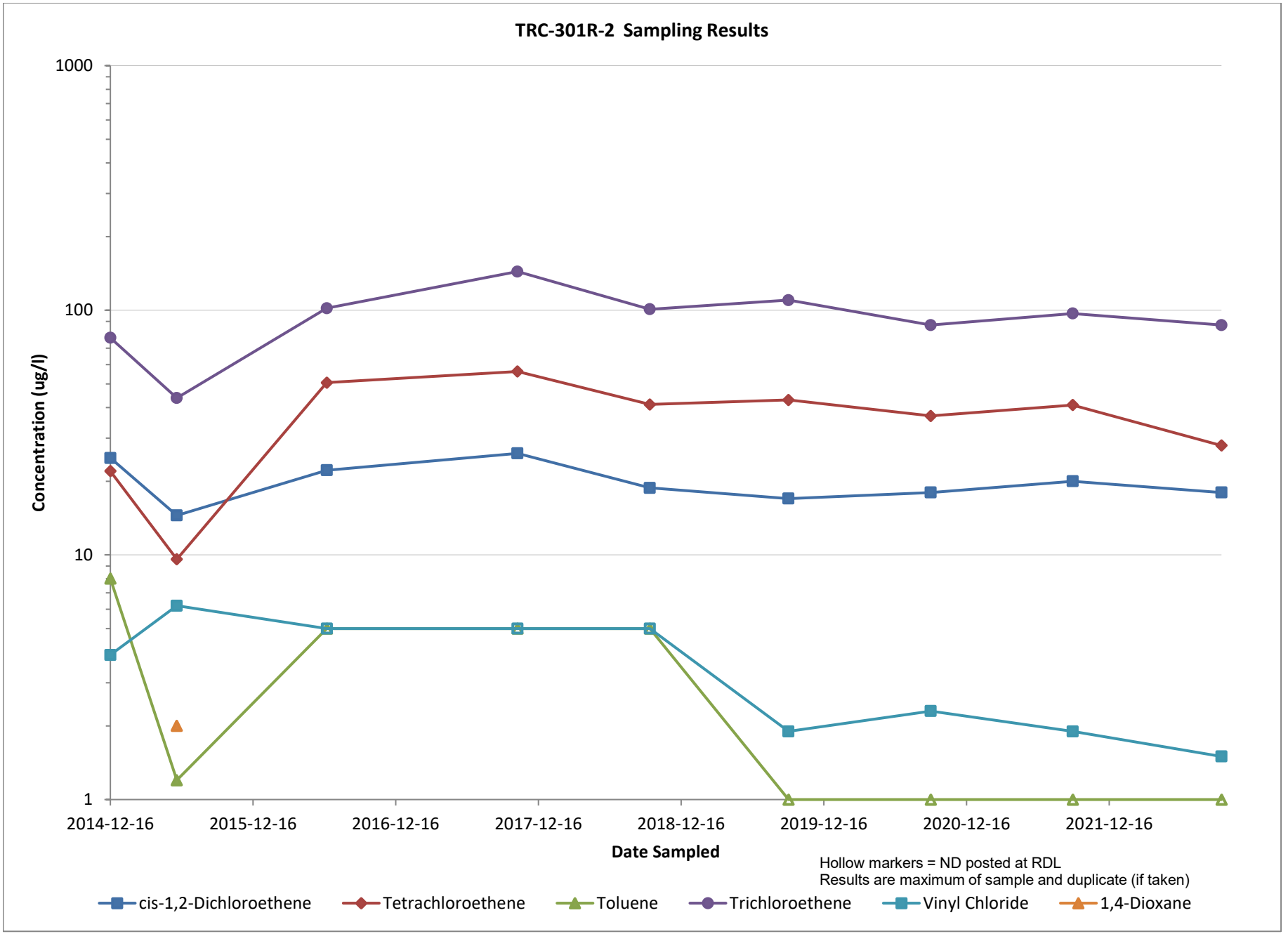

STM-8R Sampling Results
100
10
1
0.1
Concentration (ug/l)
1992-8-1
1996-8-1
2000-8-1
2004-8-1
2008-8-1
2012-8-1
2016-8-1
2020-8-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

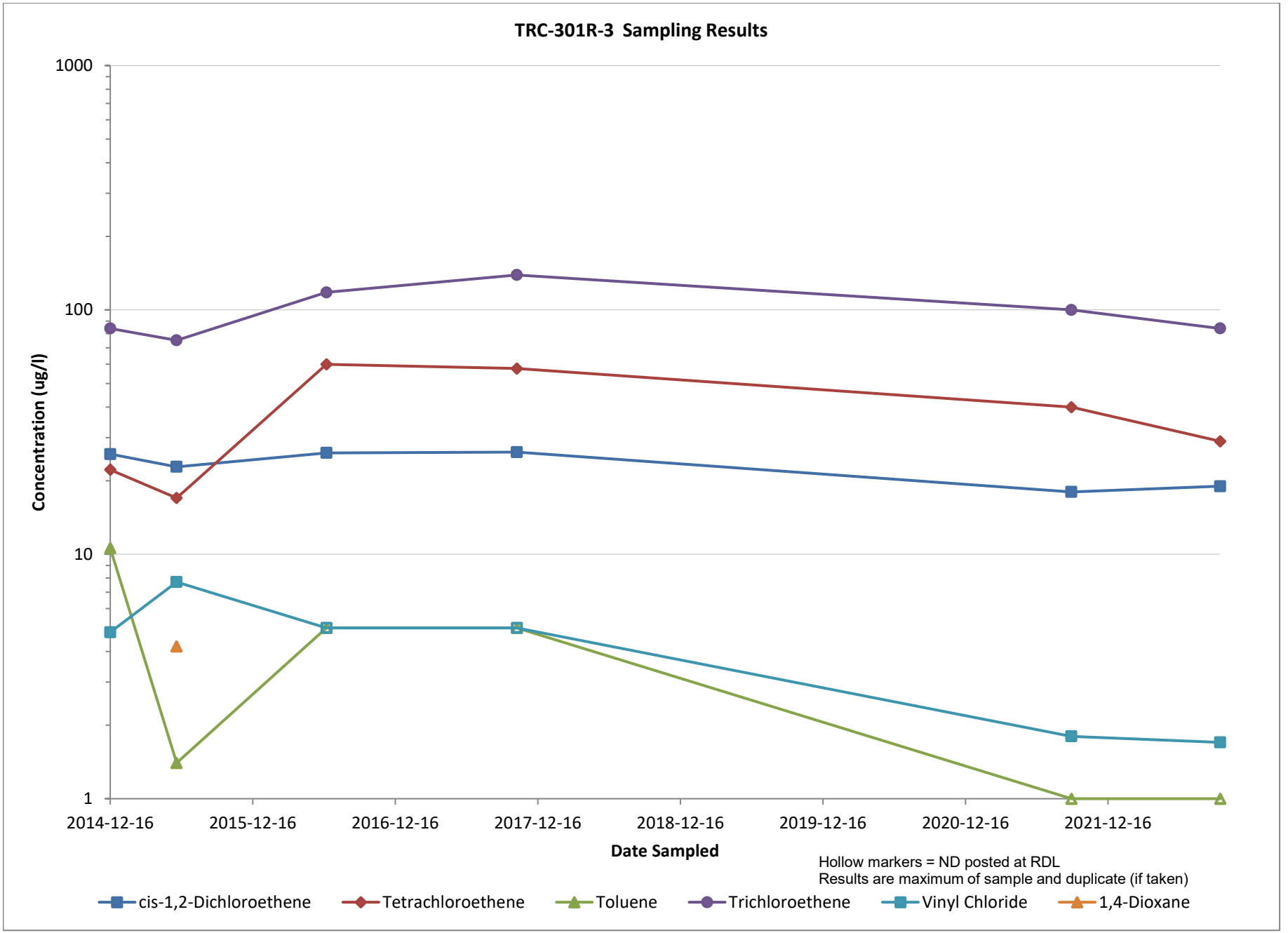

STM-8R1 Sampling Results
100
10
1
0.1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-15
2017-12-16
2018-12-16
2019-12-16
2020-12-15
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

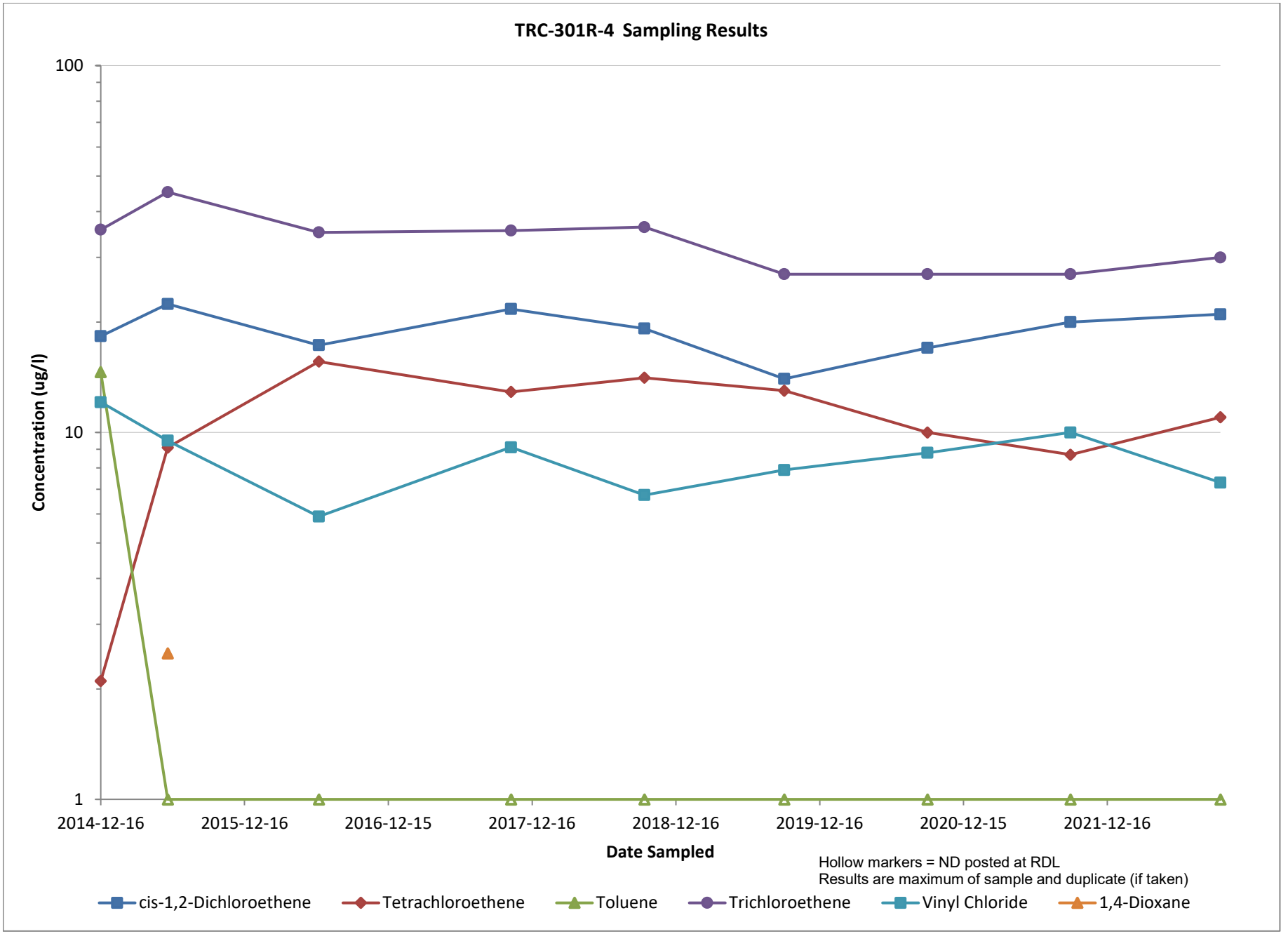

TRC-102 Sampling Results
10
1
Concentration (ug/l)
2015-6-1
2016-5-31
2017-6-1
2018-6-1
2019-6-1
2020-5-31
2021-6-1
2022-6-1
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-201R Sampling Results
1000
100
10
1
Concentration (ug/l)
2001-4-5
2004-4-4
2007-4-5
2010-4-5
2013-4-5
2016-4-4
2019-4-5
2022-4-5
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

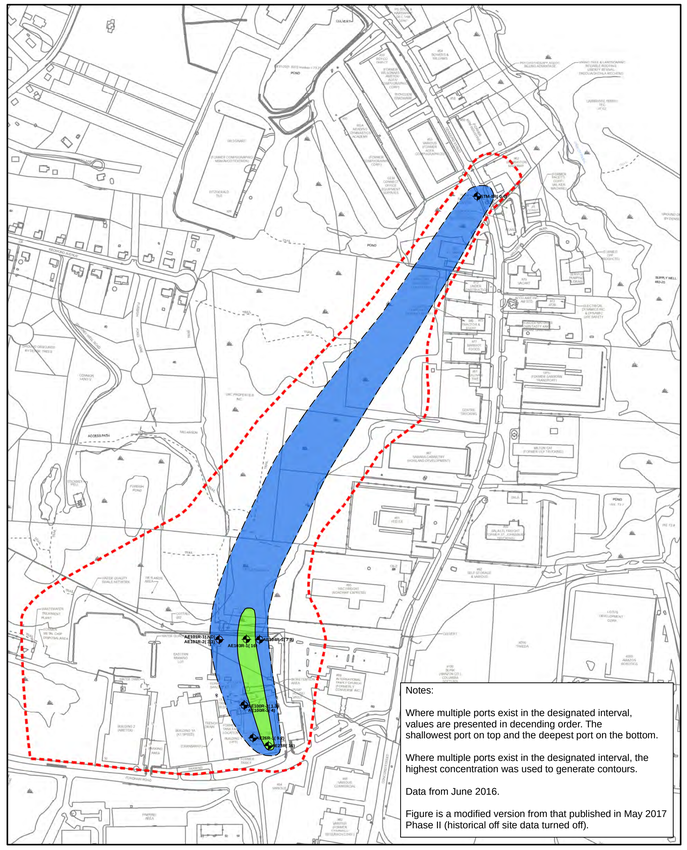

TRC-301R-1 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-301R-2 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

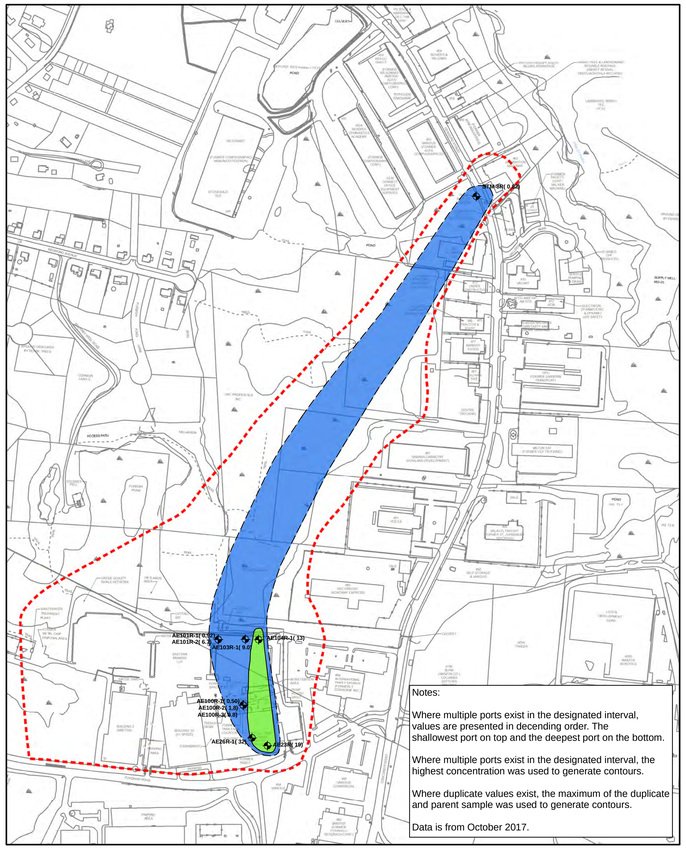

TRC-301R-3 Sampling Results
1000
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-16
2017-12-16
2018-12-16
2019-12-16
2020-12-16
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane


TRC-301R-4 Sampling Results
100
10
1
Concentration (ug/l)
2014-12-16
2015-12-16
2016-12-15
2017-12-16
2018-12-16
2019-12-16
2020-12-15
2021-12-16
Date Sampled
Hollow markers = ND posted at RDL
Results are maximum of sample and duplicate (if taken)
cis-1,2-Dichloroethene
Tetrachloroethene
Toluene
Trichloroethene
Vinyl Chloride
1,4-Dioxane

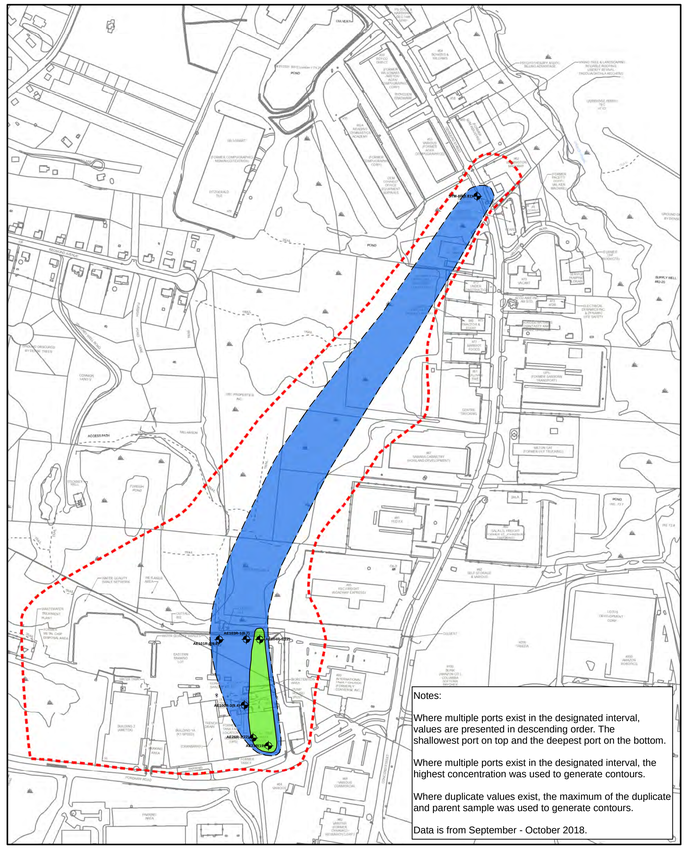
APPENDIX E
2016-2021 BEDROCK PLUMES (1,4-DIOXANE, TETRACHLOROETHENE, TRICHLOROETHENE)



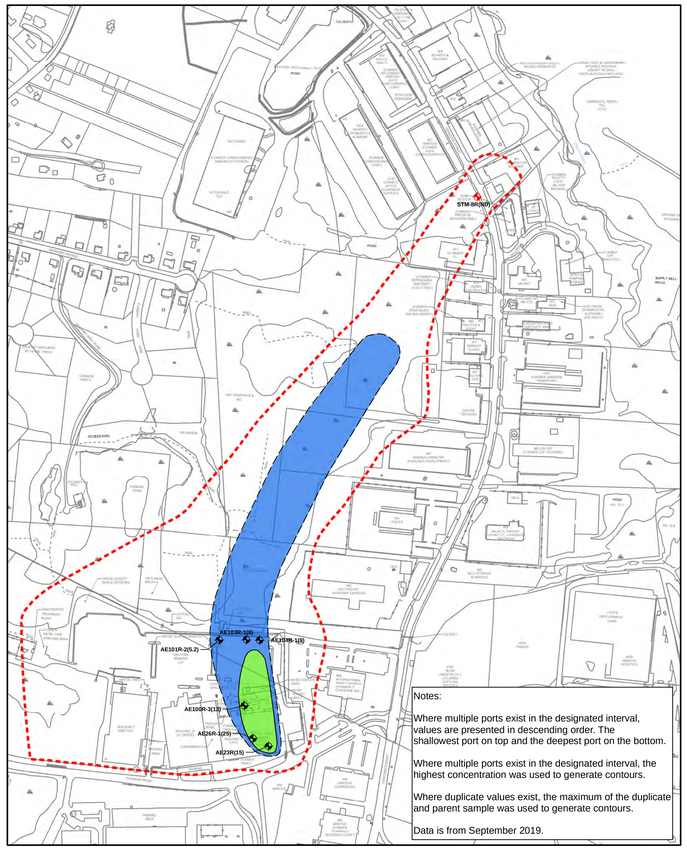
2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



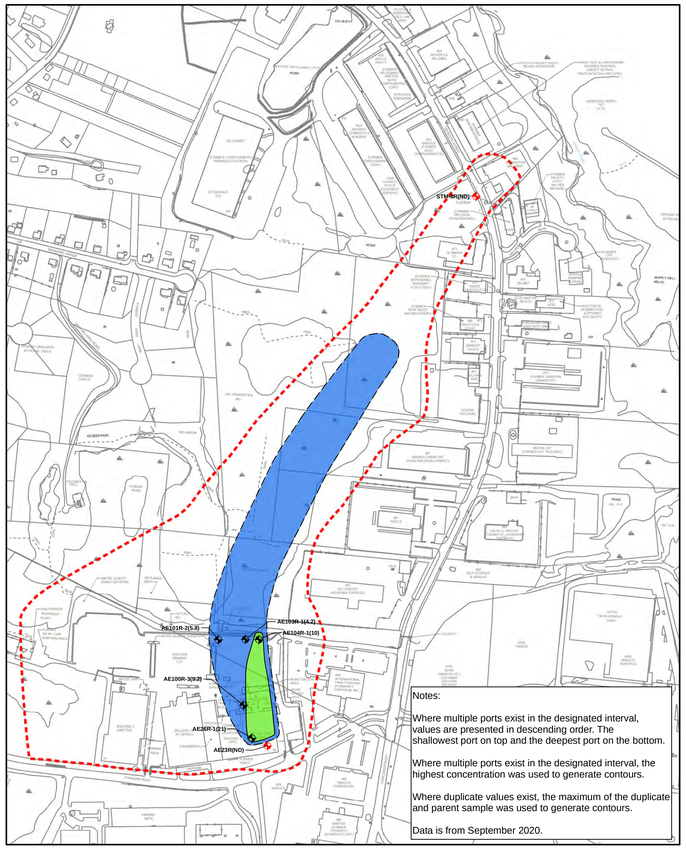
2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



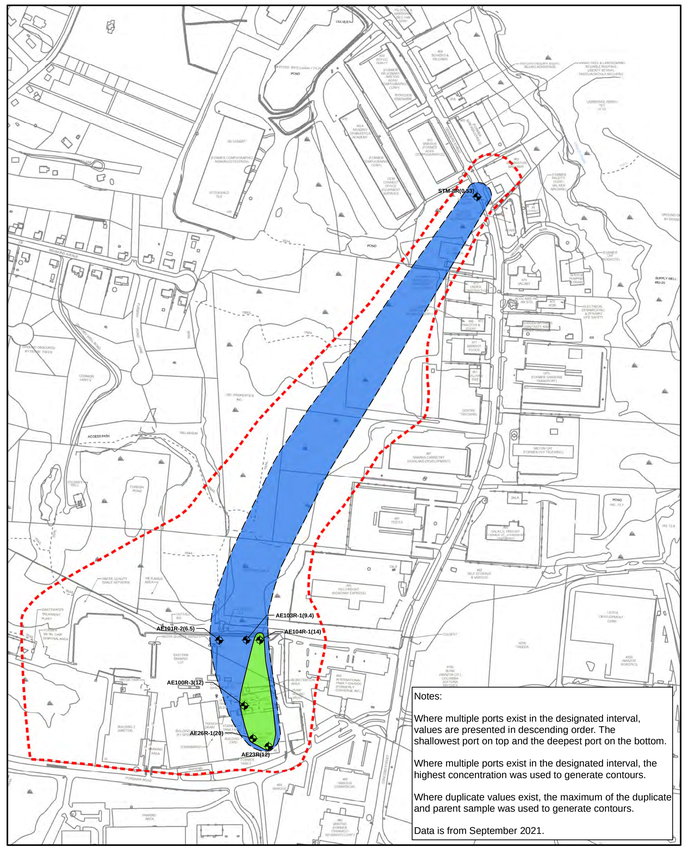
2018 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 0.3 µg/l

N

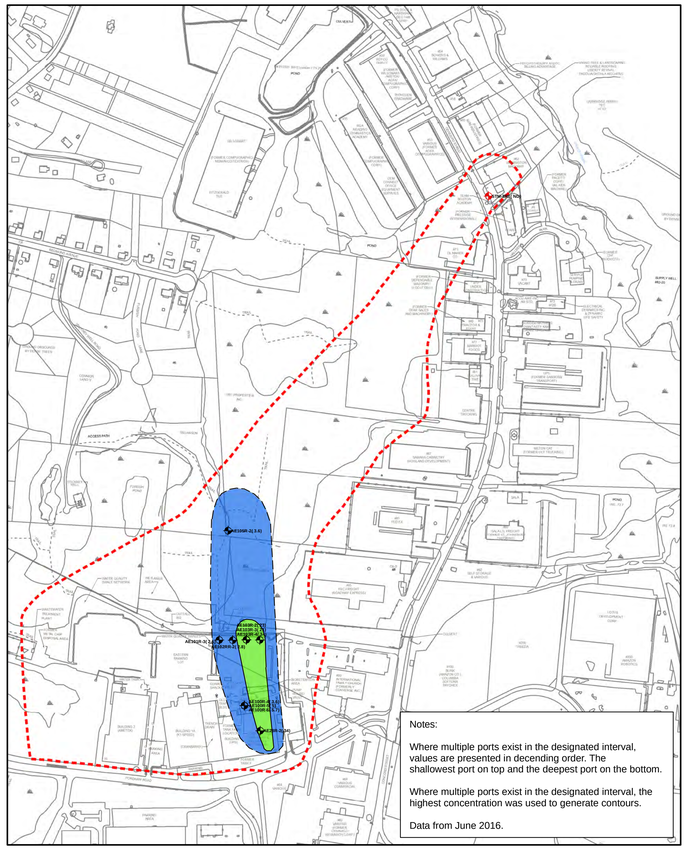
0 100 200 400 600 800 Feet

1,4-Dioxane (SW8270D-SIM) in Groundwater
Upper Bedrock (0 - 60 ft bgs)

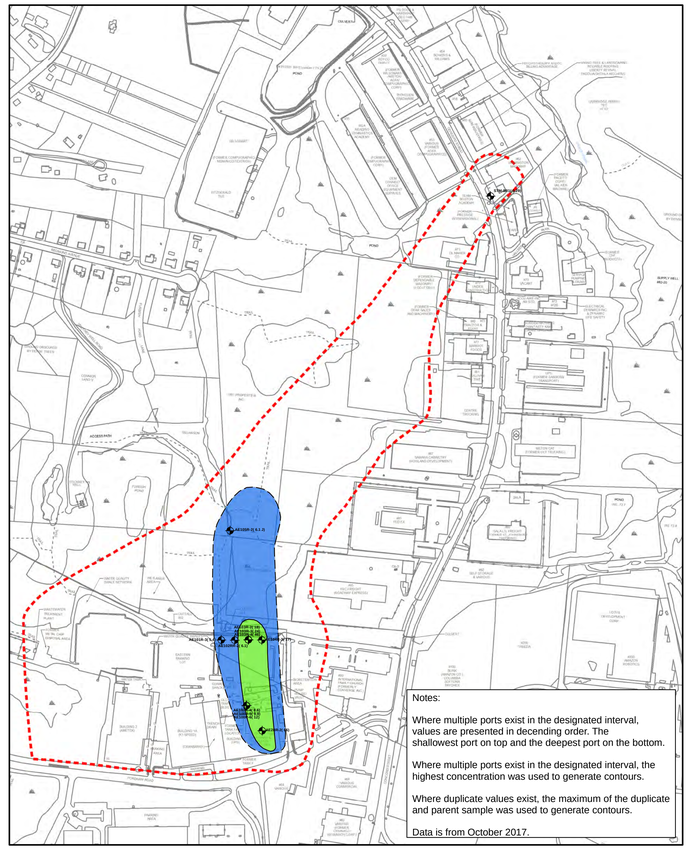
Figure 5-6

AECOM

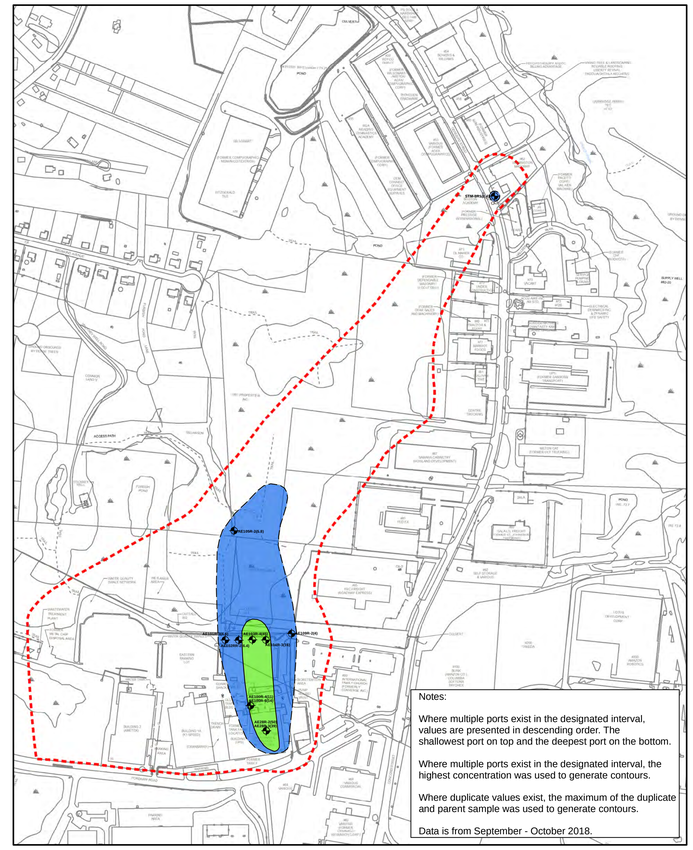
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Engr\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_6_Diox_Upper_BR_2016_2021.mxd



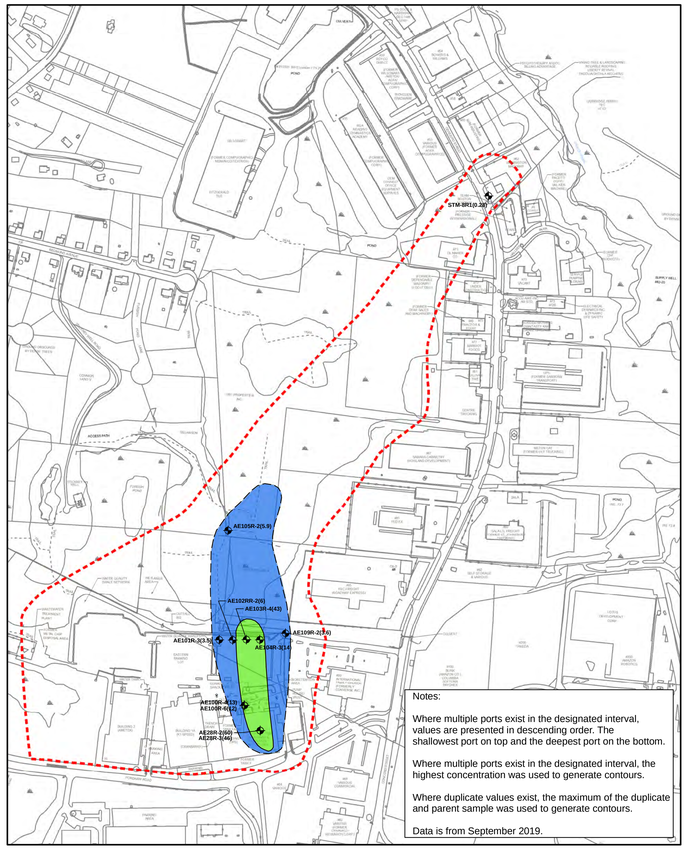
2016 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



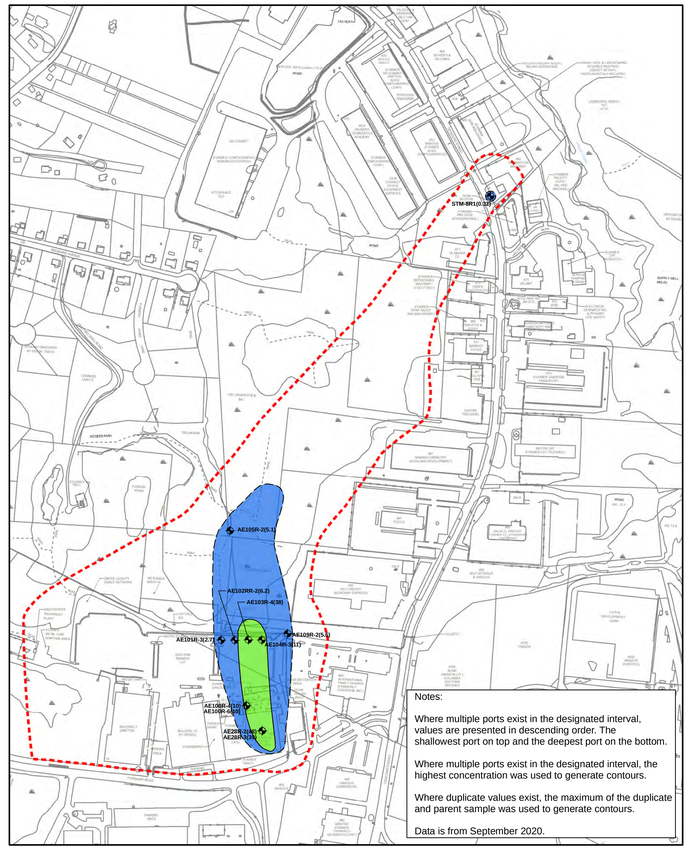
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



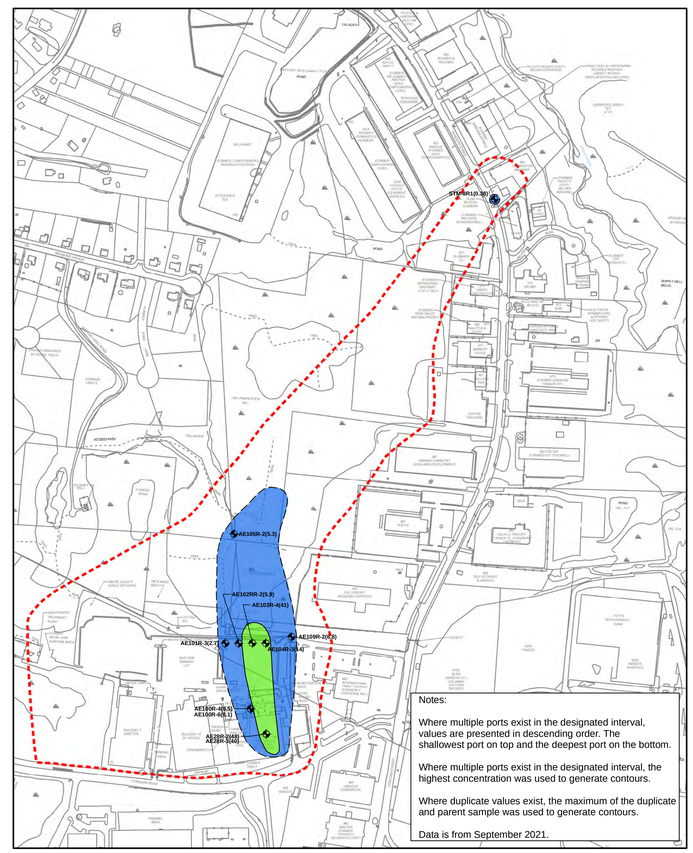
2018 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2021 1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 0.3 µg/l

N

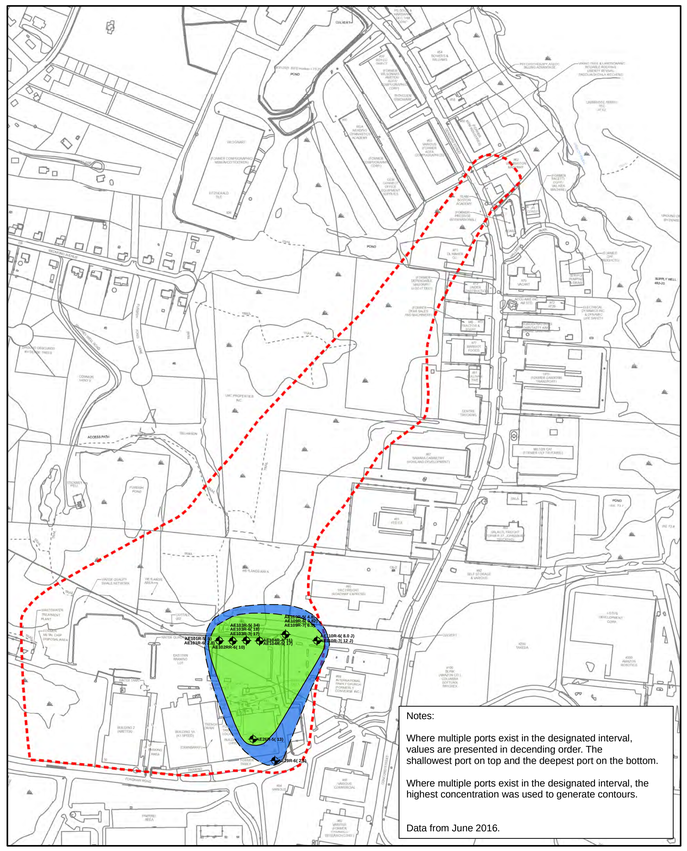
0 100 200 400 600 800 Feet

AECOM

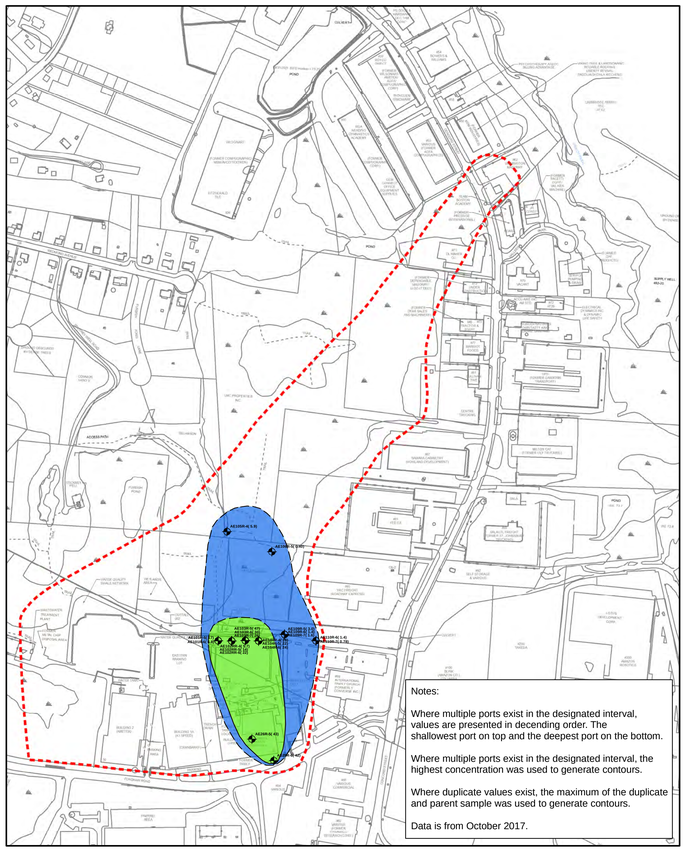
1,4-Dioxane (SW8270D-SIM) in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-7

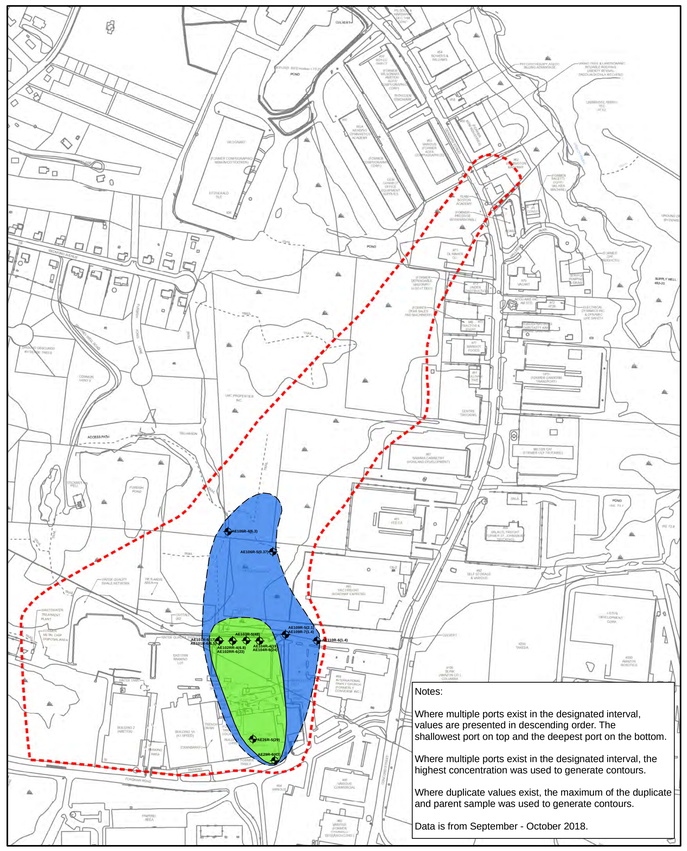
Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_7_Diox_Middle_BR_2016_2021.mxd



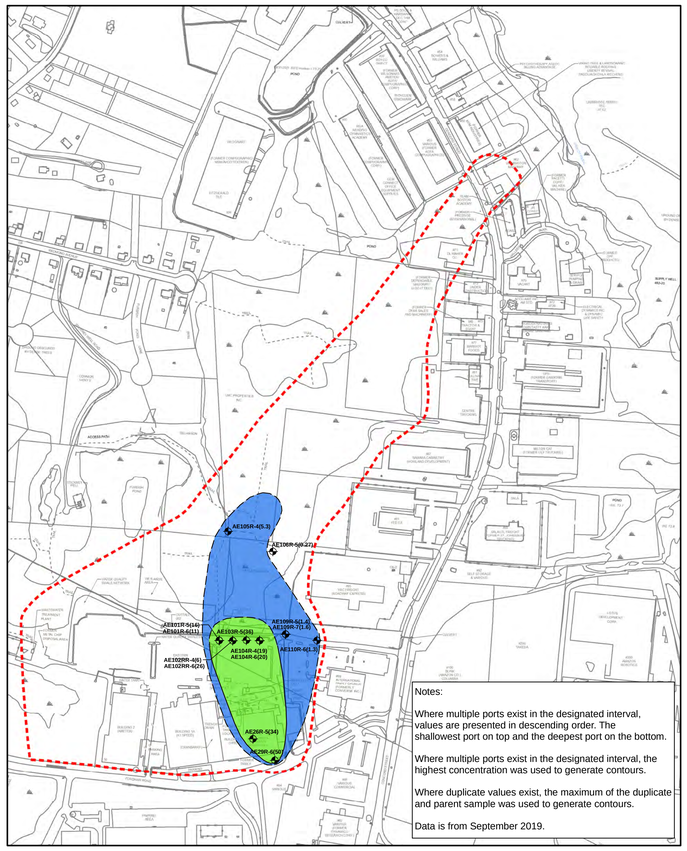
2016 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



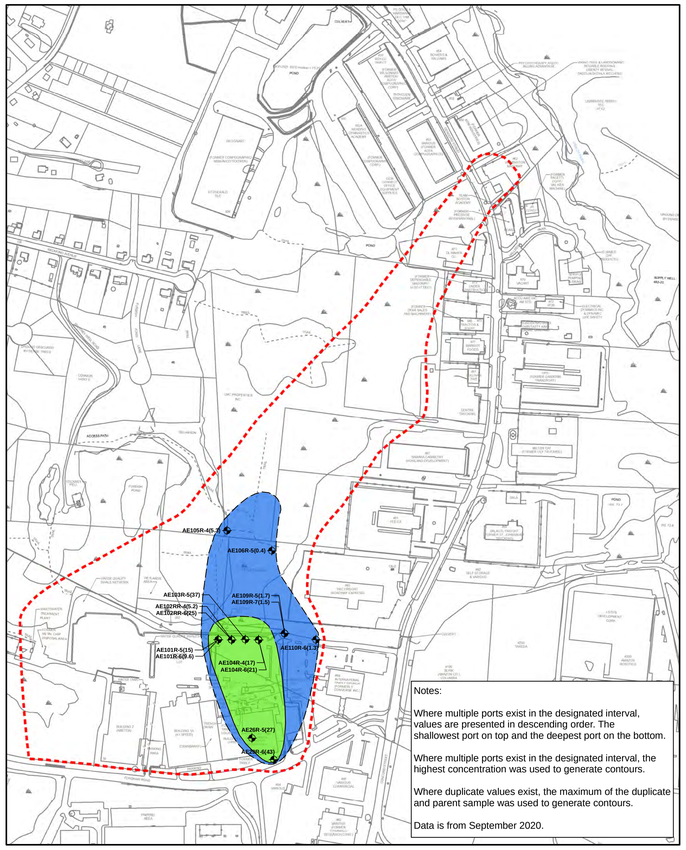
2017 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



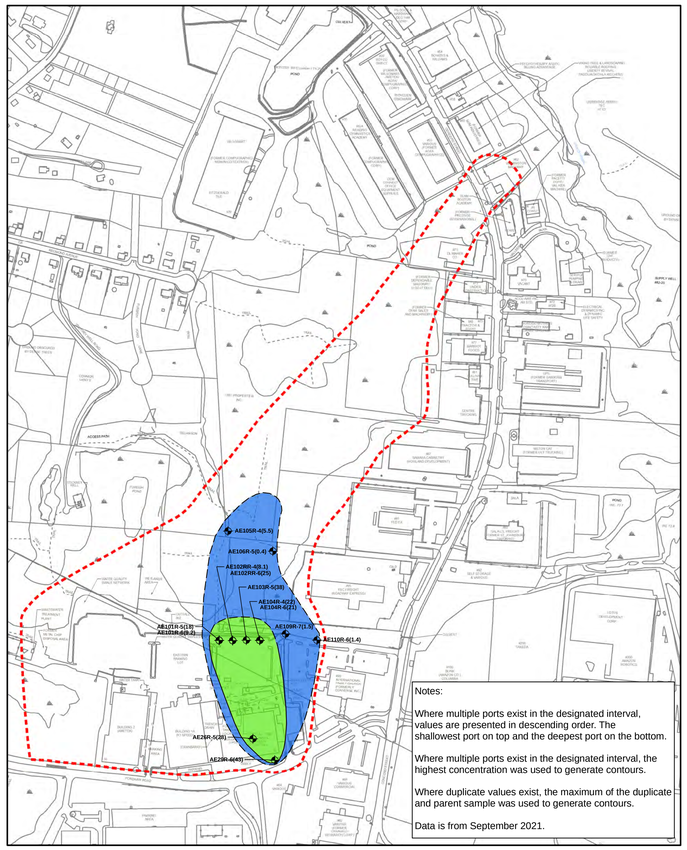
2018 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 0.3-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 0.3 µg/l

N

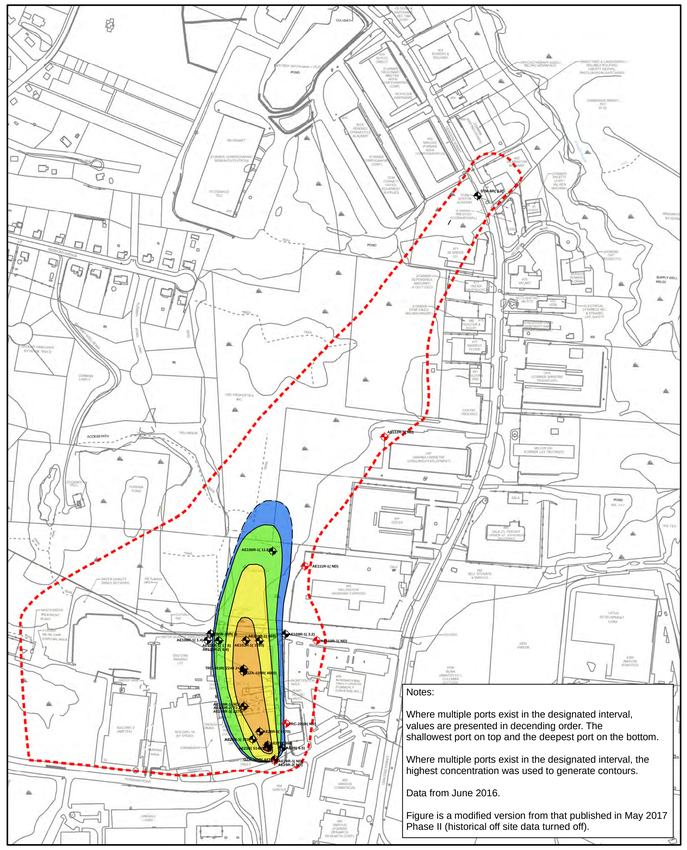
0 100 200 400 600 800 Feet

AECOM

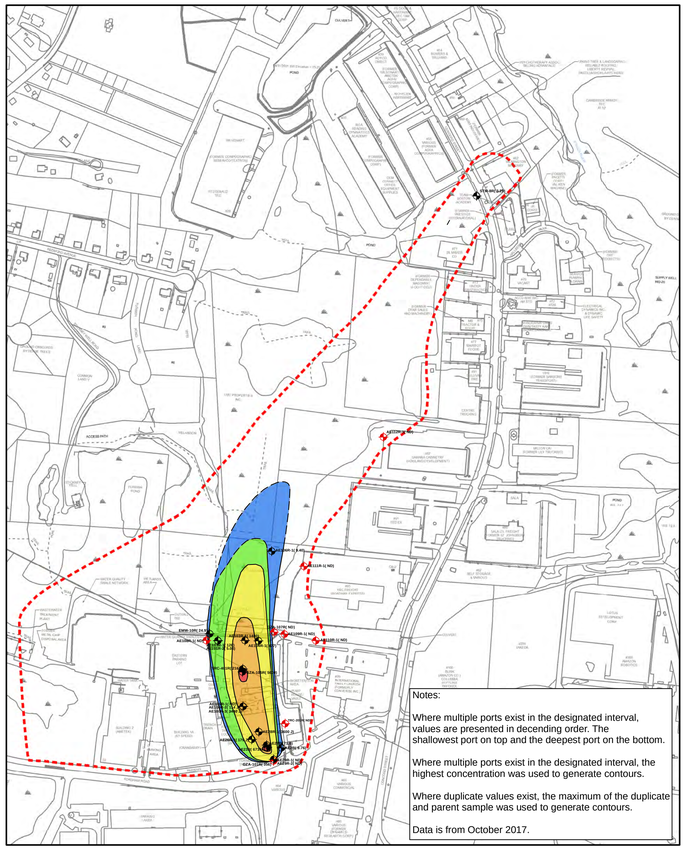
1,4-Dioxane (SW8270D-SIM) in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-8

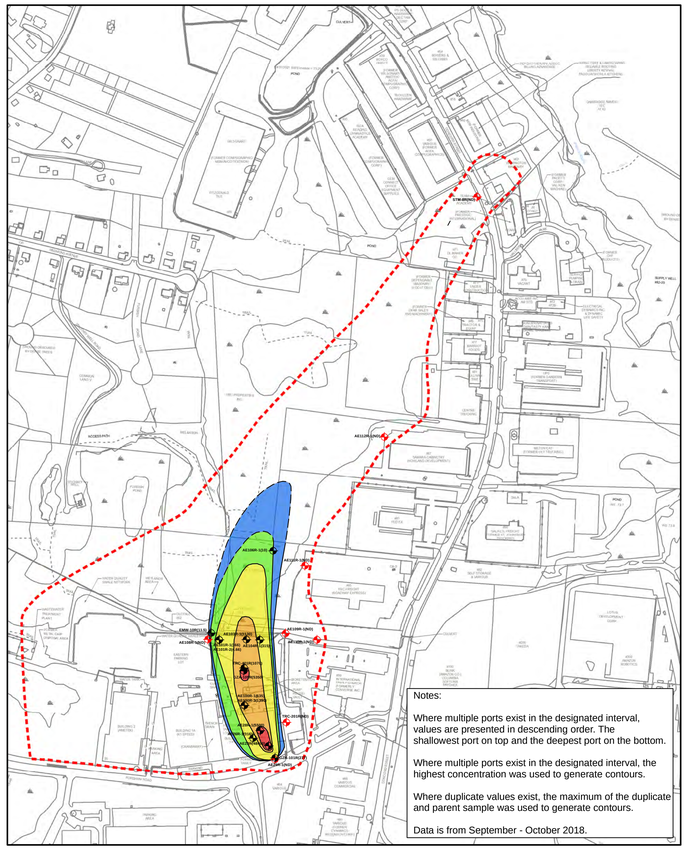
Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_8_Diox_Lower_BR_2016_2021.mxd



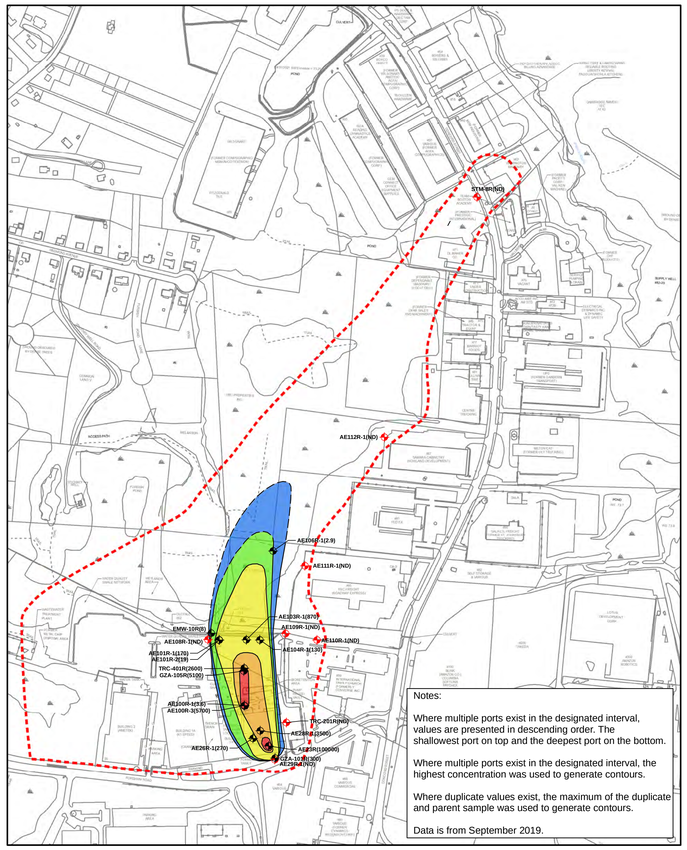
2016 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



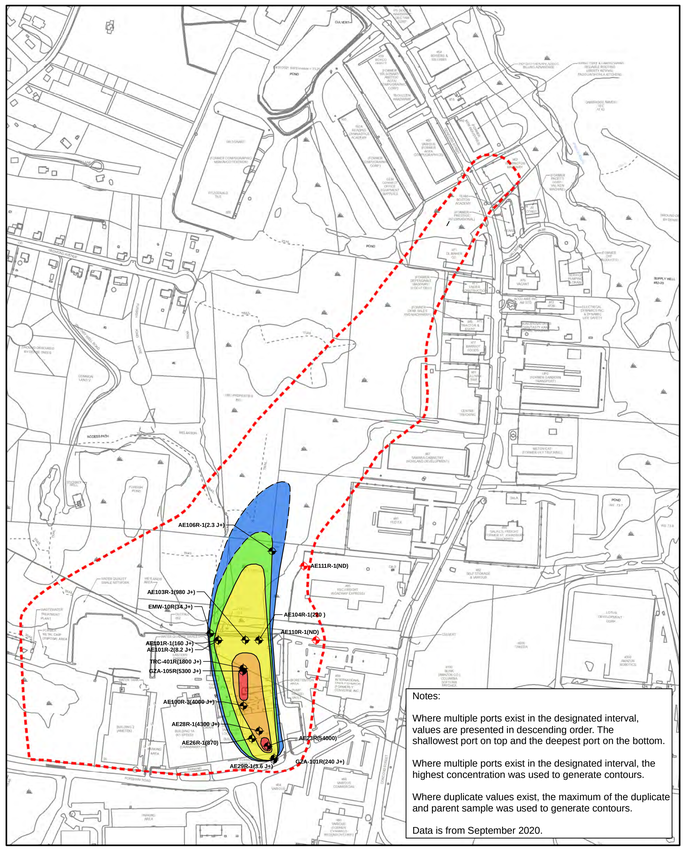
2017 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



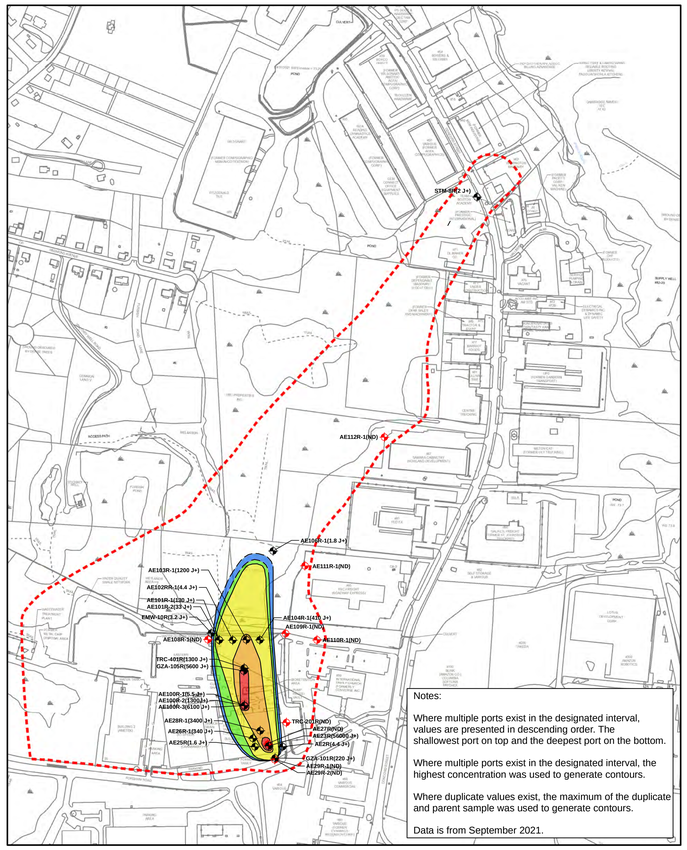
2018 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary

MCP GW-1 Standard = 5 µg/l

N

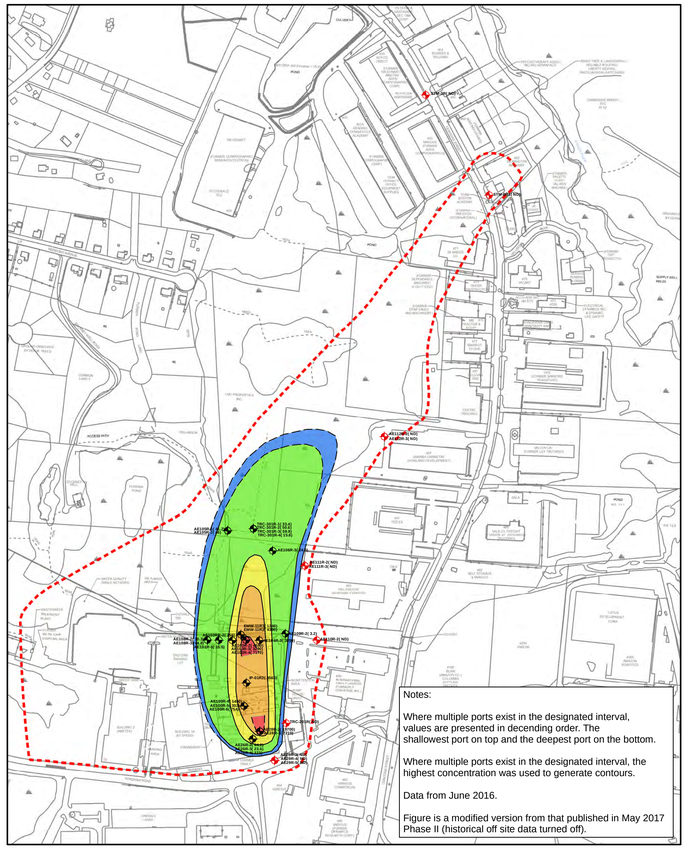
0 100 200 400 600 800 Feet

AECOM

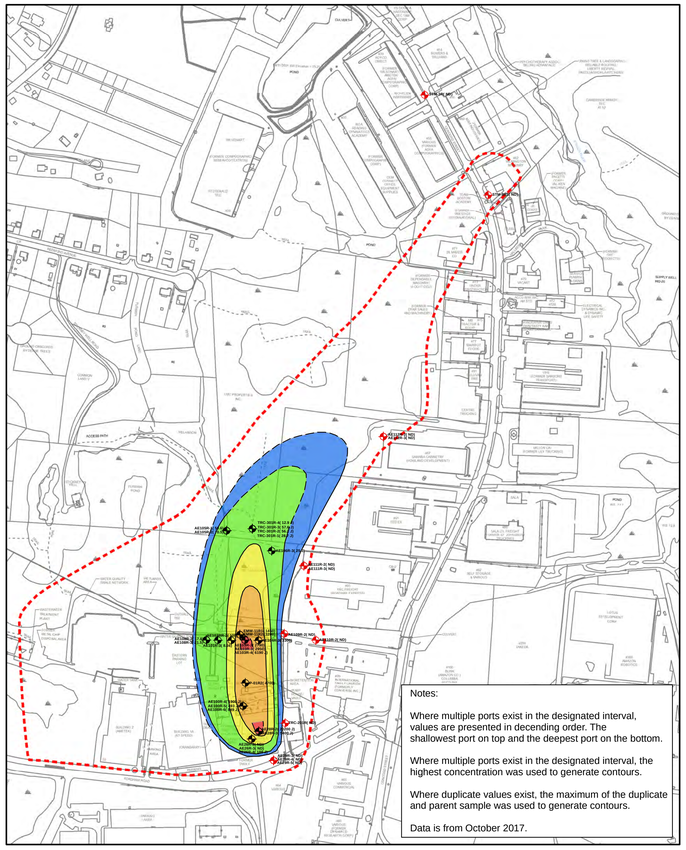
PCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-14

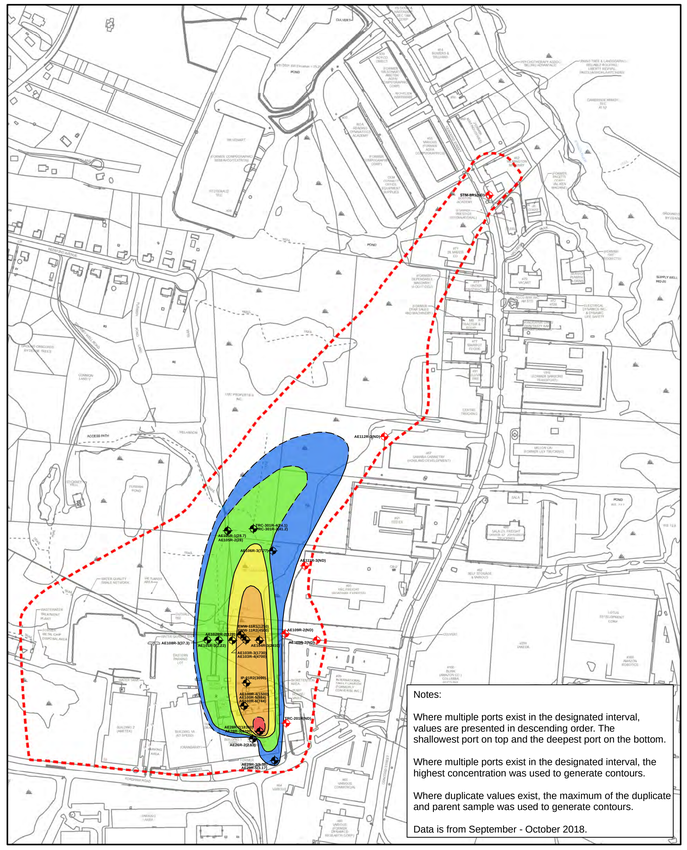
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Engr\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_14_PCE_Upper_BR_2016_2021.mxd



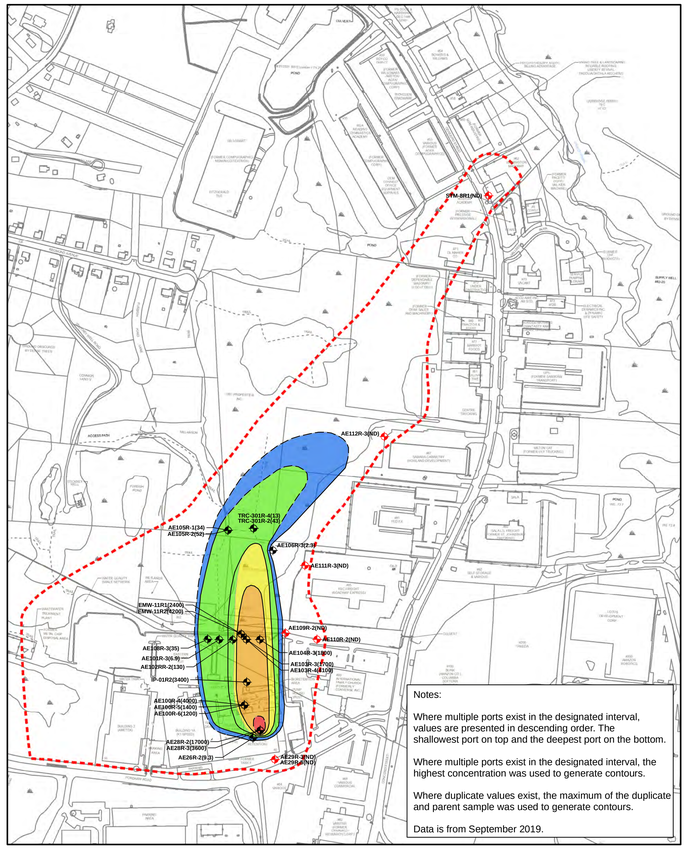
2016 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



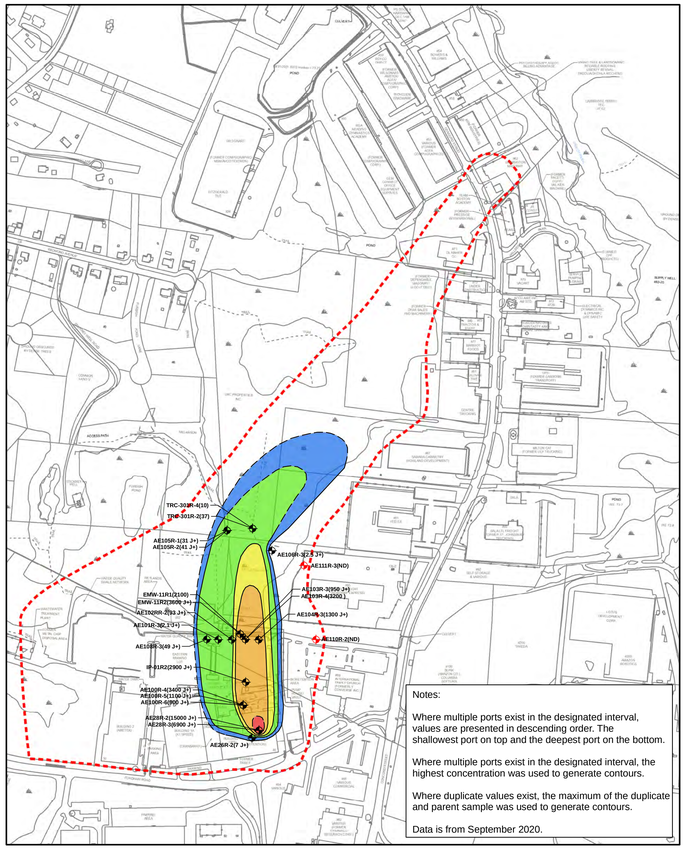
2017 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



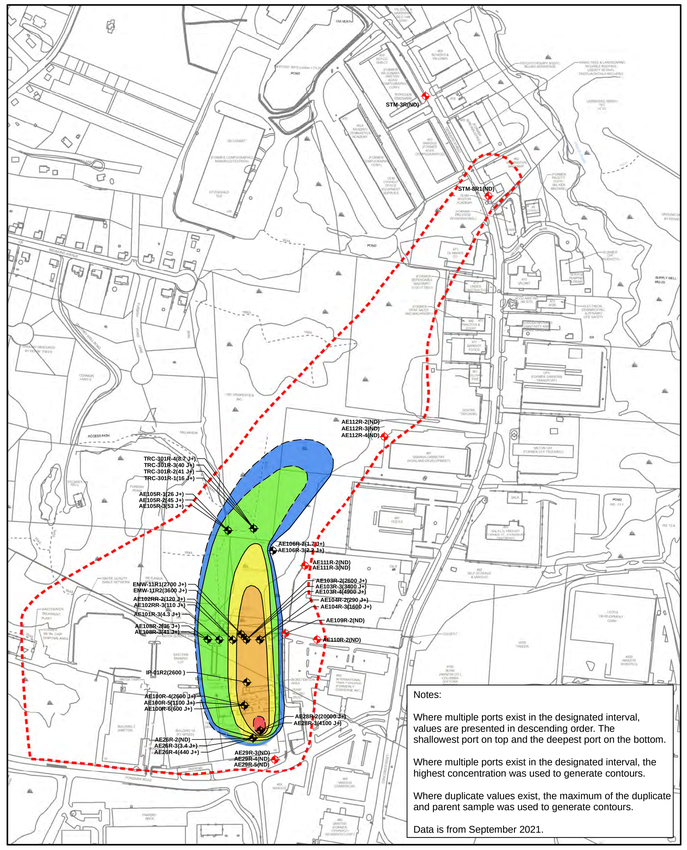
2018 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2019 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2020 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2021 PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

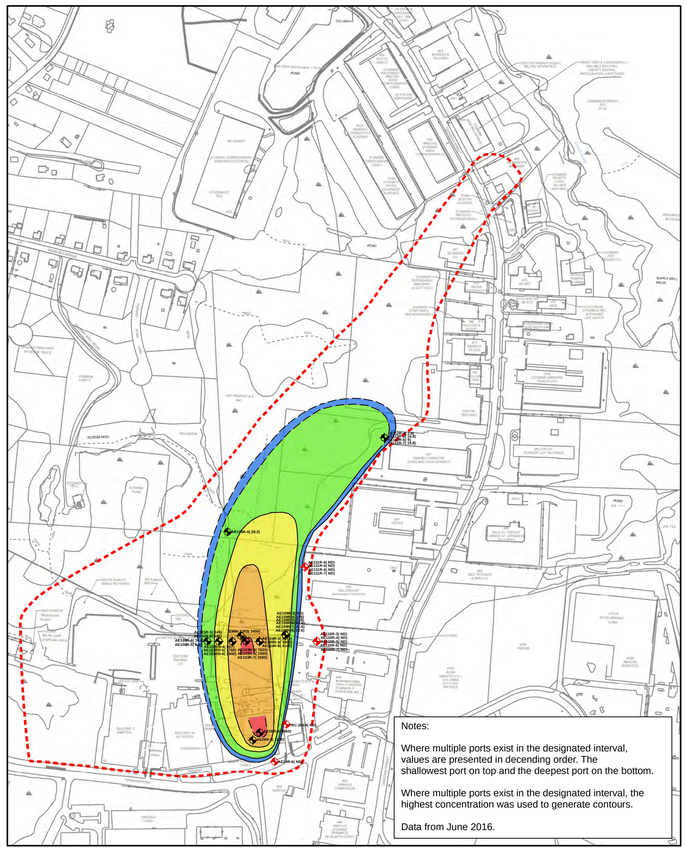
0 100 200 400 600 800 Feet

AECOM

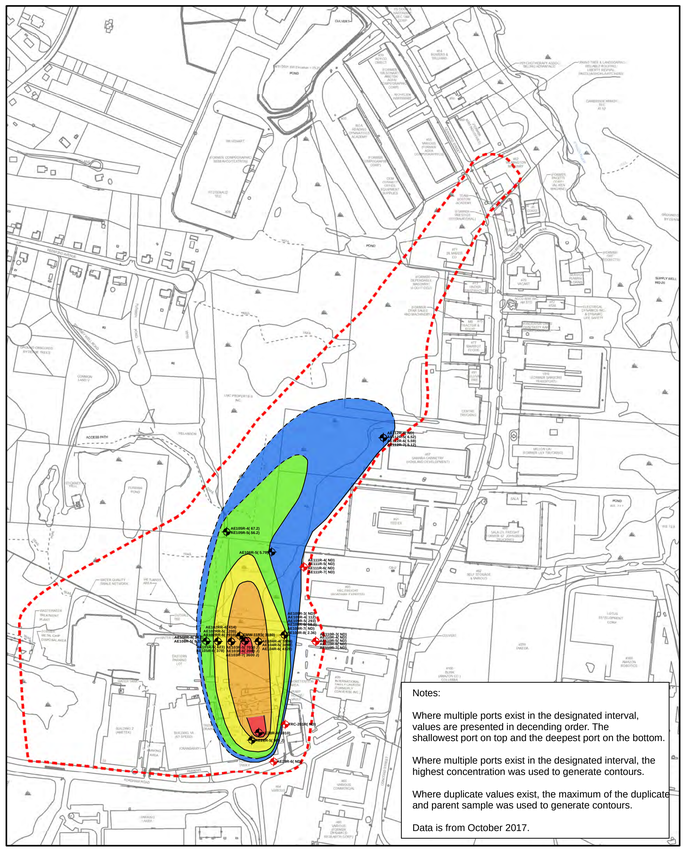
PCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-15

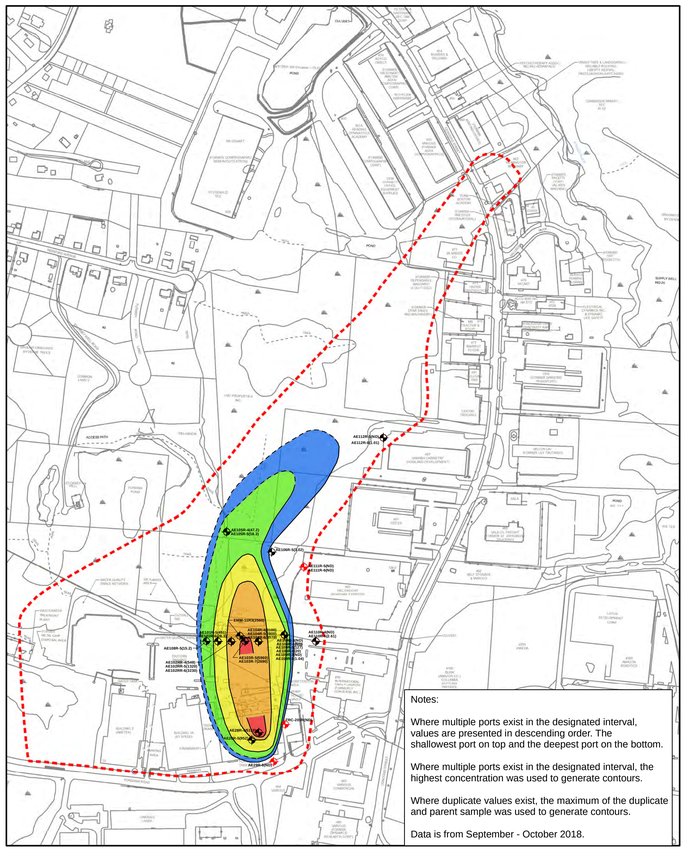
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_15_PCE_Middle_BR_2016_2021.mxd



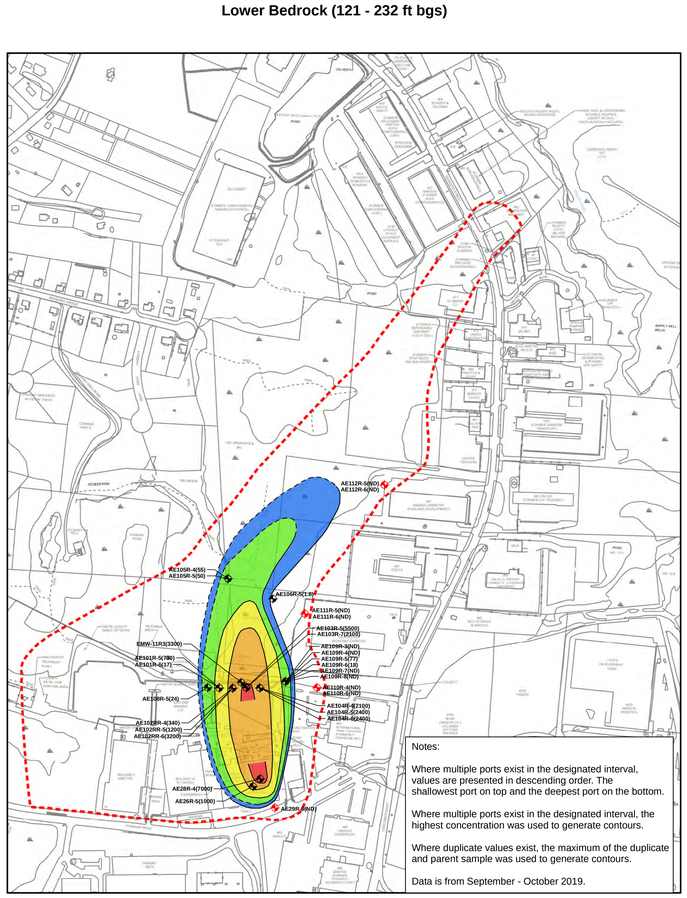
2016 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



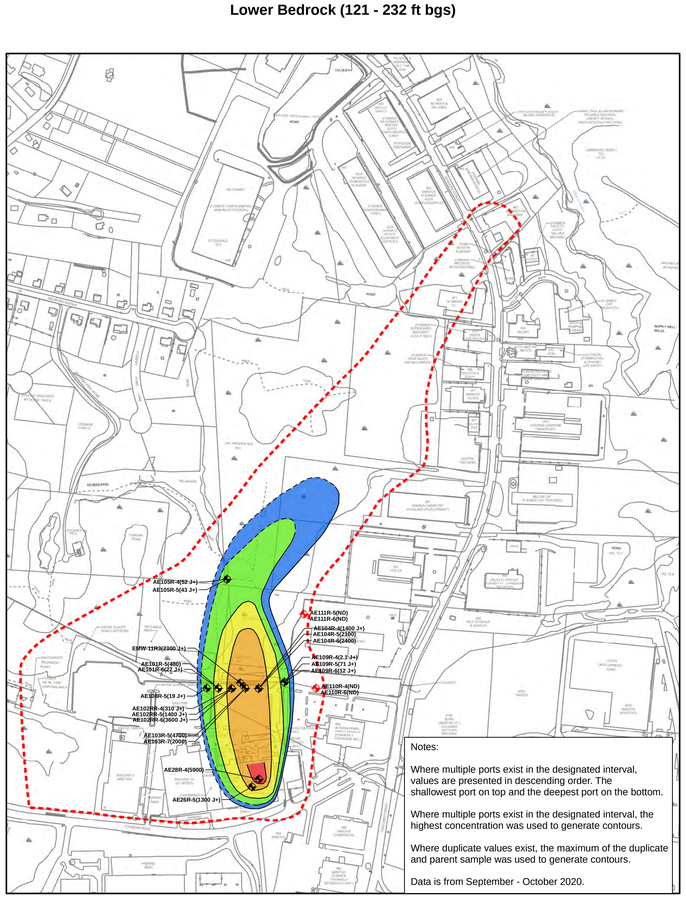
2017 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



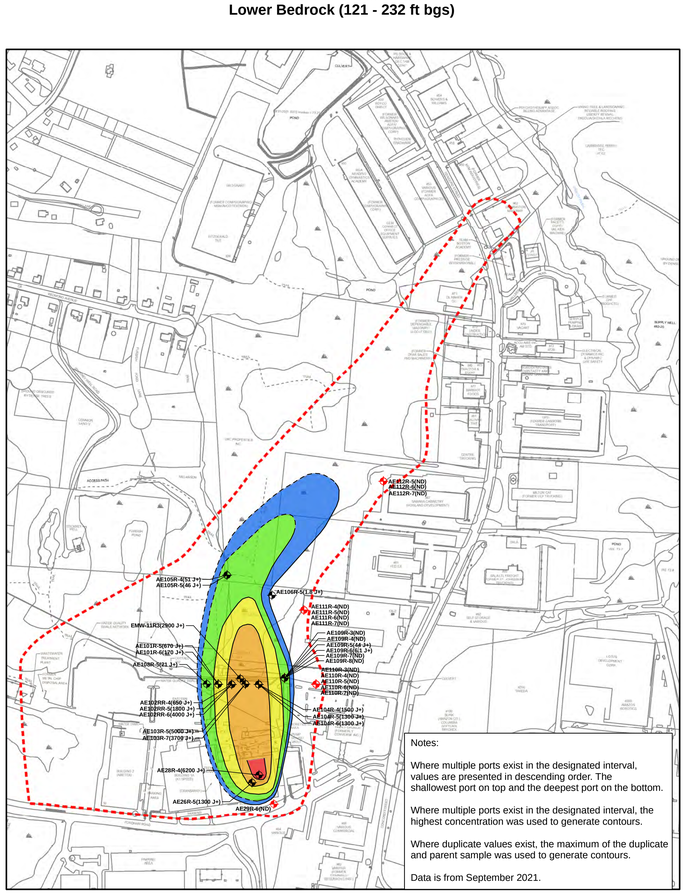
2018 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

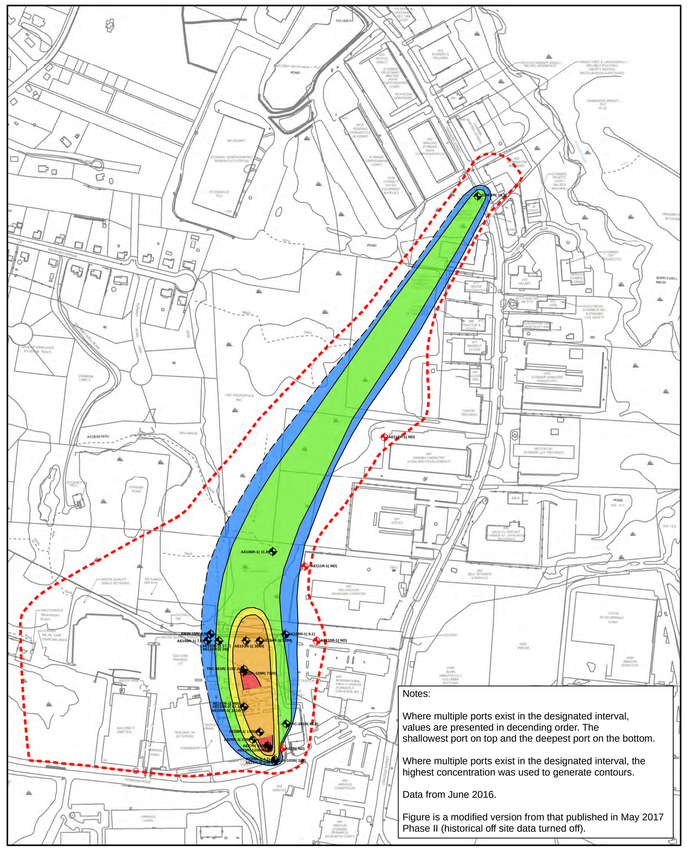
0 100 200 400 600 800 Feet

AECOM

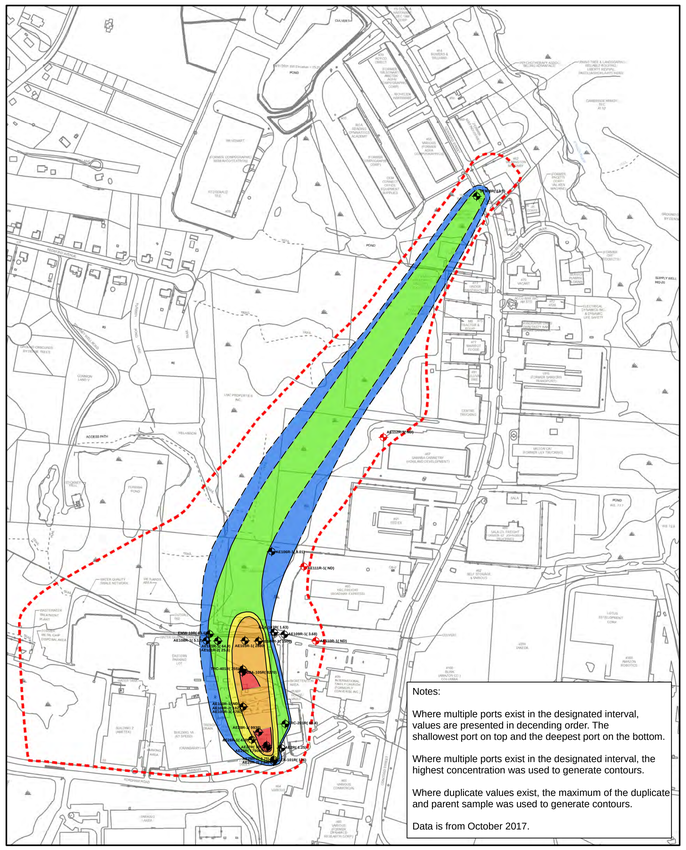
PCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-16

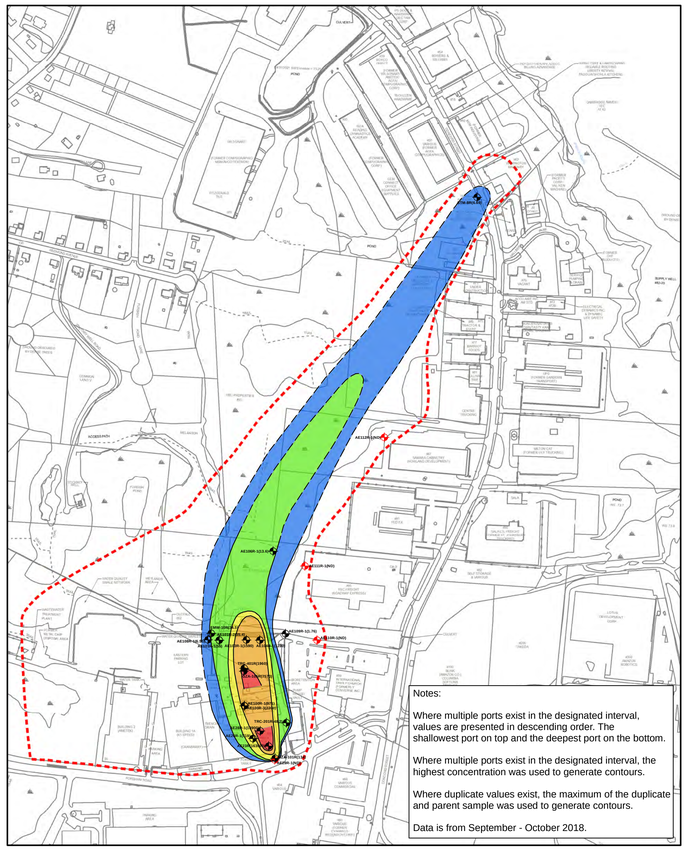
Path: C:\Work\Lockheed_Martin_Wilmington_2017_2022\2016-2021 Plume Maps\MXD\Fig_5_16_PCE_Lower_BR_2016_2021.mxd



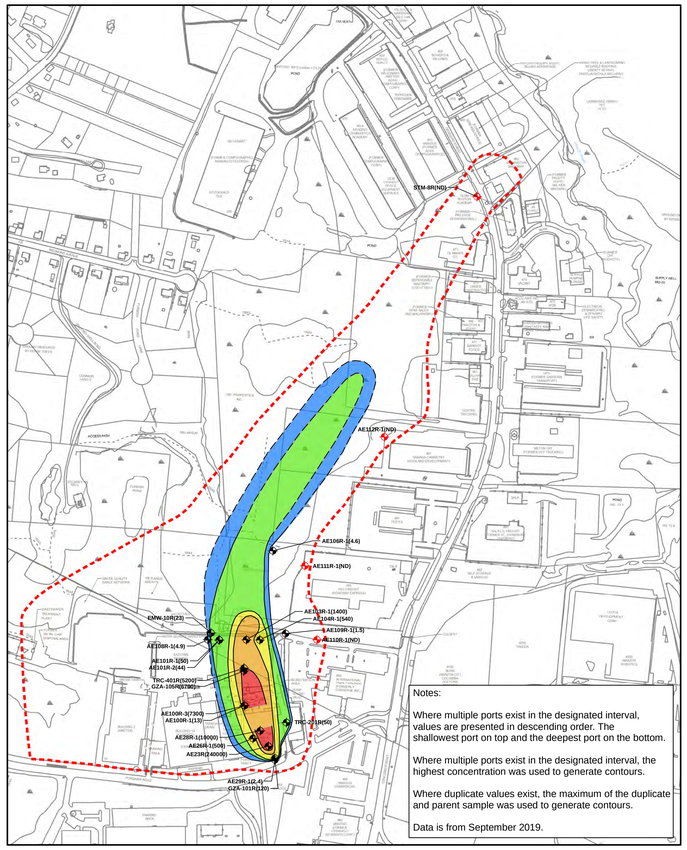
2016 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



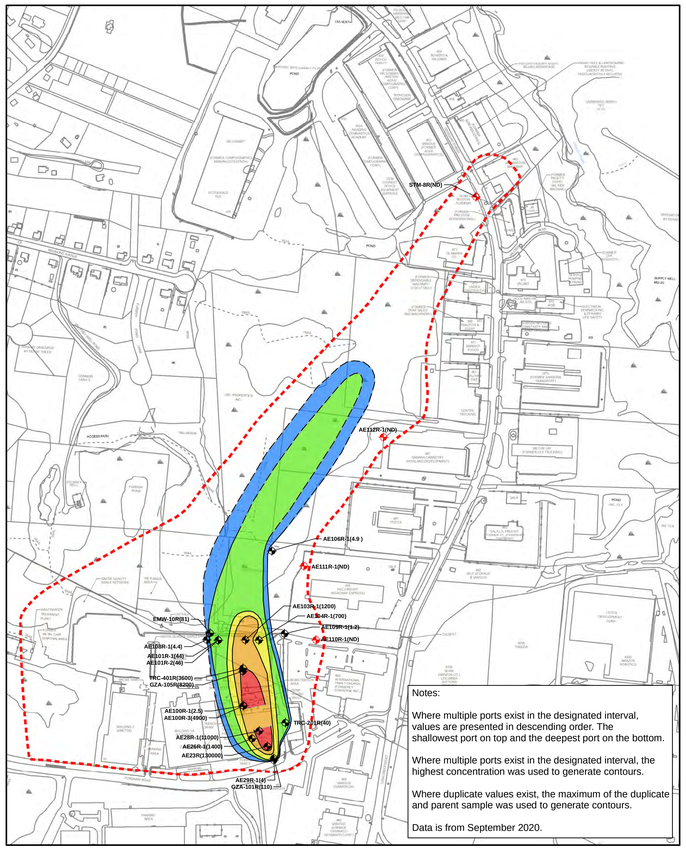
2017 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



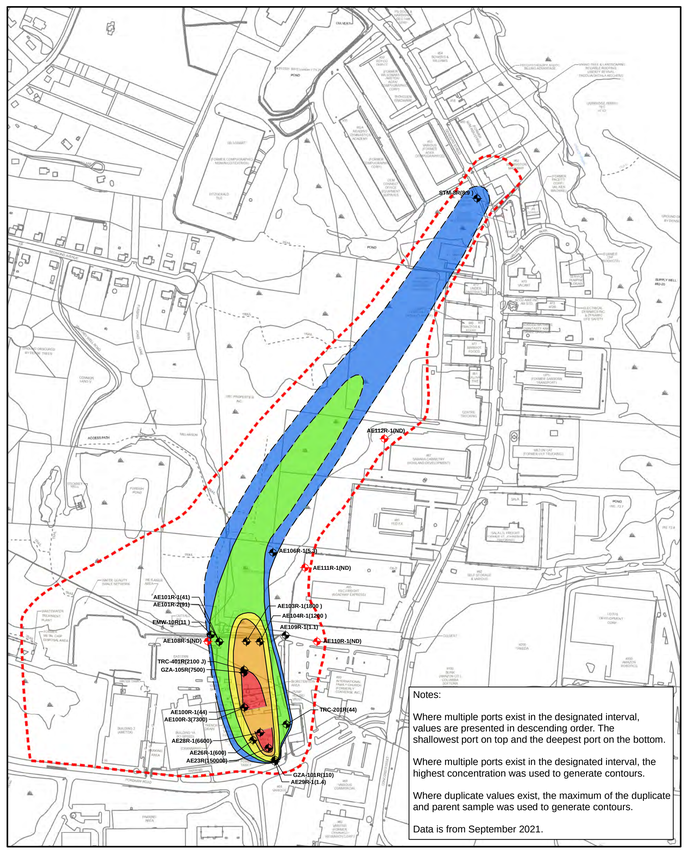
2018 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2019 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2020 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)



2021 TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

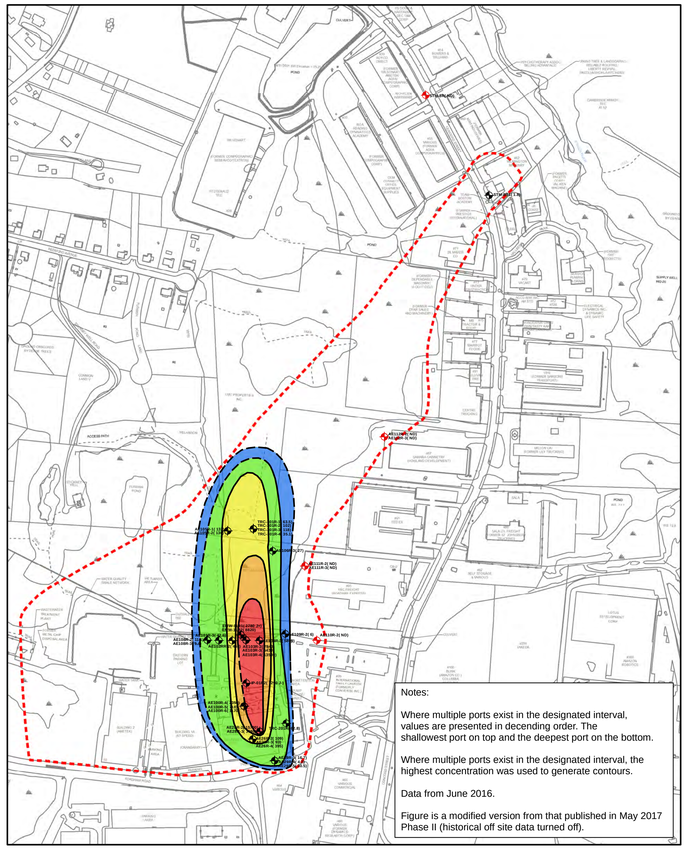
0 100 200 400 600 800 Feet

AECOM

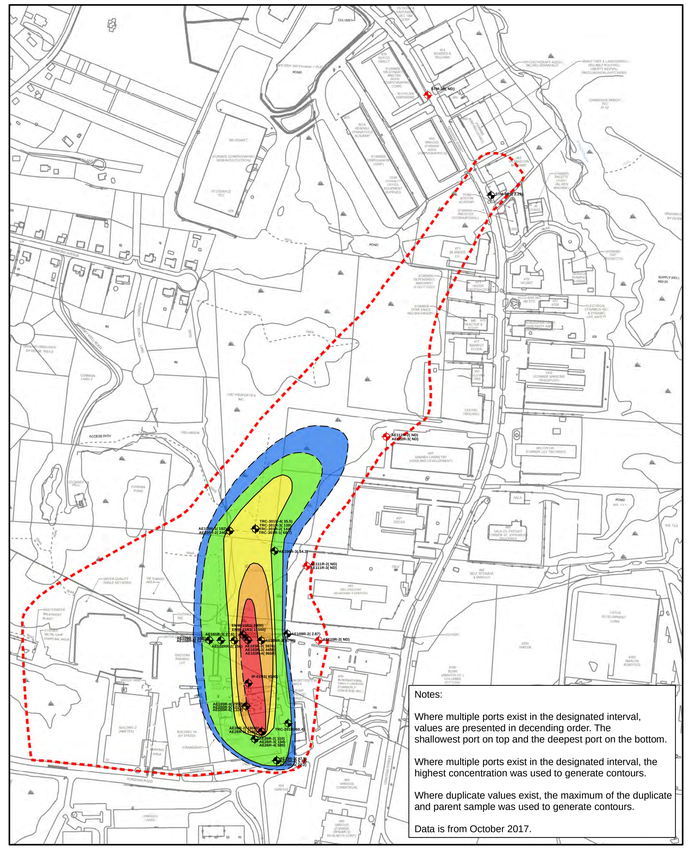
TCE in Groundwater
Upper Bedrock (0 - 60 ft bgs)

Figure 5-18

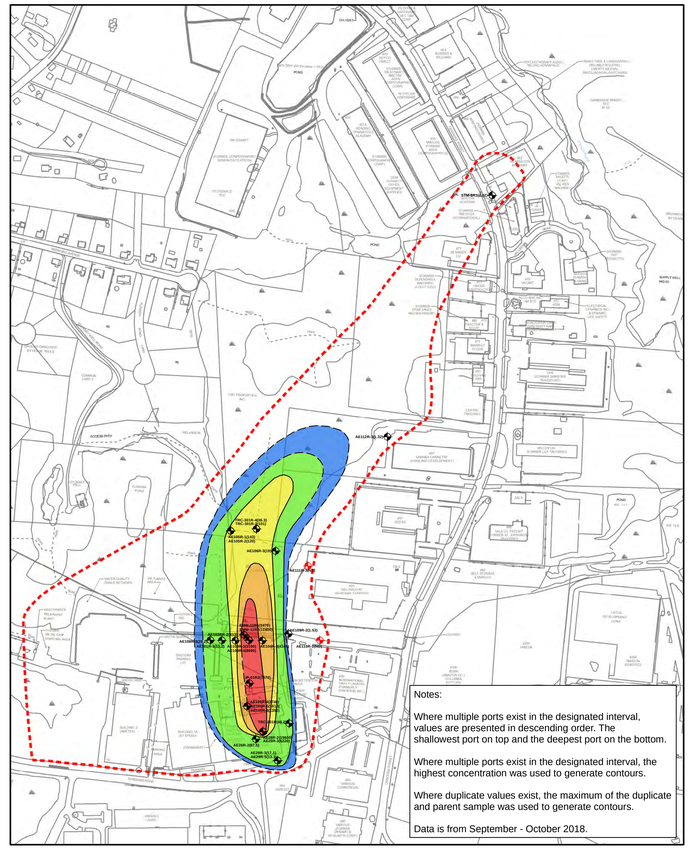
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_18_TCE_Upper_BR_2016_2021.mxd



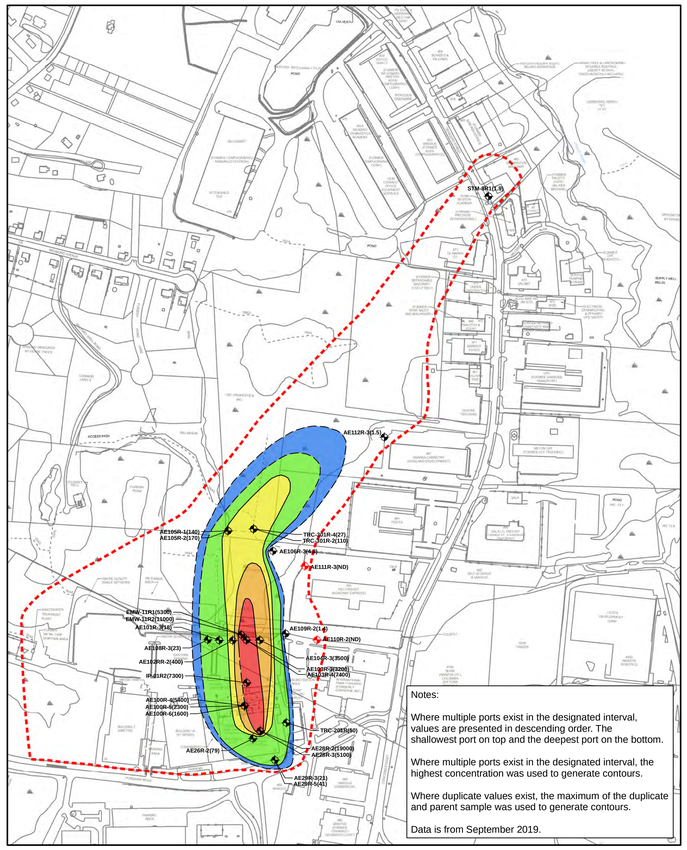
2016 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



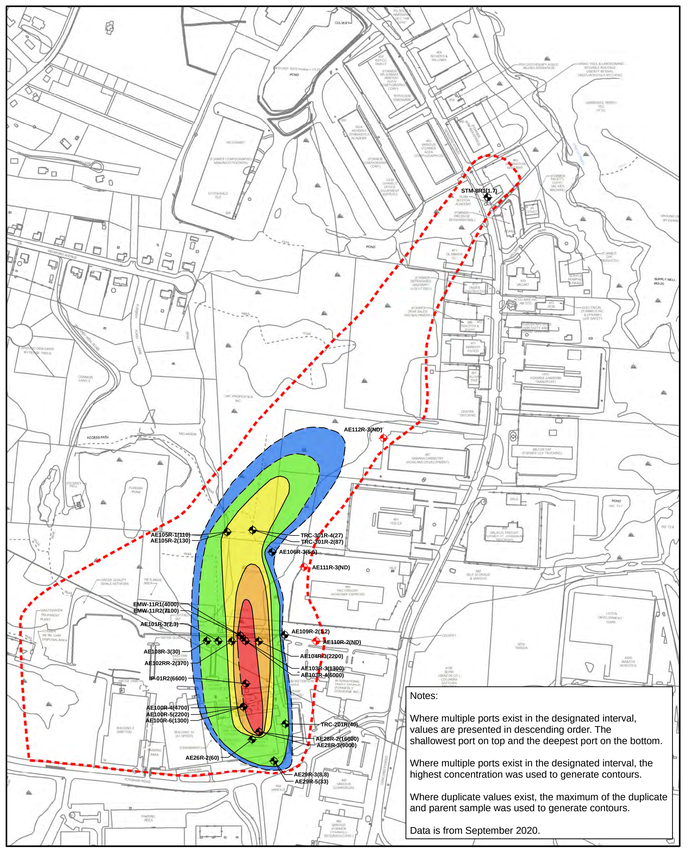
2017 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



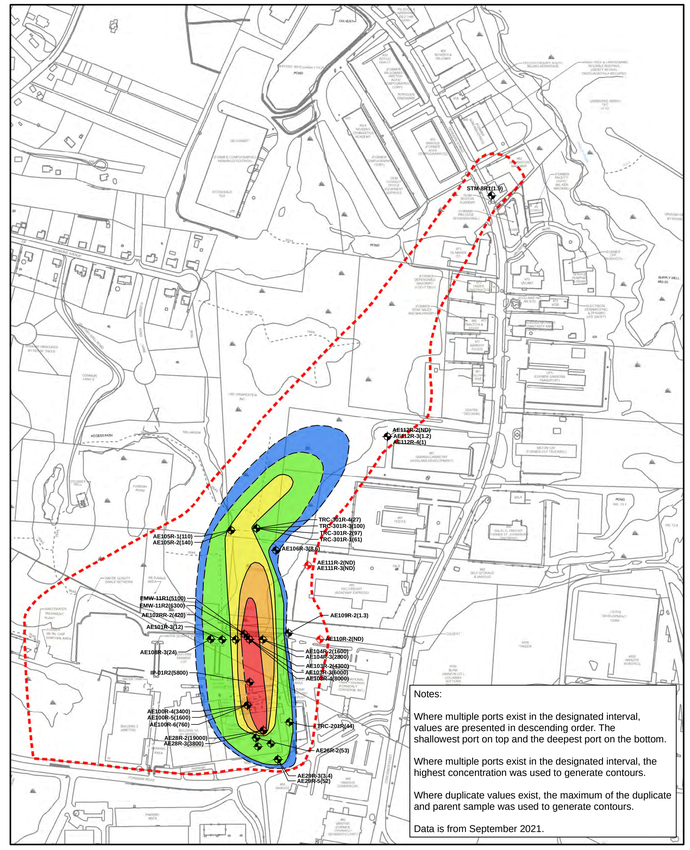
2018 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2019 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2020 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)



2021 TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

N

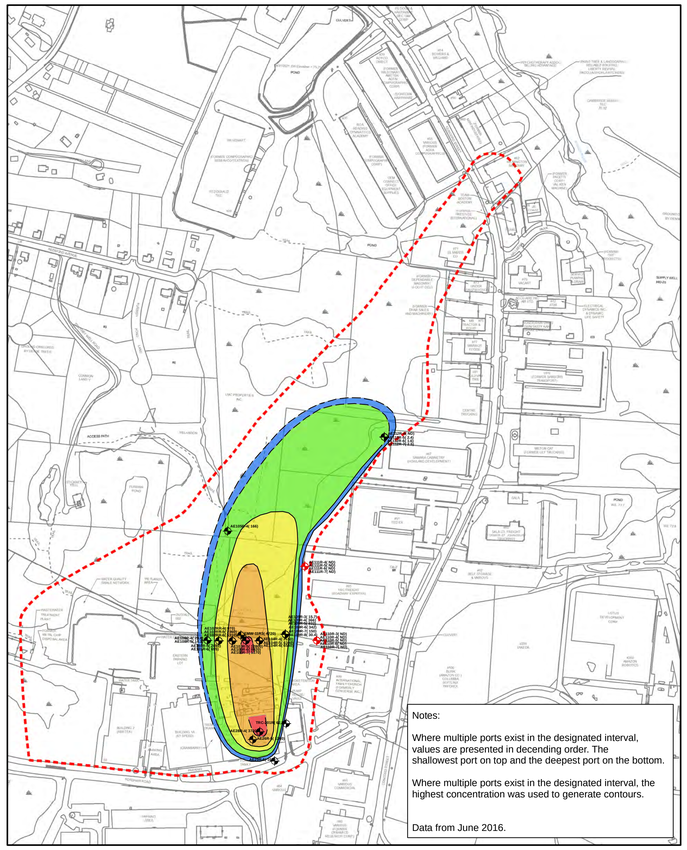
0 100 200 400 600 800 Feet

AECOM

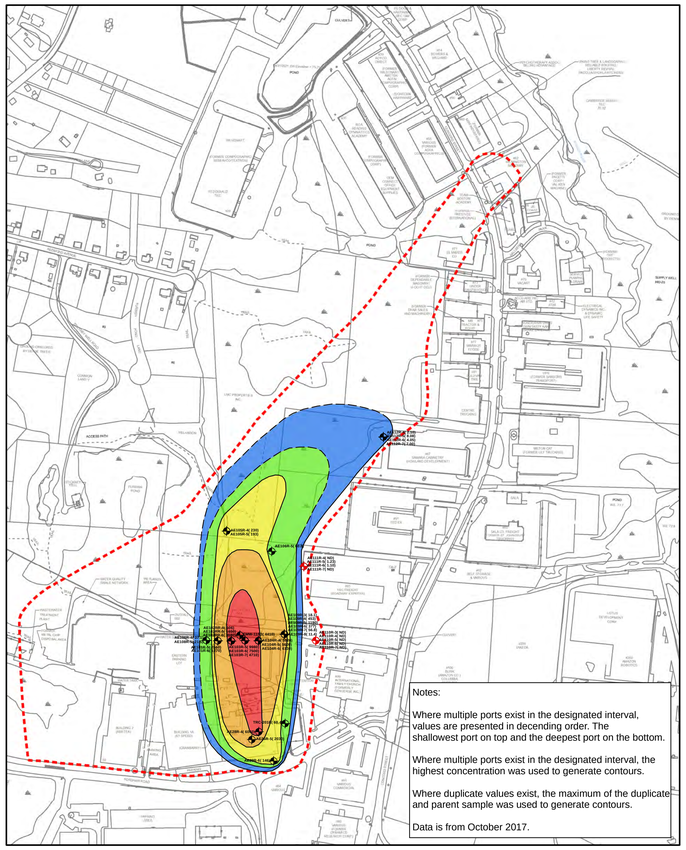
TCE in Groundwater
Middle Bedrock (61 - 120 ft bgs)

Figure 5-19

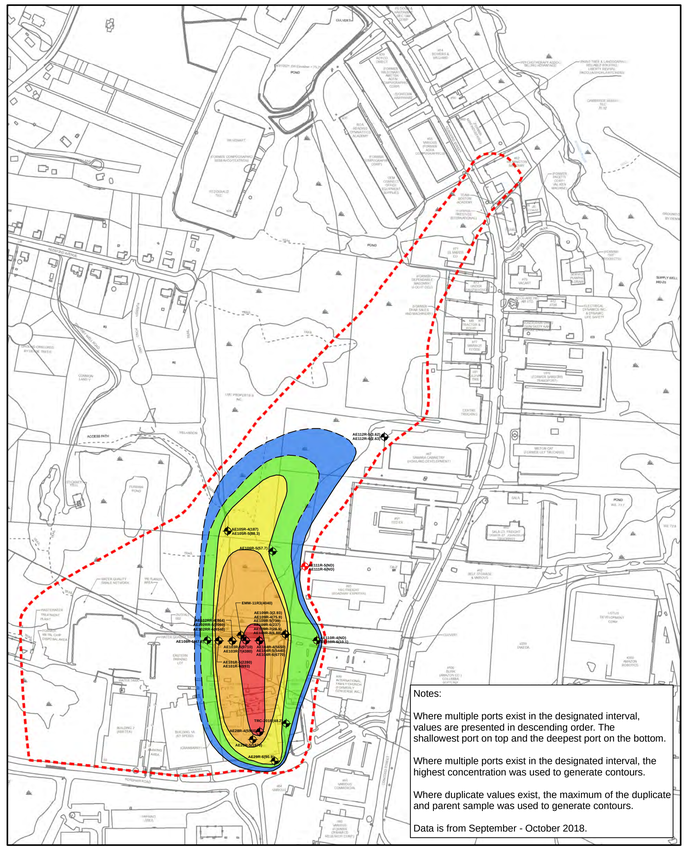
Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_19_TCE_Middle_BR_2016_2021.mxd



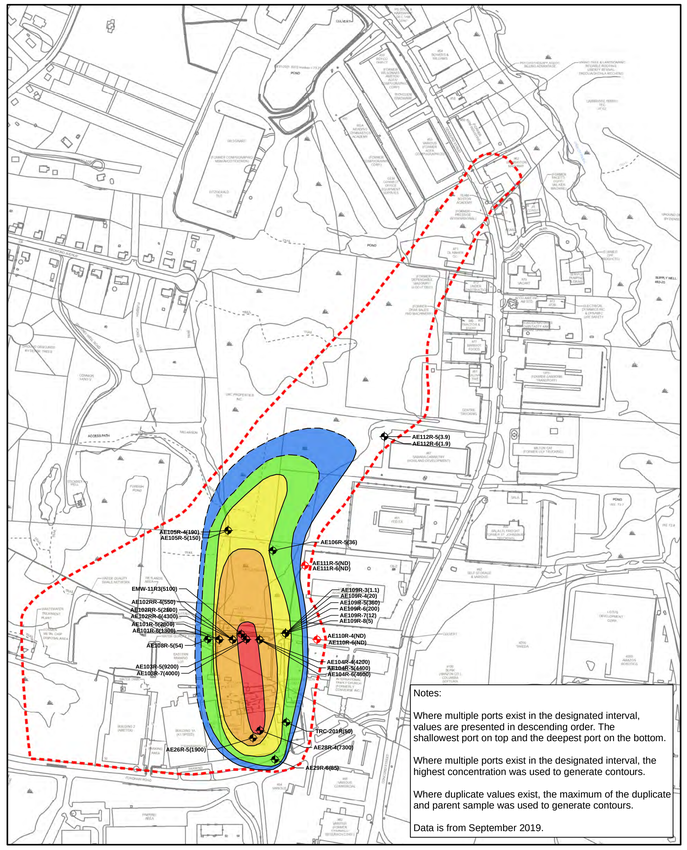
2016 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



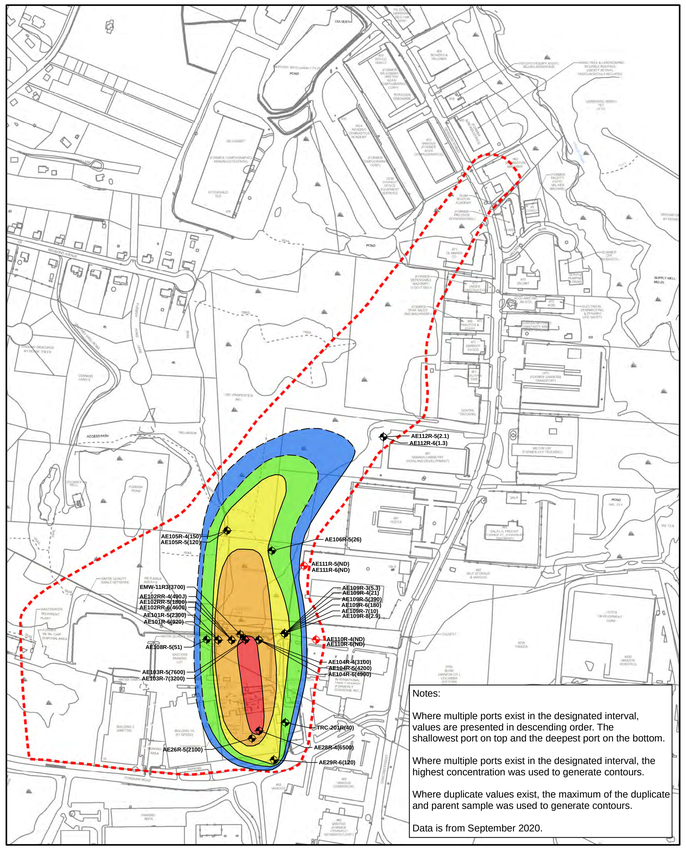
2017 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



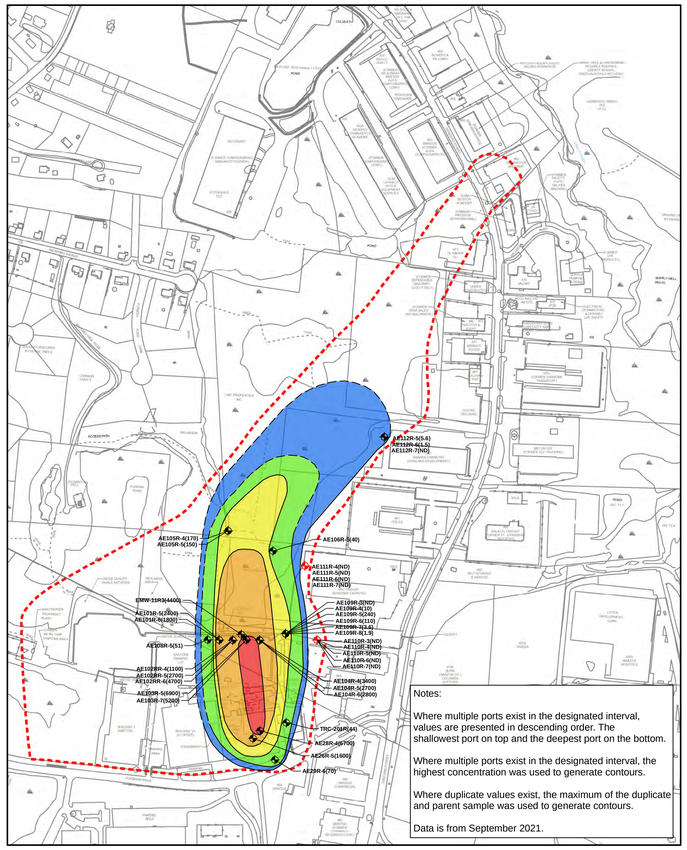
2018 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2019 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2020 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)



2021 TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Legend

- Monitoring Well
- Monitoring Well - Non Detect (ND)
- 5-10 ug/L
- 10-100 ug/L
- 100-1,000 ug/L
- 1,000-5,000 ug/L
- >5,000 ug/L
- MCP Site Boundary
- MCP GW-1 Standard = 5 µg/l

0 100 200 400 600 800 Feet

TCE in Groundwater
Lower Bedrock (121 - 232 ft bgs)

Figure 5-20

Path: L:\Legacy\USCHL1FP001\Data\Projects\Jobs\Rem_Eng\Project Files\Lockheed Martin\Wilmington 2017-2022\900-CAD-GIS\920 GIS-Graphics\2016-2021 Plume Maps\MXD\Fig_5_20_TCE_Lower_BR_2016_2021.mxd

APPENDIX F
ACTIVITY AND USE LIMITATION

NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, §6 and 310 CMR 40.0000

Note: Pursuant to 310 CMR 40.1074(5), upon transfer of any interest in or a right to use the property or a portion thereof that is subject to this Notice of Activity and Use Limitation, the Notice of Activity and Use Limitation shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer. Within 30 days of so incorporating the Notice of Activity and Use Limitation in a deed that is recorded or registered, a copy of such deed shall be submitted to the Department of Environmental Protection.

Disposal Site Name: 50 Fordham Road
DEP Release Tracking No.: 3-0000518

This Notice of Activity and Use Limitation ("Notice") is made as of this ____ day of _____, 2015, by Rosemarie Stanieich, Victoria J. Miyara, and Annette Maria Given as Trustees of the Wilmington Realty Trust, established by Declaration of Trust dated September 7, 1973, registered in the Middlesex North Registry District of the Land Court as Document No. 63541 and noted on Certificate of Title No. 19837 and registered further in the Middlesex South Registry of the Land Court as Document No. 515729 and noted on Certificate of Title No. 142138, together with their successors and assigns (collectively "Owner").

W I T N E S S E T H :

WHEREAS, the Wilmington Realty Trust, of Wilmington, Middlesex County, Massachusetts is the owner in fee simple of those certain parcels of land located at 40 and 50 Fordham Road in Wilmington, Middlesex County, Massachusetts, with the buildings and improvements thereon;

WHEREAS, said parcels of land, which are more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property"), are subject to this Notice of Activity and Use Limitation. The Property is shown on plans registered in the Middlesex County North Registry District of the Land Court as Land Court Plan Nos. 31713-C, 34588-B, 34588-E, and 36899-B, and in the Middlesex County South Registry District of the Land Court as Land Court Plan No. 31713-D;

WHEREAS, a portion of the Property ("Portion of the Property") is more specifically subject to this Notice of Activity and Use Limitation. This Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on a sketch plan attached hereto and filed herewith for registration;

WHEREAS, the Portion of the Property comprises part of a disposal site as the result of a release of oil and/or hazardous materials. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Portion of the Disposal Site in accordance with M.G.L. c.21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or groundwater, and (b) the restriction of certain activities occurring in, on, through, over or under the Portion of the Property. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Notice of Activity and Use Limitation is attached hereto as Exhibit C and made part hereof.

NOW, THEREFORE, Notice is hereby given that the activity and use limitations set forth in this Notice of Activity and Use Limitation are as follows:

1. Activities and Uses Consistent with Maintaining No Substantial Hazard Conditions. The following Activities and Uses are consistent with maintaining a condition of No Substantial Hazard and, as such, may occur on the Portion of the Property pursuant to 310 CMR 40.0000:

i. Industrial and commercial uses;

ii. Such other activities which, in the Opinion of a Licensed Site Professional, shall present no greater risk of harm to health, safety public welfare or the environment than the activities and uses set forth in this Paragraph; and

iii. Such other activities and uses not identified in Paragraph 2 as being Activities and Uses inconsistent with maintaining No Substantial Hazard Conditions.

2. Activities and Uses Inconsistent with Maintaining No Substantial Hazard. The following Activities and Uses are inconsistent with maintaining a condition of No Substantial Hazard pursuant to 310 CMR 40.0000, and, as such, may not occur on the Portion of the Property:

i. Residential, school, playground, park, or daycare use; and

ii. In the area as defined by the Activity and Use Limitation ("AUL") boundary presented in Figure 1 of the Activity and Use Limitation Opinion annexed hereto as Exhibit C, activities that would result in exposure to or the disturbance of potentially contaminated soils, bedrock, groundwater, and indoor air, unless appropriate precautions to prevent human exposure are taken as described in paragraph 3 below.

3. Obligations and Conditions. The following obligations or conditions are necessary and shall be undertaken and/or maintained at the Portion of the Property to maintain a condition of No Substantial Hazard:

i. The concrete floors within the footprint of the AUL boundary, if present, must be maintained in a condition that will prevent potential exposure to potentially contaminated soil, groundwater, and soil gas. Interior building floors will be inspected annually with repairs made to seal cracks larger than one-fourth (1/4) inch in width. The penetration of and the subsequent repairs made to the concrete floor of any buildings within the AUL boundary will be evaluated by a Licensed Site Professional to maintain the safety of construction and on-site workers.

ii. Excavated soil and bedrock removed from the AUL area must be managed in accordance with the Soil Management Procedures pursuant to 310 CMR 40.0030.

a. If the soils and bedrock are suspected or are pre-determined by a Licensed Site Professional to be Remediation Waste as defined under 310 CMR 40.0006, then the soils and bedrock will be managed under a Release Abatement Measure ("RAM") set forth by the MCP at 310 CMR 40.0440, as determined by a Licensed Site Professional.

b. If the excavated soils and bedrock from the AUL area are determined not to be Remediation Waste, then they will be managed under a RAM or in accordance with the Similar Soils Provisions Guidance, WSC#-13-500, as determined by a Licensed Site Professional.

iii. If groundwater dewatering activities are required within the AUL area, then the groundwater will be managed appropriately as described here:

a. If the groundwater is determined to be a Remediation Waste, then it will be managed under a Release Abatement Measure ("RAM") set forth by the MCP at 310 CMR 40.0440, as determined by a Licensed Site Professional.

b. If the groundwater removed from the AUL area is not determined to be a Remediation Waste, then other appropriate options may be used to manage the water as determined by a Licensed Site Professional.

iv. Activities that could result in exposure to or the disturbance of soils, bedrock or groundwater in the AUL area, must be conducted in accordance with the performance standards for RAMs set forth by the MCP at 310 CMR 40.0440, the Soil Management Procedures pursuant to 310 CMR 40.0030, the Similar Soils Provisions Guidance (WSC#-13-500), Construction of Buildings in Contaminated Areas (Policy WSC#-00-425) and applicable Health and Safety

procedures outlined in 310 CMR 40.0018, as determined by a Licensed Site Professional.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Portion of the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a Licensed Site Professional who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes are inconsistent with maintaining a condition of No Substantial Hazard. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of the AUL. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a Licensed Site Professional in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of No Substantial Hazard.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a Licensed Site Professional in accordance with 310 CMR 40.1080, the owner or operator of the Portion of the Property subject to this Notice at the time the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owner herby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned Licensed Site Professional, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

[Remainder of Page Intentionally Left Blank]

WITNESS the execution hereof under seal this 13th day of July, 2015.

Owner
Rosemarie Stanieich, as
Trustee of the Wilmington Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss July 13, 2015

On this 13th day of July, 2015, before me, the undersigned notary public, personally appeared Rosemarie Stanieich (name of document signer), proved to me through satisfactory evidence of identification, which were a Driver's License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust.

Notary Public:
My Commission Expires: 12-26-2019

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

WITNESS the execution hereof under seal this 14th day of July, 2015

Owner
Victoria J. Miyara, as
Trustee of the Wilmington Realty Trust

~~COMMONWEALTH OF MASSACHUSETTS~~
State of New Hampshire

Merrimack, ss July 14, 2015

On this 14th day of July, 2015 before me, the undersigned notary public, personally appeared Victoria J. Miyara (name of document signer), proved to me through satisfactory evidence of identification, which were Florida Drivers Lic to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust

Notary Public:
My Commission Expires: 8-22-17

RHONDA L. ROLLINS
STATE OF
MY
COMMISSION
EXPIRES
AUGUST 22,
2017
NEW HAMPSHIRE
NOTARY PUBLIC

WITNESS the execution hereof under seal this 13th day of July, 2015

Owner
Annette Maria Given, as
Trustee of the Wilmington Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss July 13, 2015

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Annette Maria Given (name of document signer), proved to me through satisfactory evidence of identification, which were Drivers License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as trustee for Wilmington Realty Trust

Notary Public:
My Commission Expires: 12-26-19

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

The undersigned Licensed Site Professional hereby certifies that in his Opinion this Notice of Activity and Use Limitation is consistent with maintaining a condition of No Substantial Hazard.

Date: _____

_____
Daniel W. Folan, PhD, PG, LSP, LEP
Licensed Site Professional Seal

COMMONWEALTH OF MASSACHUSETTS

_____,ss _____, 2015

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

_____
Notary Public:
My Commission Expires:

Upon recording, return to:

Ronald Dardeno, Esq.
Law Offices of Frank N. Dardeno LLP
424 Broadway
Somerville, MA 02145-2619

and

Beth M. Kramer, Esq.
Associate General Counsel -- Energy,
Environment, Safety & Health
Lockheed Martin Corporation
6801 Rockledge Drive
Bethesda, MD 20817

EXHIBIT A

DESCRIPTION OF PROPERTY SUBJECT TO THE AUL

LEGAL DESCRIPTION

LOT 4 and LOT 6

Two (2) certain parcels of land located in the Town of Wilmington, County of Middlesex, Massachusetts; said two (2) parcels of land located easterly of Fordham Road, in Wilmington, Massachusetts; and said two (2) parcels of land shown as Lot 4 and Lot 6 on "Plan of land in Wilmington, Mass." dated February 28, 1978, Dana F. Perkins & Assoc., Inc., Civil Engineers and Surveyors, Reading-Lowell, Massachusetts; which plan is filed in Middlesex North Registry District of the Land Court, as Plan No. 36899-B.

The said two (2) parcels of land are bounded and described as follows:

LOT 4 as shown on said plan.

NORTHWESTERLY:	by land now or formerly of Carl Realty, Inc., seven hundred thirty-one and 40/100 (731.40) feet;
NORTHEASTERLY:	by Lot 6 as shown on said plan, two hundred seventy-five and 02/100 (275.02) feet;
EASTERLY:	by Lot 3 as shown on said plan, ninety-two and 44/100 (92.44) feet; and
SOUTHEASTERLY:	by land now or formerly of George E. Dunn, along the Town Line dividing Wilmington and North Reading, seven hundred fifty-five and 87/100 (755.87) feet; and
SOUTHWESTERLY:	by land now or formerly of South Mass. Land Developers, Inc., two hundred thirty and 27/100 (230.27) feet.

LOT 6 as shown on said plan.

NORTHWESTERLY:	by land now or formerly of Carl Realty, Inc., two hundred ninety-seven and 00/100 (297) feet;
SOUTHEASTERLY:	by Lot 5 as shown on said plan, four hundred thirty-five and 67/100 (435.67) feet; and
NORTHEASTERLY:	by Lot 4 as shown on said plan, two hundred seventy-five and 02/100 (275.02) feet.

For title of Trustees of THE WILMINGTON REALTY TRUST to said Lot 4 and Lot 6, see Middlesex North Registry District of the Land Court, Certificate of Title No. 19842, recorded in Registration Book 102, Page 83.

LOT 7

A certain parcel of land, located in the Town of Wilmington, County of Middlesex, Commonwealth of Massachusetts, said parcel shown as Lot 7 upon a plan entitled "Plan of Land in NORTH READING & WILMINGTON, MASS.", dated September 21, 1983, DANA F. PERKINS and Assoc., Inc., Civil Engineers and Surveyors, and filed with the Engineering Division of the Land Court of Massachusetts as Plan 31713^{C} and Plan 31713^{D} bounded and described as follows:

NORTHWESTERLY	by the Northeasterly line of Fordham Road, eighty-four and 60/100 (84.60) feet;
NORTHWESTERLY	by a radius 1081.41 along the Northeasterly line of Fordham Road, six hundred fifty-nine and 84/100 (659.84) feet;
NORTHERLY	by the Northeasterly line of Fordham Road, two hundred (200) feet;
NORTHEASTERLY	by lands shown on said Plan as "Lot 30", six hundred twenty-one and 74/100 (621.74) feet;
NORTHERLY	by lands shown on said Plan as "Lot 30", ninety-two and 55/100 (92.55) feet;
NORTHEASTERLY	by lands shown on said Plan as "Lot 30", two hundred thirty and 29/100 (230.29) feet;
SOUTHWESTERLY	by the Town Line between Wilmington and North Reading, as shown on said plan, nine hundred seven and 9/100 (907.9) feet;
WESTERLY	by Lot 8, as shown on said Plan, eighty-eight and 69/100 (88.69) feet;
SOUTHEASTERLY	by Lot 8, as shown on said Plan, eighty (80) feet; and
SOUTHWESTERLY	by Lot 8 as shown on said Plan, two hundred fifty-five (255) feet.

Said Lot 7, all within the Town of Wilmington, comprises 12.63 acres, more or less, (549,973 square feet of land, more or less), as shown on said plan.

Said Lot 7 is a subdivision of certain lots, title to which is registered in the Land Registration Office, North Registry District of Middlesex County, and as follows:

- of Lot 31, as shown on Plan No. 34588-C (Certificate of Title No. 19837); Book 102-73

- ~~of Lot 35, as shown on Plan No. 34588-A (Certificate of Title No. 19841);~~ and

- of ~~Lots 4~~ 2 & 4, as shown on Plan No. 31713-A (Certificate of Title No. 19838), Book 102-75

For

LOT 10

A certain parcel of land, located in the Town of North Reading, County of Middlesex, Commonwealth of Massachusetts, said parcel shown as Lot 10 upon a plan entitled "Plan of Land in NORTH READING & WILMINGTON, MASS.", dated September 21, 1983, DANA F. PERKINS and Assoc., Inc., Civil Engineers and Surveyors, and filed with the Engineering Division of the Land Court of Massachusetts as Plan 31713C and Plan 31713D bounded and described as follows:

NORTHERLY	by the Town Line between North Reading and Wilmington, as shown on said Plan, nine hundred seven and 09/100 (907.09) feet;
NORTHWESTERLY	by land shown on said Plan as "Town of North Reading", ninety-eight and 43/100 (98.43) feet;
SOUTHEASTERLY	by Lot 9, as shown on said Plan, four hundred twenty-three and 16/100 (423.16) feet;
SOUTHWESTERLY	by Lot 9, as shown on said Plan, one hundred ten and 41/100 (110.41) feet;
SOUTHEASTERLY	by Lot 9, as shown on said Plan, three hundred ninety and 49/100 (390.49) feet; and
SOUTHWESTELRY	by Lot 9, as shown on said Plan, two hundred forty-eight and 36/100 (248.36) feet.

Said Lot 10, all within the town of North Reading, comprises 3.91 acres of land, more or less (170,477) square feet of land, more or less), as shown on said Plan.

Said Lot 10 is a subdivision of certain lots, title to which is registered in the Land Registration Office, South Registry District of Middlesex County, and as follows:

~~- of Lot 26, as shown on Plan No. 31508-A (Certificate of Title No. 142137)~~; and

Ø of Lot 6, as shown on Plan No. 31713-B (Certificate of Title No. 142138), Bk. 840-188

LOT 30

That certain parcel of land situate in Wilmington, County of Middlesex, Commonwealth of Massachusetts bounded and described as follows:

SOUTHWESTERLY	by the Northeasterly line of Fordham Road, two hundred fifty (250) feet;
NORTHWESTERLY	by land now or formerly of Carl Realty, Inc., six hundred seventy-two and 36/100 (672.36) feet;
EASTERLY	by land now or formerly of So. Mass. Land Developers, Inc., two hundred fifty-five and 07/100 (255.07) feet; and
SOUTHEASTERLY	by land now or formerly of Carl Realty, Inc., six hundred twenty-one and 74/100 (621.74) feet.

All of said boundaries are determined by the Land Court to be located as shown on subdivision plan 34588-B, drawn by Dana F. Perkins & Sons, Inc., Surveyors, dated April 9, 1968, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of title 16261, and said land is shown as Lot thirty (30) on said plan.

Being the same premises evidenced by Certificate of Title No. 19839 (Middlesex North Registry District). Bk. 702-77

LOT 33

That certain parcel of land situate in Wilmington, in the County of Middlesex Commonwealth of Massachusetts, bounded and described as follows:

WESTERLY	by the Easterly line of Fordham Rd. by several lines measuring together, eleven hundred eighty-seven and 97/100 (1,187.97) feet;
NORTHEASTERLY	by land now or formerly of Carl Realty, Inc., five hundred thirty-two and 01/100 (532.01) feet;
NORTHEASTERLY	again by land now or formerly of Max Siegel et al, two hundred ninety-seven (297) feet;
EASTERLY	by land now or formerly of So. Mass. Land Developers, Inc., five hundred ninety-nine and 28/100 (599.28) feet; and
SOUTHEASTERLY	by Lot 30, six hundred seventy-two and 36/100 (672.36) feet.

All of said boundaries are determined by the Land Court to be located as shown on subdivision plan 34588-E, drawn by Dana F. Perkins and Sons, Inc., Surveyors, dated January 27, 1969, as approved by the Court, filed in the Land Registration Office, a copy of a portion of which is filed with Certificate of Title 16620, and said land is shown as Lot thirty-three (33) on said plan.

Being the same premises evidenced by Certificate of Title No. 19840 (Middlesex North Registry District). Bk. 702-77

THE ABOVE DESCRIPTIONS ARE TAKEN FROM LAND COURT RECORD DOCUMENT NUMBER 172247 NORTH MIDDLESEX COUNTY

Raymond P. Shea
Massachusetts PLS No. 33192
Holden Engineering & Surveying, Inc.

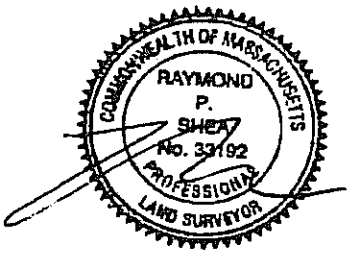


EXHIBIT A-1

LEGAL DESCRIPTION OF PORTION OF PROPERTY SUBJECT TO AUL

AUL BOUNDARY LEGAL DESCRIPTION

Beginning at a stone bound on the easterly sideline of Fordham Road at the northwest corner of lot ID 91-131 Lot 7 and the southwest corner of lot ID 91-131A Lot 30 and the point of beginning of the AUL Boundary, thence along the easterly sideline of Fordham Road North 11° 54' 17" West 285.10 feet past the northwest corner of lot ID 91-131 Lot 30 to lot ID 91-131A Lot 33, thence over lot ID 91-131A Lot 33 North 81° 02' 45" East 443.90 feet, thence over lot ID 91-131A Lot 33, North 16° 31' 27" West 142.97 feet, thence over lot ID 91-131A Lot 33, North 75° 45' 44" East 108.12 feet, thence over lot ID 91-131A Lot 33, North 01° 02' 35" West 85.99 feet, thence over lot ID 91-131A Lot 33, and lot ID 99-1 Lot 4 North 78° 32' 00" East 334.19 feet, thence over lot ID 99-1 Lot 4 South 07° 25' 18" East 335.96 feet, thence over lot ID 99-1 Lot 4 and lot ID 213-212 Lot 10 and along lot ID 213-2-11 South 12° 48' 00" East 847.35 feet, to the southeast corner of the AUL Boundary and southeast corner of lot ID 91-131 Lot 7 at land of lot ID 213-2-11 thence along lot ID 213-2-11 South 72° 23' 59" West 293.36 feet, thence along lot ID 213-2-11 South 63° 19' 49" West 26.31 feet, thence along lot ID 213-2-11 South 63° 19' 49" West 88.69 feet, thence along lot ID 213-2-11 South 25° 37' 41" East 80.00 feet, thence along lot ID 213-2-11 South 64° 22' 25" West 255.00 feet to the southwesterly corner of the AUL Boundary and southwesterly corner of lot ID 91-131 Lot 7 at the easterly sideline of Fordham Road, thence along the easterly sideline of Fordham Road North 48° 17' 49" West 84.60 feet to a point of curvature, thence along the easterly sideline of Fordham Road having a curve to the right having a Radius of 1081.41 feet and a length of 659.84 feet and a chord bearing of North 29° 23' 07" West 649.65 feet to the point of tangency, thence along the easterly sideline of Fordham Road North 11° 54' 17" West 200.00 feet to the point of beginning.

Containing 970,499 Square Feet or 22.280 Acres

Raymond P. Shea
Massachusetts PLS No. 33192
Holden Engineering & Surveying, Inc.

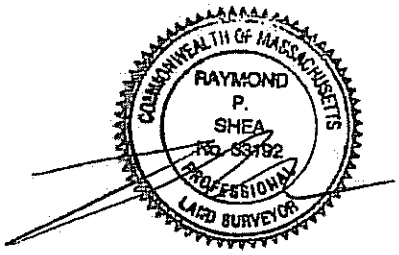
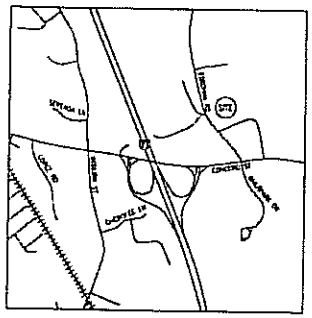


EXHIBIT A-2

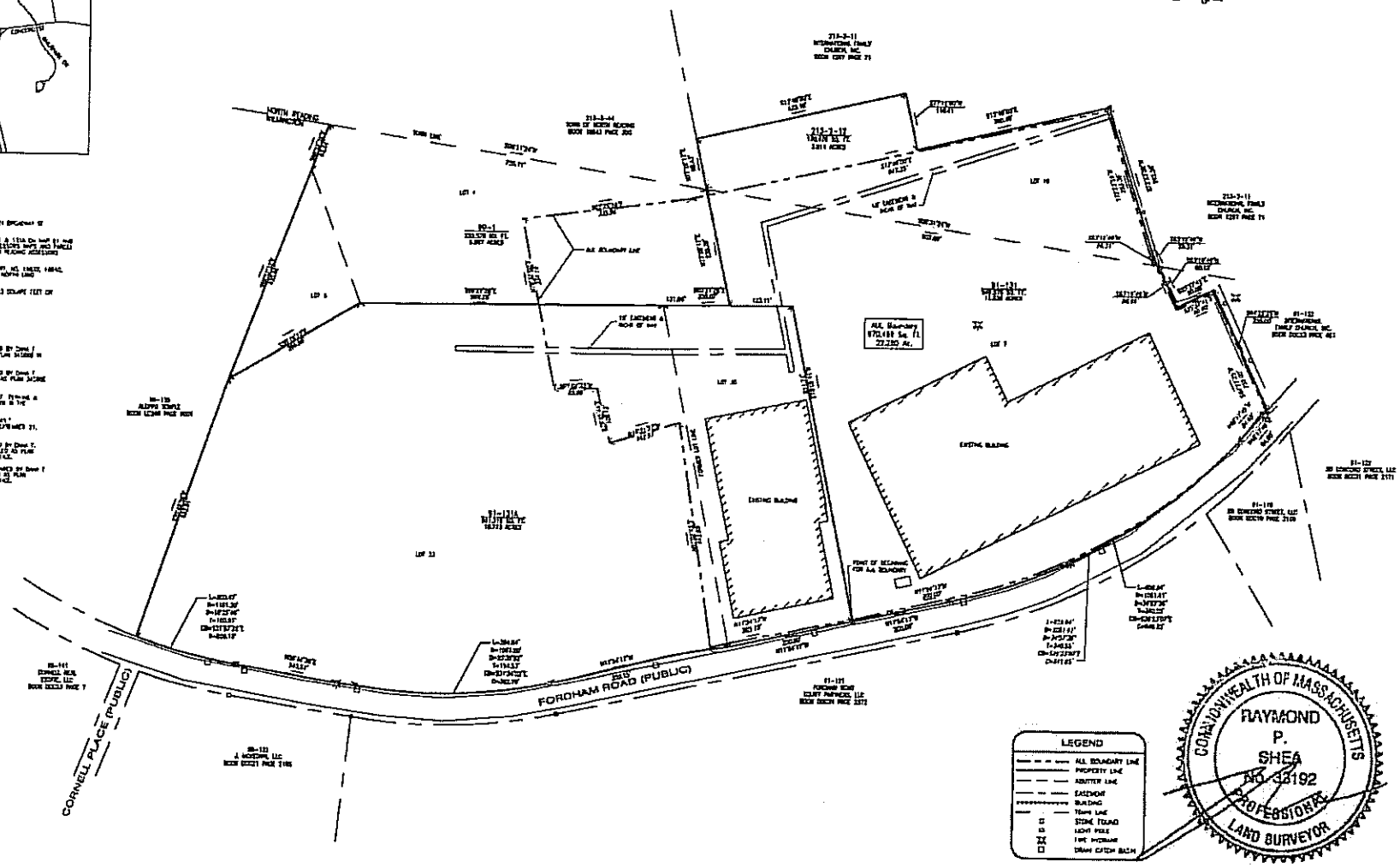
PLAN OF THE PORTION OF THE PROPERTY SPECIFICALLY SUBJECT TO THE AUL PREPARED BY REGISTERED LAND SURVEYOR



VICINITY MAP

NOTES:

PLAN REFERENCES:



HOLDEN ENGINEERING & SURVEYING, Inc.

AUL BOUNDARY PLAN
ROSEMARIE STANIEICH
NORTH READING/WILMINGTON, MA

Date	Revisions	By	Ck
5/21/15	CLIENT COMMENTS	PV	RV
5/27/15	CLIENT COMMENTS	PV	RV

Book | Page

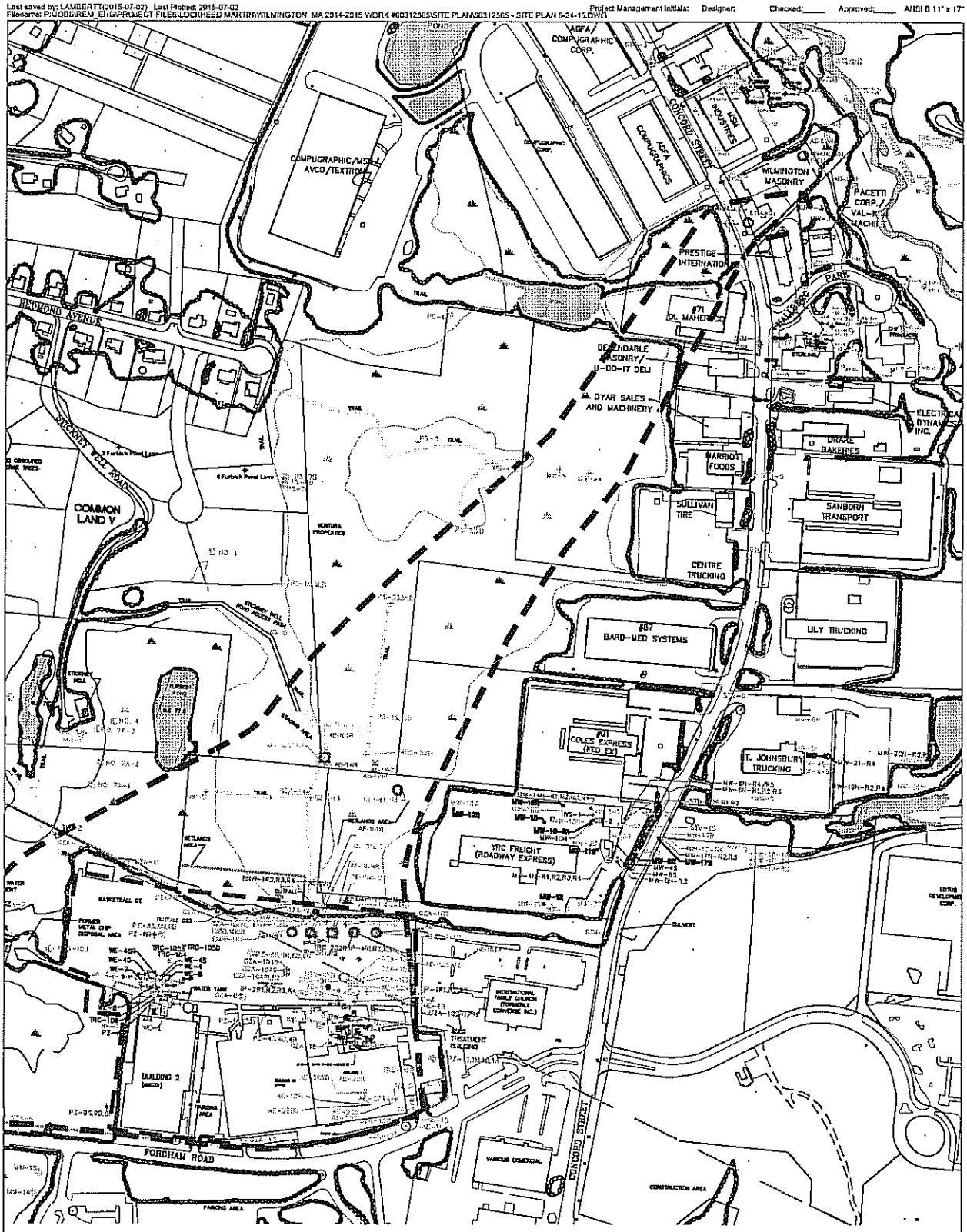
Date: 05/04/2015
Scale: 1" = 100'
Dr. By: SPG By: DJ
Job No. 1320358
Sheet no 1 of 1

© All Rights Reserved. No part of this plan may be reproduced or utilized without the express permission of Holden Engineering & Surveying, Inc.

EXHIBIT B

RELATIONSHIP OF THE PORTION OF THE PROPERTY SUBJECT TO THE AUL TO THE BOUNDARIES OF THE DISPOSAL SITE (Sketch Plan)

Last saved by: LAMBERTT(2015-07-02) Last Plotted: 2015-07-02 Project Management Initials: Designed: Checked:____ Approved:____ ANSI B 11" x 17"
Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON, MA 2014-2015 WORK #60312865\SITE PLAN\60312565 - SITE PLAN 6-24-15.DWG



WORKPLAN
#50 FORDHAM ROAD, WILMINGTON, MA
Lockheed Martin
60312865 2015-07-01

SKETCH PLAN

AECOM

EXHIBIT B

EXHIBIT C

ACTIVITY AND USE LIMITATION OPINION

EXHIBIT C - ACTIVITY AND USE LIMITATION OPINION

Purpose of the AUL

This Notice of Activity and Use Limitation ("AUL") provides notice to current and future interest holders of the property commonly known as 50 Fordham Road (including the addresses of 40 and 50 Fordham Road), Wilmington, Massachusetts (the "Property") of residual contamination remaining at the Property. It should be noted that this AUL is being used voluntarily, in accordance with Section 40.1012(3)(h) of the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, and is not required by the MCP, to confirm certain assumptions regarding future uses at the Property for purposes of Risk Characterization of human health and ecological risks at the Disposal Site. This AUL describes certain restrictions upon the use of the Property to promote the ongoing protection of human health and the environment.

This AUL will serve as a notification, concerning appropriate health and safety measures to be taken during any future construction-related or other activities that disturb the subsurface, including (but not limited to) penetration of concrete building slabs, subsurface soil or bedrock excavations and groundwater dewatering activities. It will also be protective of human health and the environment by requiring that any contaminated media generated during construction activities be managed in accordance with Massachusetts Contingency Plan (MCP) Soil Management procedures as described in 310 CMR 40.0030 and the Massachusetts Department of Environmental Protection (MassDEP) guidance documents, including Construction of Buildings in Contaminated Areas (Policy WSC#-00-425) and the Similar Soils Provisions Guidance (WSC#-13-500), as determined by a Licensed Site Professional ("LSP").

Relevant Property History

Contamination of the Stickney Well, a currently inactive public supply well for the town of North Reading, was discovered in the late 1970s. Subsequent investigations of multiple surrounding properties, including the Property (formerly owned and operated by GE Aerospace (sometimes referred to as "GE" herein)), began in the early 1980s. The Property has been subject to remedial investigations and cleanup since 1986, when the MassDEP (then the Department of Environmental Quality Engineering or DEQE) issued GE a Notice of Responsibility. In 1987, the MassDEP

classified the former GE facility as a Priority Disposal Site,[1] and in 1994 the MassDEP assigned Release Tracking Number (RTN) RTN-3-0518 to the site.[2]

The Property has had a history of manufacturing processes that have contributed to releases of fuels, oils, solvents, and metals to the environment. Analytical data have shown that six primary types of organic and inorganic compounds are associated with RTN 3-0518. These include chlorinated volatile organic compounds (CVOCs); total petroleum hydrocarbons (TPH); benzene, toluene, ethyl benzene and xylenes (BTEX) compounds; methyl tertiary butyl ether (MTBE); several metals; and light non-aqueous phase liquids (LNAPL) identified as Stoddard fuel (solvent). Known impacted areas of the Property include four separate operating units (OU), as well as the Tank F and Building 1 Areas, and are summarized in the following table and shown on the attached Figure 1. These areas are designated "Restricted Areas."

Restricted Areas	Description	Affected Media	Compounds of Concern	Regulatory Status
OU-1	Former Tank Farm source area and adjacent Eastern Parking Lot (EPL). Tank Farm had 4 underground storage tanks (USTs) removed in 1987.	Vadose zone soils, and shallow groundwater	Stoddard Solvent LNAPL in groundwater and extractable petroleum hydrocarbons (EPH)-volatile petroleum hydrocarbons (VPH) in both soils and groundwater; associated arsenic	Open
OU-2	Former Tank Farm source area and down-gradient plume on- and off-property	Groundwater	CVOCs and 1,4-dioxane	Open
OU-3	Storm water/Waste water Outfalls 001 and 002	Sediment	Metals and petroleum hydrocarbons	Closed, Partial Class A-2 Response Action Outcome (RAO) (Submitted 2004)

[1] Under 310 CMR 40.0006 (1)(b), the term "Disposal Site" is used to refer to a place or area where an uncontrolled release of oil and/or hazardous material from or at a site or vessel has come to be located.

[2] Martin Marietta acquired GE Aerospace in 1993 and subsequently Martin Marietta and Lockheed merged to form Lockheed Martin Corporation.

Restricted Areas	Description	Affected Media	Compounds of Concern	Regulatory Status
OU-4	Former Tank K source area and immediately down-gradient of plume.	Vadose zone soils and shallow groundwater	Gasoline related petroleum hydrocarbons (VOCs) from former gasoline UST. UST was removed in 1986.	Closed, Partial Class A-2 RAO (Submitted 2010)
Tank F/Building 1 Area	Former Tank F area and area below concrete slab of Building 1	Vadose zone soils and groundwater	CVOCs and petroleum hydrocarbons	Open

OU-1 Area

The Response Actions taken at the Tank Farm/EPL Petroleum Area (OU-1) have included LNAPL recovery, removal of Building 3 and the Oil House/drum storage, and excavation and off-site disposal of petroleum contaminated soil. Since 2011, LNAPL gauging has indicated the absence of measurable LNAPL in any wells that have been gauged. Soil impacts in the OU-1 appear to be consistent with current MCP Industrial/Commercial standards; however, the deeper groundwater and down-gradient plume is impacted with the CVOCs emanating from the former Tank Farm OU-2 Area (see below).

OU-2 Area

The Response Actions taken at the Tank Farm CVOC Source Area (OU-2) have been extensive and included:

- Removal in 1987 of four Underground Storage Tanks ("USTs") at the Tank Farm (Tank D, a 10,000-gal "waste fuel" tank that received waste fuel and oil, thinners, and solvents; Tank G, a 10,000-gal tank used for storing jet fuel and oil; Tank H, a 1,000- gal tank used for storing JP-4 jet fuel; and Tank I, a 500-gal tank used for storing methanol).
- Groundwater pump and treat at the Tank Farm Area between 1993 and 2002. During operation, approximately 1.9 million gallons of groundwater were treated, and approximately 31 pounds of VOCs were removed from the groundwater.
- Groundwater pump and treat in a bedrock well (TRC-202R) located down-gradient of the Tank Farm Area between 2003 and 2008. During operation, approximately 4.3 million gallons of groundwater were treated, and approximately 159 pounds of VOCs were

removed from the groundwater. Groundwater data trends did not indicate significant reductions in contaminant concentrations. The system remains shut down at the present time.

- Addition of a remedial treatment solution known as Emulsified Zero Valent Iron (EZVI) in 2005 through 2006. EZVI was injected directly into bedrock fractures and into the overburden-bedrock interface within the Tank Farm Area. The EZVI treatment was not considered successful.

- Analysis of monitored natural attenuation (MNA) geochemical and microbiological parameters in 2012 for groundwater, indicating conditions supportive of limited enhanced reductive dechlorination. A review of plume geometry and other trends indicate that the off-site CVOC impacts appear to be stable or shrinking.

- Additional groundwater investigation activities from 2012 through 2014 in the Tank Farm, the EPL and off-site in the adjacent wetland areas. This work is on-going and the data will be evaluated and presented in a Supplemental Phase II report in the future.

OU-3 and OU-4 Areas

Areas within OU-3 and OU-4 have been remediated and closed under the MCP in 2004 and 2010, respectively. Response Actions taken at OU-3 included excavation of metal-impacted sediments and wetland restoration. Response Actions taken at OU-4 have included UST removal, soil excavation, and biosparge/soil vapor extraction. Although these areas have been closed under the MCP, it should be noted that contaminated media were cleaned up to Industrial/Commercial standards and that low level impacts may remain. That is, the soil, sediments and groundwater have not been cleaned up to conditions such that these locations would be suitable for Residential, Institutional, or park/playground land use without first completing further response actions.

Tank F and Building 1 Areas

Tank F, formerly located on the southwest side of Building 1 on the former GE facility property, which received acid and caustic wastes plus other degreasing solvent and fuel wastes through floor drains from Building 1, was removed from the Property in 1990. No obvious impacts were

observed during its removal or from samples obtained from soils and other liquids associated with the tank prior to its removal. No remedial efforts have been associated with this tank area.

Investigation results suggest CVOC impacts in the southwestern area of Building 1 and/or the former Tank F area. Shallow groundwater in the overburden does not exhibit elevated CVOC concentrations; however, bedrock wells in this area exhibited much higher concentrations of both PCE and TCE. In June 1987, a small tank was removed adjacent to Tank F and field screening levels of VOCs ranging from 100 to 200 parts per million (ppm) were encountered near the bottom of the excavation. In addition, sampling of sediment from within the chase troughs in Building 1 exhibited petroleum hydrocarbon and CVOC impacts. Soils within the top foot under the metals finishing floor sumps indicated low levels of CVOCs.

Sub-slab and indoor air sampling has been conducted within Building 1 between 2009 through 2014. Elevated levels of petroleum hydrocarbons and CVOCs have been detected below the concrete slab of Building 1. Low levels of CVOCs have also been detected in indoor air samples, however, they have consistently been below MassDEP available MA Commercial/Industrial (C/I) Threshold Values and do not pose a risk to industrial/ commercial workers. It is therefore the opinion of the LSP that industrial and commercial use is a permissible use under the AUL.

In 2013 and 2014, additional soil and groundwater investigation activities have been performed underneath Building 1. This work is on-going and the data will be evaluated and presented in a Supplemental Phase II report in the future.

Nature and Extent of Contamination

The lateral extent of the MCP Disposal Site encompasses a large portion of the Property as shown on the attached **Figure 1**. Within this site boundary, residual levels of contaminants are likely present within soil or groundwater or both. Higher concentrations are expected within the Operable Units and the Tank F/Building 1 Areas than in areas outside of these designated areas. However, low level residual contamination above applicable MCP standards may be present in areas outside of these areas within the Disposal Site boundary. The AUL boundary has been set to encompass a large portion of the Property, including the Restricted Areas, but exclusive of the

northern wetland areas where future construction-related activities are considered to be highly unlikely, and exclusive of the areas beneath and between Buildings 1A and 2.

Recommendations

It is the opinion of the LSP that the restrictions on Activities and Uses of the Property and the Obligations and Conditions contained in the AUL are appropriate, based on the foregoing.

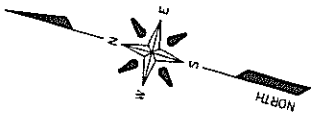
File: J:\Rem_Eng\Project Files\Lockheed Martin\Wilmington, MA 2012 #60267214\Project Implementation files\CADD\ROS_2013-04\AUL Site Plan 2.dwg Layout: _ACM-0 (3) User: barryk Plotted: Oct 13, 2014 - 2:04pm Xref's:

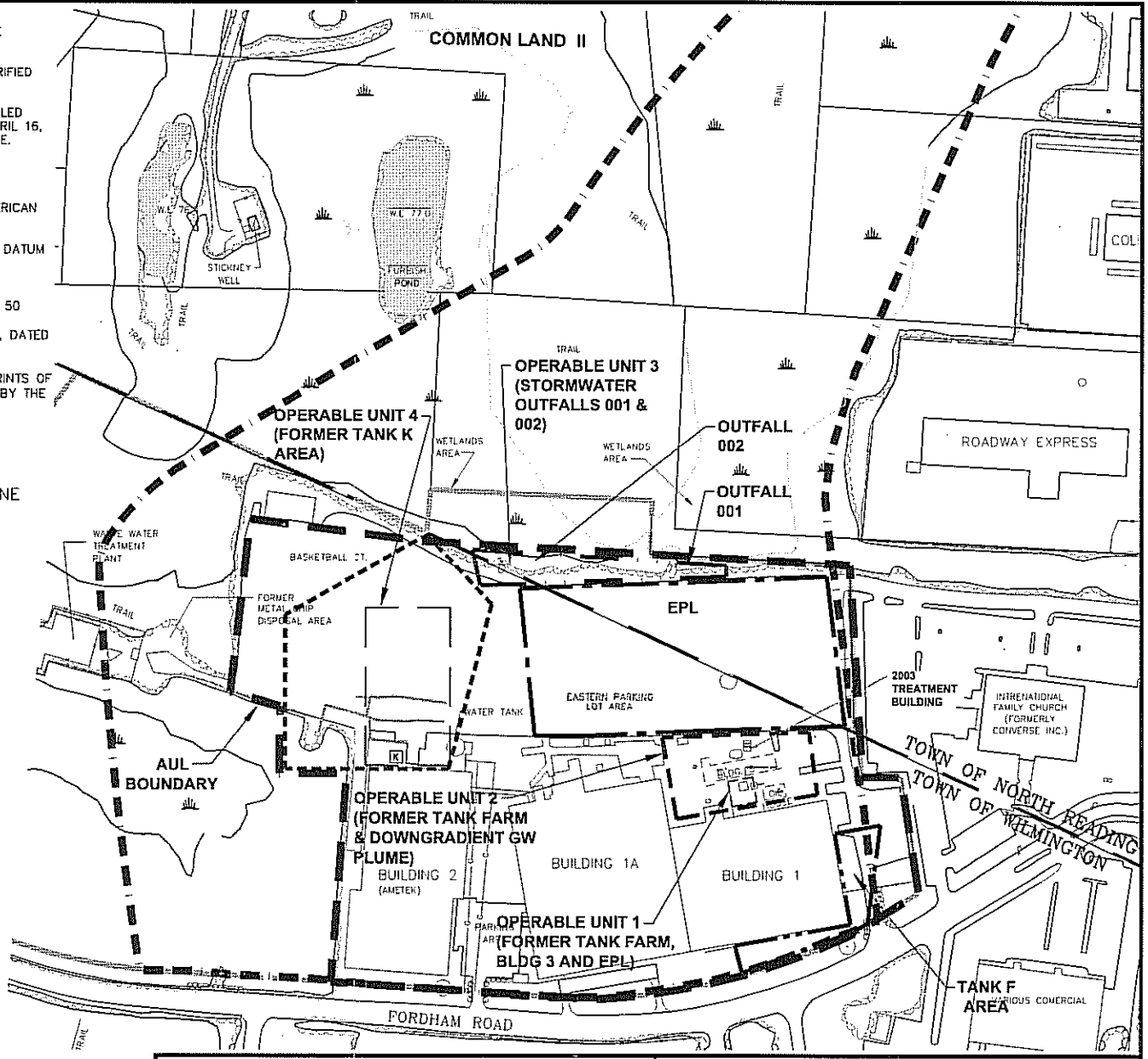
NOTES:

1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL COORDINATE SYSTEM AND THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 16, 1992 BY EAST COAST MAPPING INC., CONCORD, NEW HAMPSHIRE. MAPPING GROUND CONTROL ESTABLISHED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
3. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1929.
4. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
5. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM:
   A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 FORDHAM ROAD PROPERTY, WILMINGTON/NORTH READING, MASSACHUSETTS, BY GOLDBERG – ZOINO & ASSOCIATES, INC., DATED APRIL 1990;
   B) MODIFIED PER NORTH READING GIS DATA, JUNE 2002; AND
   C) DIGITIZED BY MASSGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 125:000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.

LEGEND

- APPROXIMATE PROPERTY LINE
- APPROXIMATE TOWN LINE
- MCP SITE BOUNDARY
- AUL BOUNDARY





0' 150' 300' 600'

APPROXIMATE SCALE IN FEET
1"=300'

AECOM

FORMER GE FACILITY 50 FORDHAM ROAD WILMINGTON, MA			AUL SITE PLAN
DATE: 10/14	DRWN: K.P.B.		FIGURE 1

EXHIBIT D

TRUSTEE CERTIFICATE

WILMINGTON REALTY TRUST
TRUSTEES' CERTIFICATE

The undersigned, Rosemarie Stanieich, Victoria J. Maiyara, and Annette Maria Given, as Trustees of Wilmington Realty Trust under Declaration of Trust dated September 7, 1973, registered in the Middlesex North Registry District of the Land Court as Document No. 63541 and noted on Certificate of Title No. 19837 and registered further in the Middlesex South Registry of the Land Court as Document No. 515729 and noted on Certificate of Title No. 142138 (the "Trust"), hereby certify as follows:

1. That they are all of the current Trustees of the Trust;

2. That the Trust is in full force and effect and has not been revoked, terminated or rescinded in whole or in part;

3. That the undersigned Trustees have been duly authorized and specifically directed by all of the beneficiaries of the Trust to execute, acknowledge and deliver that certain Activity and Use Limitation with respect to the property owned by the Trust and having an address of 50 Fordham Road in Wilmington, Massachusetts, and:

4. No beneficiary of the Trust is a minor, a Massachusetts corporation selling all or substantially of all its Massachusetts assets, or a personal representative of an estate subject to an estate tax lien, deceased, or under any other legal incapacity.

EXECUTED as a sealed instrument this 13th day of July, 2015

WILMINGTON REALTY TRUST

Rosemarie Stanieich, as Trustee and not individually

Victoria J. Maiyara, as Trustee and not individually

Annette Maria Given, as Trustee and not individually

THE COMMONWEALTH OF MASSACHUSETTS

County of Middlesex, ss.

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Rosemarie Stanieich, proved to me through satisfactory evidence of identification, which was [✓] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

Notary Public
Name: Alexandra Danilov
My Commission Expires: 12-26-19

Rhonda L. Rollins
7-14-15

RHONDA L. ROLLINS NOTARY PUBLIC STATE OF NEW HAMPSHIRE - MY COMMISSION EXPIRES AUGUST 22, 2017

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

~~THE COMMONWEALTH OF MASSACHUSETTS~~
THE STATE OF NEW HAMPSHIRE

Merrimack
County of ~~Middlesex~~, ss.

On this 14th day of July, 2015 before me, the undersigned notary public, personally appeared Victoria J. Maiyara proved to me through satisfactory evidence of identification, which was [x] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

RHONDA L. ROLLINS STATE OF - MY - COMMISSION EXPIRES AUGUST 22, 2017 NEW HAMPSHIRE NOTARY PUBLIC

Rhonda L. Rollins
Notary Public
Name: Rhonda L. Rollins
My Commission Expires: 8/22/17

THE COMMONWEALTH OF MASSACHUSETTS

County of Middlesex, ss.

On this 13th day of July, 2015 before me, the undersigned notary public, personally appeared Annette Maria Given proved to me through satisfactory evidence of identification, which was [X] photographic identification with signature issued by a federal or state government agency, [ ] oath or affirmation of a credible witness, or [ ] personal knowledge of the undersigned, to be the person whose name is signed on the preceding document as Trustee of Wilmington Realty Trust as aforesaid and acknowledged to me that she signed it voluntarily, for its stated purpose.

Alexandra Danilov
Notary Public
Name: Alexandra Danilov
My Commission Expires:
12.26.19

ALEXANDRA DANILOV
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 26, 2019

APPENDIX G
PUBLIC NOTIFICATION DOCUMENTATION

DOCUMENT AVAILABILITY LETTER

AECOM
250 Apollo Drive
Chelmsford, MA 01824
aecom.com

Reference
60688023

May 4, 2023

Subject: **NOTIFICATION OF DOCUMENT AVAILABILITY**
Post-Temporary Solution Status Report – May 2023
Former General Electric (GE) Facility, 50 Fordham Road, Wilmington, MA, RTN 3-0000518

Dear Community Members:

Pursuant to the Massachusetts Contingency Plan (MCP) 310 CMR 40.1405 and the Public Involvement Plan (PIP) for the site dated November 17, 2000, AECOM has prepared this letter on behalf of Lockheed Martin Corporation ("Lockheed Martin") to inform you that the *Post-temporary Solution Status Report No. 12* was submitted to the Massachusetts Department of Environmental Protection (MassDEP) on May 2, 2022. This report was submitted to the MassDEP for Release Tracking Number (RTN) 3-0000518, located at the former General Electric Facility, 50 Fordham Road, Wilmington, Massachusetts (the site).

Should you wish to view copies of the semi-annual Post-temporary Solution Status Reports (May and November each year) and five-year Periodic Reviews (2022, 2027, 2032, etc.) electronic copies are available for viewing at the Reference Desk at the designated information repository in the Flint Memorial (North Reading) Library, 147 Park Street, North Reading, MA (telephone 978-664-4942). Library hours: Monday, Tuesday and Thursday 10 AM to 8 PM; Wednesday, Friday, and Saturday 10 AM to 5 PM; closed on Sundays.

The disposal site reports and historical files can also be viewed online two ways:

- Visit the Lockheed Martin site-specific website: www.lockheedmartin.com/wilmington
- Visit the MassDEP website at https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=3-0000518
  - the *Electronically Submitted Files* tab has documents from 2007 to present
  - the *Scanned Documents* tab has documents from 1982 to 2016

If you have questions or require additional information related to these submittals, please contact the undersigned at (978) 905-2100.

Yours sincerely,

Scott Olson - AECOM

cc: Paul Calligan, Lockheed Martin Corporation
PIP Mailing List

SAMPLING NOTIFICATIONS

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: HILCO Redevelopment Partners

2. Street Address: 99 Summer Street, Suite 1110

City/Town: Boston, MA Zip Code: 02110

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 40 Fordham Rd (site formerly #50, but is now #40 Fordham Rd)

City/Town: Wilmington, MA Zip Code: 01887

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be conducted September 26 to mid-October 2022.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following groundwater monitoring activities will be conducted onsite between the dates of September 26 and mid-October 2021:

- Groundwater sampling for laboratory analyses from numerous overburden and bedrock monitoring wells located at 40 and 50 Fordham Rd at:
    - Up to 11 monitoring locations within Building 1, and
    - Approximately 40-60 monitoring wells outside of the Building at various locations on the property. Approximately 30 of these wells are located within the parking lot.
- Although unlikely, surface water samples may also be collected for laboratory analyses from select locations in the wetland.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ken Polk - International Family Church

2. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 26 - mid October, 2022

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 26 and mid October 2022:

- Groundwater sampling for laboratory analyses from up to five monitoring wells (MW-5, MW-7, AE-109D, AE-109R, and AE-110R) which are located in the parking lot and wooded portions of the property at 99 Concord Street in N. Reading, MA. The wells will be accessed from the parking lot of the former GE property at 40 Fordham Rd which abuts the 99 Concord Street property.

- Surface water samples may also be collected for laboratory analyses from the wooded portions of the property during this time.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ruben Byerly

2. Street Address: 10990 Roe Avenue

City/Town: Overland Park, KS Zip Code: 66211-1213

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 95 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 26 to mid-October 2022.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 26 and mid-October 2022:

- Groundwater sampling for laboratory analyses from up to four monitoring wells (AE-106 S/M/D/R) located in the woods/wetlands and one well (AE-111R) in the parking lot of the property at 95 Concord Street in North Reading, MA.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Patrick St. Pierre - Howland Development Corp.

2. Street Address: 155 West Street

City/Town: Wilmington, MA Zip Code: 01867

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 87 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 26 - mid October 2022

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

This written notice satisfies the notification requirement from the access agreement in place between Howland Development Corporation and Lockheed Martin Corporation.

The following activities will be conducted onsite between the approximate dates of September 26 and mid October 2022:

- Groundwater sample collection for laboratory analyses from up to two monitoring wells, AE-112D, AE-112R.
- The wells are located in the paved parking area around the building. AECOM will visit the wells periodically during the sampling event with tentative dates of September 26 – 27 for water level measurements, plus 1-2 days in September for groundwater sampling.
- Access is only needed to the localized area at each well. Each visit will include 1-2 people with 1-2 vehicles for durations of 1-8 hours. At no time will we disrupt traffic flow at the property or impede occupants use of the property.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Roland Gagne - Wilmington Masonry

2. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed September 26 to mid-October 2022.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 26 and mid-October 2022:

- Groundwater sampling for laboratory analyses from one monitoring well (STM-8R1) located in the parking lot of the property at 62 Concord Street in North Reading, MA.
- Water levels will be obtained at locations along the Ipswich River through the back of the property at 62 Concord Street.
- Although unlikely, surface water samples may also be collected for laboratory analyses from along the Ipswich River during this time.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Mark Clark - Town of North Reading

2. Street Address: 235 North Street

City/Town: N. Reading Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 71 Concord Street & 0 Furbish Pond Lane

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☑ commerical ☑ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached supplemental page for details of environmental work to be completed ~ September 26 - mid October 2022

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Notice of Environmental Sampling – BWSC 123

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

This Notice is Related to Release Tracking Number 03-0518

(Supplemental Page to BWSC-123 Form)

D.4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

The following activities will be conducted onsite between the approximate dates of September 26 and mid-October 2022:

- Groundwater sample collection for laboratory analyses from up to seven monitoring wells, PS-8 S/M/D and STM-8 S/M/D/R.

- The STM-8 S/M/D/R wells are located along the edge of Concord Rd in North Reading near the DL Maher property. The PS-8 S/M/D wells are located along the Stickney Well road. AECOM will visit the wells periodically during the sampling event with tentative dates of September 26 - 27 for water level measurements, plus 1-2 days in September and October for groundwater sampling.

- Access is only needed to the localized area at each well. At no time will we disrupt traffic flow along Concord Street.

GROUNDWATER DATA SUBMITTALS

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

January 11, 2023 ***** **Via Electronic Mail** *****

Mr. Eric Darci
Vice President
Hilco Redevelopment Partners (HRP)
101 Seaport Boulevard, Suite 650
Boston, MA 02210

Subject: September - October 2022 Groundwater Analytical Results
50 Fordham Road, Wilmington, MA

Dear Mr. Darci,

In September – October 2022, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from 64 monitoring well [screen intervals] located on your property at 40-50 Fordham Road in Wilmington and North Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September – October 2022 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September – October 2022 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Julianna Connolly, Hilco Redevelopment Partners
Paul Calligan, Lockheed Martin Corp.

Attachments

Groundwater Data Submittal

ATTACHMENT A

BWSC-123 Notification Form

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Eric Darci - Hilco Redevelopment Partners

2. Street Address: 99 Summer Street, Suite 1110

City/Town: Boston, MA Zip Code: 02110

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☒ 4 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 40-50 Fordham Road

City/Town: Wilmington / N.Reading, MA Zip Code: 01887 / 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☒ 4 Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☒ 4 commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

See attached letter and data sheets for groundwater data from 64 wells/screens sampled in September - October 2022.

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

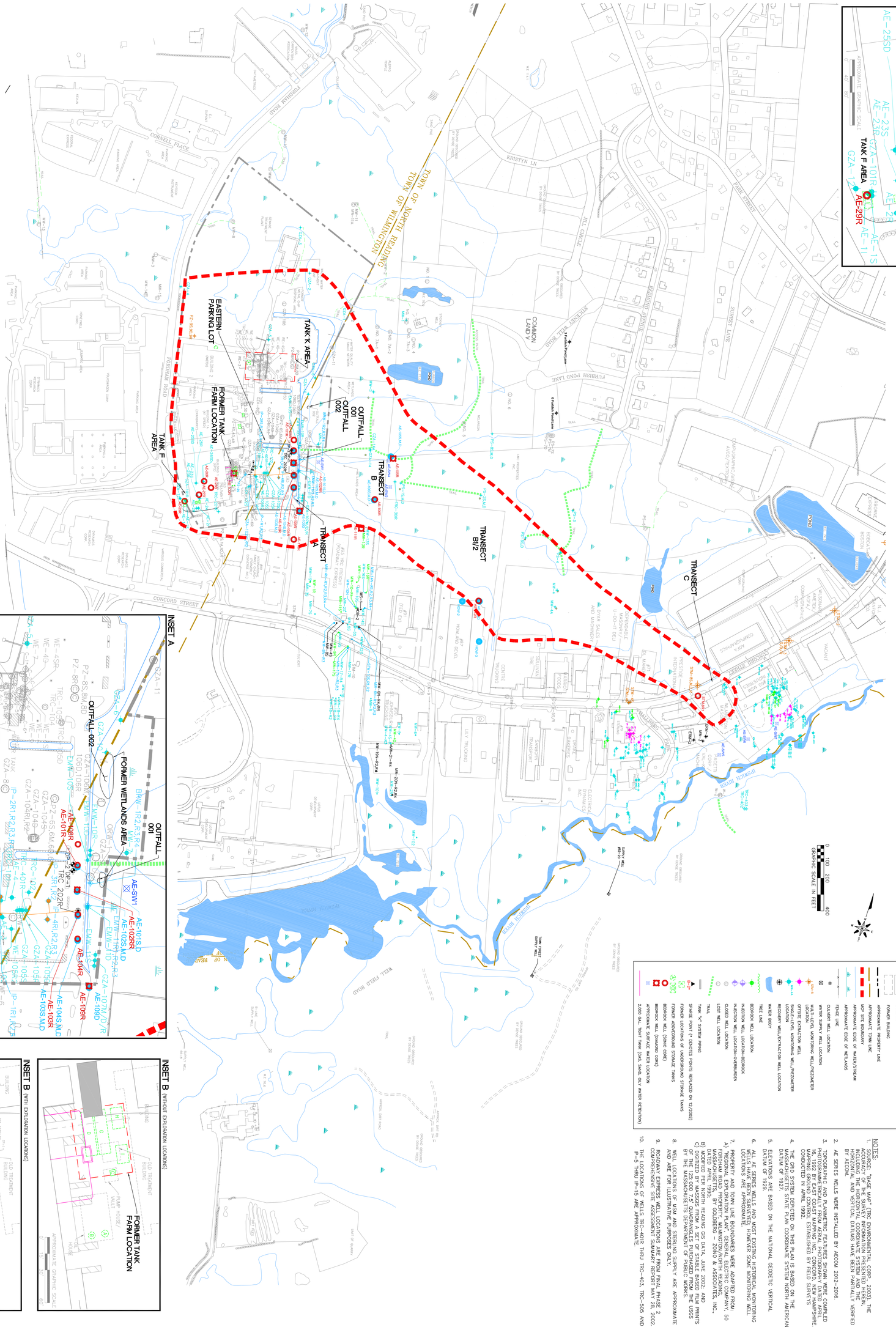
ATTACHMENT B

Groundwater Sampling Location Map

and Analytical Results Summary Tables

Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON 2017-2022\900-CAD-GIS\910 CAD\09_GW MEMO 2018\FIG 1_MONITORING WELL LOCATIONS.DWG Last saved by: BARRYK Last Plotted: 2018-10-16

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ARCH C 18" x 24"
K.P.B. S.O. A.T.



NOTES:
1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. AE SERIES WELLS WERE INSTALLED BY AECOM 2012-2016.
3. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 1990 BY MASSACHUSETTS GEODETIC, INC. FOLLOWED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
4. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1927.
5. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
6. WELLS AND MW-1 THROUGH MW-21 ARE EXISTING GROUNDWATER MONITORING WELLS. ALL OTHER WELLS WERE SURVEYED BY AECOM IN 2012. WELL LOCATIONS ARE APPROXIMATE.
7. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM: A) "REGIONAL EXPLORATION PLANT, GENERAL ELECTRIC COMPANY, 50 FORDHAM ROAD, WILMINGTON, MASSACHUSETTS" BY GOLDBERG, ZOINO & ASSOCIATES, INC., DATED APRIL 1990; B) "PLAN OF NORTH READING, DATED JUNE 2002, AND C) DIGITIZED BY MASGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 1:25,000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.
8. WELL LOCATIONS OF MSM AND STERLING SUPPLY ARE APPROXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.
9. ROADWAY EXPRESS WELL LOCATIONS ARE FROM FINAL PHASE 2 COMPREHENSIVE SITE ASSESSMENT SUMMARY REPORT MAY 28, 2002.
10. THE LOCATIONS OF WELLS TRC-401R THRU TRC-403, TRC-505 AND IP-5 THRU IP-15 ARE APPROXIMATE.

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

MONITORING WELL LOCATIONS

AECOM

60552044 Date: 2018-10-18

FIGURE: 1

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

						Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
						Location ID	AE23R	AE23S	AE24	AE24	AE26R-1	AE26R-4	AE26R-5	AE26S	AE27R	AE28R-1	AE28R-2	AE28R-3	AE28R-4
						Sample ID	22A-AE23R-100522-1	22A-AE23S-100522-1	22A-AE24-100522-1	22A-AE24-100522-2	22A-AE26R1-100522-1	22A-AE26R4-100522-1	22A-AE26R5-100522-1	22A-AE26S-100522-1	22A-AE27R-100522-1	22A-AE28R1-100522-1	22A-AE28R2-100522-1	22A-AE28R3-100522-1	22A-AE28R4-100522-1
						Sample Date	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022
						Sample Type	N	N	N	FD	N	N	N	N	N	N	N	N	N
						Depth Interval	44.75 - 54.75 ft	10 - 20 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	50 - 56 ft	104 - 114 ft	123 - 132 ft	25 - 30 ft	50 - 60 ft	45 - 51 ft	75 - 85 ft	81 - 88 ft	132 - 142 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):														
CSIA (‰ VPDB)																			
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**-28.3**	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**-24.2**	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**-26.6**	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloride	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**155000**	NS	NS	NS	**967000**	NS	**39000**	NS	NS
Nitrate	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	50 U	NS	NS	NS	50 U	NS	50 U	NS	NS
Nitrite as N	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	20 U	NS	NS	NS	100 U	NS	10 U	NS	NS
Sulfate	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**16400**	NS	NS	NS	**21100**	NS	**19400**	NS	NS
Sulfide	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**170**	NS	NS	NS	**700**	NS	**270**	NS	NS
Total Organic Carbon	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**1100**	NS	NS	NS	**6500**	NS	**1200**	NS	NS
Dissolved Gases (ug/l)																			
Acetylene	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	0.13 U	NS	NS	NS	0.13 U	NS	**0.46 J**	NS	NS
Ethane	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**0.88 J-**	NS	NS	NS	**1.7 J-**	NS	**5.1 J-**	NS	NS
Ethene	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**12 J-**	NS	NS	NS	**10 J-**	NS	**10 J-**	NS	NS
Hydrogen	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**16**	NS	NS
Methane	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**170 J**	NS	NS	NS	**150 J**	NS	**120 J**	NS	NS
Propane	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	0.29 U	NS	NS	NS	**0.31 J+**	NS	**0.48 J+**	NS	NS
EPH with PAHs (ug/l)																			
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VPH (ug/l)																			
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)																			
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	**6**	NS	NS	4 U	NS	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**118**	NS	NS	NS	**70**	NS	**1040**	NS	NS
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**728**	NS	NS	NS	**1070**	NS	**2110**	NS	NS
Total Metals (ug/l)																			
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	**9**	NS	NS	4 U	NS	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**227**	NS	NS	NS	**69**	NS	**1080**	NS	NS
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	**748**	NS	NS	NS	**1010**	NS	**2220**	NS	NS
SVOCs (ug/l)																			
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	**9.6 J**	NS	0.20 U	0.20 U	**16**	NS	**21**	NS	NS	NS	**35**	NS	NS	
VOCs (ug/l)																			
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	2.0 U	25 U	25 U	13 U	13 U	
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	**1100 J+**	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	130 U	0.50 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.50 U	1.0 U	25 U	25 U	13 U	13 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	2.0 U	25 U	25 U	13 U	13 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	**890**	1.0 U	5.0 U	5.0 U	**26**	**24**	**39**	1.0 U	2.0 U	**160**	**190**	**58**	**84**	
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	**530**	1.0 U	5.0 U	5.0 U	5.0 U	**5.1**	**10**	1.0 U	2.0 U	**65**	**65**	**16 J+**	**24**	
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	7.0 U	1.0 U	2.0 U	25 U	25 U	13 U	13 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	130 U	0.25 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	0.25 U	0.50 U	25 U	25 U	13 U	13 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	70 U	70 U	50 U	50 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	56 U	56 U	50 U	50 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	250 UJ	0.50 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	10 UJ	0.50 UJ	1.0 UJ	50 U	50 U	25 UJ	25 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	130 U	0.25 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	0.25 U	0.50 U	25 U	25 U	13 U	13 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	130 U	0.60 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	5.0 U	0.60 U	1.2 U	25 U	25 U	13 U	13 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	130 U	1.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	5.0 U	1.0 U	2.0 U	25 U	25 U	13 U	13 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	60 U	60 U	50 U	50 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	370 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	2.0 U	25 U	25 U	13 U	13 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	20000 U	40 U	200 U	200 U	200 U	200 U	800 U	40 U	80 U	4000 U	4000 U	2000 U	2000 U	
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	1000 UJ	5.0 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	40 UJ	5.0 UJ	10 UJ	200 U	200 U	100 UJ	100 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE	240 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
2-Hexanone	ug/l	NE	NE	NE	NE	1000 UJ	5.0 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	40 UJ	5.0 UJ	10 UJ	200 U	200 U	100 UJ	100 UJ
2-Phenylbutane	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	250 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

						Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F
						Location ID	AE23R	AE23S	AE24	AE24	AE26R-1	AE26R-4	AE26R-5	AE26S	AE27R	AE28R-1	AE28R-2	AE28R-3	AE28R-4
						Sample ID	22A-AE23R-100522-1	22A-AE23S-100522-1	22A-AE24-100522-1	22A-AE24-100522-2	22A-AE26R1-100522-1	22A-AE26R4-100522-1	22A-AE26R5-100522-1	22A-AE26S-100522-1	22A-AE27R-100522-1	22A-AE28R1-100522-1	22A-AE28R2-100522-1	22A-AE28R3-100522-1	22A-AE28R4-100522-1
						Sample Date	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022
						Sample Type	N	N	N	FD	N	N	N	N	N	N	N	N	N
						Depth Interval	44.75 - 54.75 ft	10 - 20 ft	7.25 - 17.25 ft	7.25 - 17.25 ft	50 - 56 ft	104 - 114 ft	123 - 132 ft	25 - 30 ft	50 - 60 ft	45 - 51 ft	75 - 85 ft	81 - 88 ft	132 - 142 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):														
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	1000 UJ	5.0 UJ	25 UJ	25 UJ	25 UJ	25 UJ	100 UJ	5.0 UJ	10 UJ	350 U	350 U	250 UJ	250 UJ
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	6300 UJ	25 UJ	130 UJ	130 UJ	130 UJ	130 UJ	500 UJ	25 UJ	50 UJ	2500 U	2500 U	1300 UJ	1300 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	130 U	0.70 U	3.5 U	3.5 U	3.5 U	3.5 U	5.0 U	0.70 U	1.4 U	25 U	25 U	13 U	13 U
Bromobenzene	ug/l	NE	NE	NE	NE	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	62 U	62 U	50 U	50 U
Bromochloromethane	ug/l	NE	NE	NE	NE	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	83 U	83 U	50 U	50 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	130 U	0.50 U	2.5 U	2.5 U	2.5 U	2.5 U	5.0 U	0.50 U	1.0 U	25 U	25 U	13 U	13 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	130 UJ	1.0 UJ	4.0 UJ	4.0 UJ	4.0 UJ	4.0 UJ	5.0 UJ	1.0 UJ	2.0 UJ	25 U	25 U	13 UJ	13 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	130 UJ	1.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	7.0 UJ	1.0 UJ	2.0 UJ	25 UJ	25 UJ	13 U	13 U
Carbon Disulfide	ug/l	NE	NE	NE	NE	810 U	5.0 U	25 U	25 U	25 U	25 U	100 U	5.0 U	10 U	500 U	500 U	250 U	250 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	130 U	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	2.0 U	25 U	25 U	13 U	13 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
Chloroethane	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	50 U	50 U	50 U	50 U
chloromethane	ug/l	NE	NE	NE	NE	190 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	**140**	**9.6**	**11**	**13**	1.3 U	1.3 U	**600**	**320**	**27**	**120**	**4900**	**1700**	**440**	**790**
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	130 U	0.40 U	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	0.40 U	0.50 U	25 U	25 U	13 U	13 U	13 U
Cymene	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	130 U	0.50 U	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	5.0 U	0.50 UJ	1.0 UJ	25 U	25 U	13 UJ	13 UJ	13 UJ
Dibromomethane	ug/l	NE	NE	NE	NE	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	8.3 U	1.0 U	2.0 U	25 U	25 U	13 U	13 U	13 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	200 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Diethyl Ether	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	**1.1**	2.0 U	100 U	100 U	50 U	50 U	50 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	130 U	0.40 U	1.3 U	1.3 U	1.3 U	1.3 U	5.0 U	0.40 U	0.60 U	25 U	25 U	13 U	13 U	13 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	450 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	70 U	70 U	50 U	50 U	50 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	250 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	1.0 U	2.0 U	50 U	50 U	25 U	25 U	25 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	250 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	130 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U	50 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	**39000**	**94**	**710**	**650**	**410**	**360**	**1700**	**20**	**130**	**8600**	**26000**	**4400**	**6200**
Tetrahydrofuran	ug/l	NE	NE	NE	NE	1300 UJ	2.5 UJ	13 UJ	13 UJ	13 UJ	13 UJ	50 UJ	2.5 UJ	5.0 UJ	250 U	250 U	130 UJ	130 UJ
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	**3300**	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	130 U	1.0 U	5.0 U	5.0 U	**9.5**	**39**	20 U	**1.0**	2.0 U	**760**	**260**	**110**	**130**
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	130 U	0.40 U	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ	5.0 U	0.40 UJ	0.50 UJ	25 U	25 U	13 UJ	13 UJ
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**140000**	**16**	5.0 U	5.0 U	**730**	**490**	**2000**	**11**	**240**	**18000**	**26000**	**4100**	**8700**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	500 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	20 U	1.0 U	2.0 U	100 U	100 U	50 U	50 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	130 U	1.0 U	2.0 U	2.0 U	**75**	**140**	**26**	1.0 U	2.0 U	**930**	**260**	**550 J+**	**360**
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	500 U	1 U	5 U	5 U	5 U	5 U	20 U	1 U	2 U	100 U	100 U	50 U	50 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	EPL	EPL	EPL	EPL	EPL	EPL
						Location ID	AE29R-1	AE29R-3	AE29R-5	AE29R-6	AE2R	GZA-101R	TRC-201R	AE03	AE04	GZA-06	GZA-10	GZA-102S	GZA-102S
						Sample ID	22A-AE29R1-100422-1	22AAE29R3-100422-1	22A-AE29R5-100422-1	22A-AE29R6-100422-1	22A-AE2R-100322-1	22A-GZA101R-100422-1	22A-TRC201R-100622-1	22A-AE03-093022-1	22A-AE04-093022-1	22A-GZA6-100622-1	22A-GZA10-100422-1	22A-GZA102S-100322-1	22A-GZA102S-100322-2
						Sample Date	10/4/2022	10/4/2022	10/4/2022	10/4/2022	10/3/2022	10/4/2022	10/6/2022	9/30/2022	9/30/2022	10/6/2022	10/4/2022	10/3/2022	10/3/2022
						Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	FD
						Depth Interval	37 - 44 ft	70 - 76 ft	113 - 119 ft	140 - 146 ft	22 - 36 ft	36.5 - 38 ft	38 - 161.3 ft	3 - 13 ft	3 - 13 ft	8 - 18 ft	13 - 38 ft	1.7 - 10.7 ft	1.7 - 10.7 ft
CSIA (‰ VPDB)																			
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**-25.8**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**-28.1**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloride	ug/l	NE	NE	NE	NE	NS	NS	NS	**443000**	NS	NS	NS	NS	NS	NS	NS	NS	**212000**	**218000**
Nitrate	ug/l	NE	NE	NE	NE	NS	NS	NS	250 U	NS	NS	NS	NS	NS	NS	NS	NS	**270**	**280**
Nitrite as N	ug/l	NE	NE	NE	NE	NS	NS	NS	50 U	NS	NS	NS	NS	NS	NS	NS	NS	20 U	20 U
Sulfate	ug/l	NE	NE	NE	NE	NS	NS	NS	**35200**	NS	NS	NS	NS	NS	NS	NS	NS	**11800**	**11600**
Sulfide	ug/l	NE	NE	NE	NE	NS	NS	NS	**90**	NS	NS	NS	NS	NS	NS	NS	NS	50 U	50 U
Total Organic Carbon	ug/l	NE	NE	NE	NE	NS	NS	NS	**1200**	NS	NS	NS	NS	NS	NS	NS	NS	**6800**	**6800**
Dissolved Gases (ug/l)																			
Acetylene	ug/l	NE	NE	NE	NE	NS	NS	NS	0.13 U	NS	NS	NS	NS	NS	NS	NS	NS	0.13 U	0.13 U
Ethane	ug/l	NE	NE	NE	NE	NS	NS	NS	**0.65 J-**	NS	NS	NS	NS	NS	NS	NS	NS	0.17 UJ	0.17 UJ
Ethene	ug/l	NE	NE	NE	NE	NS	NS	NS	**1.5 J-**	NS	NS	NS	NS	NS	NS	NS	NS	0.24 UJ	0.24 UJ
Hydrogen	ug/l	NE	NE	NE	NE	NS	NS	NS	**9.2**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/l	NE	NE	NE	NE	NS	NS	NS	**610 J**	NS	NS	NS	NS	NS	NS	NS	NS	**61 J**	**70 J**
Propane	ug/l	NE	NE	NE	NE	NS	NS	NS	0.29 U	NS	NS	NS	NS	NS	NS	NS	NS	0.29 U	0.29 U
EPH with PAHs (ug/l)																			
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	**3.0**	0.47 U	NS	NS	0.47 U	0.48 U
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	0.47 U	0.47 U	NS	NS	0.47 U	0.48 U
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	0.09 U	0.09 U	NS	NS	0.09 U	0.10 U
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	0.09 U	0.09 U	NS	NS	0.09 U	0.09 U
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS	NS	NS	NS	NS	NS	0.09 U	0.09 U	NS	NS	0.09 U	0.10 U
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS	NS	NS	NS	NS	NS	0.19 U	0.19 U	NS	NS	0.19 U	0.19 U
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS	NS	NS	NS	NS	NS	0.09 U	0.09 U	NS	NS	0.09 U	0.10 U
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS	NS	NS	NS	NS	NS	0.02 U	0.02 U	NS	NS	0.02 U	0.02 U
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	0.09 U	0.09 U	NS	NS	0.09 U	0.10 U
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	190 U	190 U	NS	NS	190 U	190 U
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	190 U	190 U	NS	NS	190 U	190 U
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	190 U	190 U	NS	NS	190 U	190 U
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS	NS	NS	NS	NS	NS	0.05 U	0.05 U	NS	NS	0.05 U	0.05 U
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	0.02 U	0.02 U	NS	NS	0.02 U	0.02 U
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS	NS	NS	NS	NS	NS	0.47 U	0.47 U	NS	NS	0.47 U	0.48 U
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	0.09 U	0.09 U	NS	NS	0.09 U	0.10 U
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	0.09 U	0.09 U	NS	NS	0.09 U	0.10 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	**3.5**	0.47 U	NS	NS	0.47 U	0.48 U
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	0.47 U	0.47 U	NS	NS	0.47 U	0.48 U
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	0.07 U	0.07 U	NS	NS	0.07 U	0.07 U
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	190 U	190 U	NS	NS	190 U	190 U
VPH (ug/l)																			
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	1.0 U	1.0 U	NS	NS	1.0 U	1.0 U
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	NS	NS	100 U	100 U
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	**200**	100 U	NS	NS	100 U	100 U
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	**450**	100 U	NS	NS	100 U	100 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	1.0 U	1.0 U	NS	NS	1.0 U	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	1.0 U	1.0 U	NS	NS	1.0 U	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	NS	NS	2.0 U	2.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	**5.8**	5.0 U	NS	NS	5.0 U	5.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	**2.1**	1.0 U	NS	NS	1.0 U	1.0 U
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	1.0 U	1.0 U	NS	NS	1.0 U	1.0 U
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	**2.1**	2 U	NS	NS	2 U	2 U
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	100 U	100 U	NS	NS	100 U	100 U
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	**650**	100 U	NS	NS	100 U	100 U
Dissolved Metals (ug/l)																			
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	NS	**5**	NS	**32**	NS	**8**	**38**	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	**1010**	NS	NS	NS	NS	NS	NS	NS	NS	**563**	**570**
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	**821**	NS	NS	NS	NS	NS	NS	NS	NS	**406**	**410**
Total Metals (ug/l)																			
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	NS	4 U	NS	**35**	NS	**8**	**46**	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	**1090**	NS	NS	NS	NS	NS	NS	NS	NS	**584**	**567**
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	**879**	NS	NS	NS	NS	NS	NS	NS	NS	**405**	**399**
SVOCs (ug/l)																			
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	NS	NS	NS	**26**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VOCs (ug/l)																			
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	1.0 U	0.50 U	NS	NS	NS	NS	NS	0.50 U	0.50 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	1.0 U	**5.0**	**45**	**59**	1.0 U	2.0 U	**82**	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	1.0 U	1.0 U	**9.1**	**15**	1.0 U	2.0 U	**23 J+**	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	0.25 U	0.25 U	0.50 U	0.50 U	0.25 U	0.50 U	1.0 U	NS	NS	NS	NS	NS	0.25 U	0.25 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	0.50 U	0.50 UJ	1.0 U	1.0 U	0.50 U	1.0 U	1.0 UJ	NS	NS	NS	NS	NS	0.50 U	0.50 U
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	0.25 U	0.25 U	0.50 U	0.50 U	0.25 U	0.50 U	1.0 U	NS	NS	NS	NS	NS	0.25 U	0.25 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	0.60 U	0.60 U	1.2 U	1.2 U	0.60 U	1.2 U	0.60 U	NS	NS	NS	NS	NS	0.60 U	0.60 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	40 U	40 U	80 U	80 U	40 U	80 U	100 U	NS	NS	NS	NS	NS	40 U	40 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 UJ	NS	NS	NS	NS	NS	1.0 U	1.0 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	5.0 U	5.0 UJ	10 U	10 U	5.0 U	10 U	5.0 UJ	NS	NS	NS	NS	NS	5.0 U	5.0 U
2-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
2-Hexanone	ug/l	NE	NE	NE	NE	5.0 U	5.0 UJ	10 U	10 U	5.0 U	10 U	5.0 U	NS	NS	NS	NS	NS	5.0 U	5.0 U
2-Phenylbutane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	NS	1.0 U	1.0 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	Building 1 Tank F	EPL	EPL	EPL	EPL	EPL	EPL
					Location ID	AE29R-1	AE29R-3	AE29R-5	AE29R-6	AE2R	GZA-101R	TRC-201R	AE03	AE04	GZA-06	GZA-10	GZA-102S	GZA-102S
					Sample ID	22A-AE29R1-100422-1	22AAE29R3-100422-1	22A-AE29R5-100422-1	22A-AE29R6-100422-1	22A-AE2R-100322-1	22A-GZA101R-100422-1	22A-TRC201R-100622-1	22A-AE03-093022-1	22A-AE04-093022-1	22A-GZA6-100622-1	22A-GZA10-100422-1	22A-GZA102S-100322-1	22A-GZA102S-100322-2
					Sample Date	10/4/2022	10/4/2022	10/4/2022	10/4/2022	10/3/2022	10/4/2022	10/6/2022	9/30/2022	9/30/2022	10/6/2022	10/4/2022	10/3/2022	10/3/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	FD
					Depth Interval	37 - 44 ft	70 - 76 ft	113 - 119 ft	140 - 146 ft	22 - 36 ft	36.5 - 38 ft	38 - 161.3 ft	3 - 13 ft	3 - 13 ft	8 - 18 ft	13 - 38 ft	1.7 - 10.7 ft	1.7 - 10.7 ft
Analyte	**REPORT_RESULT_UNIT**	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**													
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 U	5.0 UJ	10 U	10 U	5.0 U	10 U	5.0 U	NS	NS	NS	NS	5.0 U	5.0 U
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 U	25 UJ	50 U	50 U	25 U	50 U	25 UJ	NS	NS	NS	NS	25 U	25 U
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U	0.70 U	1.4 U	1.4 U	0.70 U	1.4 U	0.70 U	NS	NS	NS	NS	0.70 U	0.70 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	1.0 U	0.50 U	NS	NS	NS	NS	0.50 U	0.50 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 U	1.0 UJ	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 UJ	1.0 UJ	2.0 UJ	2.0 UJ	1.0 UJ	2.0 UJ	1.0 U	NS	NS	NS	NS	1.0 UJ	1.0 UJ
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U	5.0 U	10 U	10 U	5.0 U	10 U	5.0 U	NS	NS	NS	NS	5.0 U	5.0 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 UJ	NS	NS	NS	NS	1.0 U	1.0 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	1.0 U	**13**	**160**	**370**	1.0 U	**7.9**	**180**	NS	NS	NS	NS	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.50 U	0.50 U	0.40 U	0.50 U	0.40 U	NS	NS	NS	NS	0.40 U	0.40 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 U	0.50 UJ	1.0 U	1.0 U	0.50 U	1.0 U	0.50 U	NS	NS	NS	NS	0.50 U	0.50 U
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 UJ	NS	NS	NS	NS	1.0 U	1.0 U
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U	0.40 U	0.60 U	0.60 U	0.40 U	0.60 U	0.40 U	NS	NS	NS	NS	0.40 U	0.40 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	**6.0**	**220**	1.0 UJ	NS	NS	NS	NS	**2.1**	**2.1**
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 U	2.5 UJ	5.0 U	5.0 U	2.5 U	5.0 U	2.5 U	NS	NS	NS	NS	2.5 U	2.5 U
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	1.0 U	1.0 U	**6.1**	**25**	1.0 U	2.0 U	**34**	NS	NS	NS	NS	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 UJ	0.50 U	0.50 U	0.40 U	0.50 U	0.40 U	NS	NS	NS	NS	0.40 U	0.40 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**1.7**	**12**	**78**	**70**	1.0 U	**150**	**40**	NS	NS	NS	NS	**1.4**	**1.3**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	2.0 U	1.0 U	NS	NS	NS	NS	1.0 U	1.0 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	1.0 U	**19**	**21**	**14**	1.0 U	2.0 U	**2.9 J+**	NS	NS	NS	NS	1.0 U	1.0 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U	1 U	2 U	2 U	1 U	2 U	1 U	NS	NS	NS	NS	1 U	1 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group Location ID Sample ID Sample Date Sample Type Depth Interval	EPL GZA-105D 22A-GZA105D-100622-1 10/6/2022 N 16 - 26 ft	EPL GZA-105R 22A-GZA105R-100622-1 10/6/2022 N 34.5 - 36.5 ft	EPL GZA-105S 22A-GZA105S-100622-1 10/6/2022 N 4 - 14 ft	EPL IP-01R2 22A-IP1R2-100322-1 10/3/2022 N 54 - 74 ft	EPL PZ-2S 22A-PZ2S-100322-1 10/3/2022 N 3.55 - 8.55 ft	EPL TRC-101 22A-TRC101-100322-1 10/3/2022 N 1.5 - 10.5 ft	EPL TRC-102 22A-TRC102-093022-1 9/30/2022 N 2.25 - 12.25 ft	EPL TRC-103 22A-TRC103-093022-1 9/30/2022 N 1.25 - 11.25 ft	Former Tank Farm AE100R-1 22A-AE100R1-100422-1 10/4/2022 N 18.68 - 24.68 ft	Former Tank Farm AE100R-2 22A-AE100R2-100422-1 10/4/2022 N 43.68 - 48.68 ft	Former Tank Farm AE100R-3 22A-AE100R3-100422-1 10/4/2022 N 50.68 - 56.68 ft	Former Tank Farm AE100R-4 22A-AE100R4-100422-1 10/4/2022 N 63.68 - 68.68 ft
CSIA (‰ VPDB)																		
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
															Conventional (ug/l)			
Chloride	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrite as N	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Organic Carbon	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)																		
Acetylene	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethane	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hydrogen	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Propane	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPH with PAHs (ug/l)																		
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**		0.49 U	NS	0.49 U	NS	0.47 U	**0.51**	0.48 U	0.47 U	0.47 U	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**		0.49 U	NS	0.49 U	NS	0.47 U	0.47 U	0.48 U	0.47 U	0.47 U	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**		0.10 U	NS	0.10 U	NS	0.09 U	0.09 U	0.10 U	0.09 U	0.09 U	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**		0.09 U	NS	0.09 U	NS	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**		0.10 U	NS	0.10 U	NS	0.09 U	0.09 U	0.10 U	0.09 U	0.09 U	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**		0.19 U	NS	0.20 U	NS	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**		0.10 U	NS	0.10 U	NS	0.09 U	0.09 U	0.10 U	0.09 U	0.09 U	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**		0.02 U	NS	0.02 U	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**		0.10 U	NS	0.10 U	NS	0.09 U	0.09 U	0.10 U	0.09 U	0.09 U	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**		190 U	NS	190 U	NS	200 U	190 U	190 U	190 U	200 U	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**		190 U	NS	190 U	NS	200 U	190 U	190 U	190 U	200 U	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**		190 U	NS	190 U	NS	200 U	190 U	190 U	190 U	200 U	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**		0.05 U	NS	0.05 U	NS	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**		0.02 U	NS	0.02 U	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**		0.49 UJ	NS	0.49 U	NS	0.47 U	0.47 U	0.48 U	0.47 U	0.47 U	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**		0.10 U	NS	0.10 U	NS	0.09 U	0.09 U	0.10 U	0.09 U	0.09 U	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**		0.10 U	NS	0.10 U	NS	0.09 U	0.09 U	0.10 U	0.09 U	0.09 U	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**		0.49 U	NS	0.49 U	NS	0.47 U	0.47 U	0.48 U	0.47 U	0.47 U	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**		0.49 U	NS	0.49 U	NS	0.47 U	0.47 U	0.48 U	0.47 U	0.47 U	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**		0.07 U	NS	0.07 U	NS	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE		190 U	NS	190 U	NS	200 U	190 U	190 U	190 U	200 U	NS	NS	NS
VPH (ug/l)																		
Benzene	ug/l	**5**	**1000**	**10000**	**100000**		1.0 U	NS	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**		100 U	NS	100 U	NS	100 U	100 U	100 U	100 U	**700**	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**		100 U	NS	100 U	NS	**120**	**190**	100 U	100 U	100 U	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**		100 U	NS	**210**	NS	**390**	**340**	100 U	100 U	100 U	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**		1.0 U	NS	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	**1.5**	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**		1.0 U	NS	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE		2.0 U	NS	2.0 U	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**		5.0 U	NS	5.0 U	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE		1.0 U	NS	**1.6**	NS	**2.9**	**1.2**	1.0 U	1.0 U	1.0 U	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**		1.0 U	NS	1.0 U	NS	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE		2 U	NS	**1.6**	NS	**2.9**	**1.2**	2 U	2 U	2 U	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE		100 U	NS	100 U	NS	100 U	100 U	100 U	100 U	**710**	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE		100 U	NS	**310**	NS	**510**	**530**	100 U	100 U	100 U	NS	NS	NS
Dissolved Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**		NS	NS	**194**	NS	NS	NS	**47**	NS	**59 J**	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**		NS	NS	**177**	NS	NS	NS	**52**	NS	**27 J**	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVOCs (ug/l)																		
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**		**0.43**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**6.7**
VOCs (ug/l)																		
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**		1.0 U	13 U	1.0 U	5.0 U	NS	NS	1.0 U	NS	NS	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**		0.50 U	13 U	0.50 U	5.0 U	NS	NS	0.50 U	NS	NS	2.0 U	2.5 U	5.0 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**		1.0 U	13 U	1.0 U	5.0 U	NS	NS	1.0 U	NS	NS	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**		**2.0**	**85**	1.0 U	**75**	NS	NS	1.0 U	NS	NS	**6.5**	**42**	**41**
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**		**1.4 J+**	**25**	1.0 U	**19**	NS	NS	1.0 U	NS	NS	5.0 U	**13**	**13**
1,1-Dichloropropene	ug/l	NE	NE	NE	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE		1.0 U	13 U	1.0 U	7.0 U	NS	NS	1.0 U	NS	NS	5.0 U	7.0 UJ	7.0 UJ
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE		1.0 U	13 U	0.25 U	5.0 U	NS	NS	0.25 U	NS	NS	1.3 U	2.5 U	5.0 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE		1.0 UJ	25 UJ	0.50 U	10 U	NS	NS	0.50 UJ	NS	NS	2.5 UJ	5.0 UJ	10 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**		1.0 U	13 U	0.25 U	5.0 U	NS	NS	0.25 U	NS	NS	1.3 U	2.5 U	5.0 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**		0.60 U	13 U	0.60 U	5.0 U	NS	NS	0.60 U	NS	NS	3.0 U	5.0 U	5.0 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**		1.0 U	13 U	1.0 U	5.0 U	NS	NS	1.0 U	NS	NS	3.0 U	3.0 U	5.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**		1.0 U	13 U	1.0 U	5.0 U	NS	NS	1.0 U	NS	NS	5.0 U	5.0 U	5.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**		100 U	2000 U	50 U	800 U	NS	NS	40 U	NS	NS	200 U	400 U	800 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE		1.0 UJ	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**		5.0 UJ	100 UJ	5.0 U	40 U	NS	NS	5.0 UJ	NS	NS	25 UJ	38 UJ	40 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
2-Hexanone	ug/l	NE	NE	NE	NE		5.0 U	100 UJ	5.0 U	40 U	NS	NS	5.0 UJ	NS	NS	25 UJ	38 UJ	40 UJ
2-Phenylbutane	ug/l	NE	NE	NE	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE		1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	EPL	EPL	EPL	EPL	EPL	EPL	EPL	EPL	Former Tank Farm	Former Tank Farm	Former Tank Farm	Former Tank Farm
					Location ID	GZA-105D	GZA-105R	GZA-105S	IP-01R2	PZ-2S	TRC-101	TRC-102	TRC-103	AE100R-1	AE100R-2	AE100R-3	AE100R-4
					Sample ID	22A-GZA105D-100622-1	22A-GZA105R-100622-1	22A-GZA105S-100622-1	22A-IP1R2-100322-1	22A-PZ2S-100322-1	22A-TRC101-100322-1	22A-TRC102-093022-1	22A-TRC103-093022-1	22A-AE100R1-100422-1	22A-AE100R2-100422-1	22A-AE100R3-100422-1	22A-AE100R4-100422-1
					Sample Date	10/6/2022	10/6/2022	10/6/2022	10/3/2022	10/3/2022	10/3/2022	9/30/2022	9/30/2022	10/4/2022	10/4/2022	10/4/2022	10/4/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	16 - 26 ft	34.5 - 36.5 ft	4 - 14 ft	54 - 74 ft	3.55 - 8.55 ft	1.5 - 10.5 ft	2.25 - 12.25 ft	1.25 - 11.25 ft	18.68 - 24.68 ft	43.68 - 48.68 ft	50.68 - 56.68 ft	63.68 - 68.68 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 U	250 UJ	5.0 U	100 U	NS	NS	5.0 U	NS	NS	25 U	50 U	100 U
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 UJ	1300 UJ	25 U	500 U	NS	NS	25 UJ	NS	NS	130 UJ	250 UJ	500 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U	13 U	0.70 U	5.0 U	NS	NS	0.70 U	NS	NS	3.5 U	5.0 U	5.0 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U	13 U	0.50 U	5.0 U	NS	NS	0.50 U	NS	NS	2.5 U	3.0 U	5.0 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 U	13 UJ	1.0 UJ	5.0 U	NS	NS	1.0 U	NS	NS	4.0 UJ	4.0 UJ	5.0 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 U	13 U	1.0 UJ	7.0 UJ	NS	NS	1.0 UJ	NS	NS	5.0 UJ	7.0 UJ	7.0 UJ
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U	250 U	5.0 U	100 U	NS	NS	5.0 U	NS	NS	25 U	50 U	100 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U	13 U	1.0 U	5.0 U	NS	NS	1.0 U	NS	NS	2.0 U	2.5 U	5.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 UJ	50 U	1.0 UJ	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	**65**	**210**	1.0 U	**84**	NS	NS	1.0 U	NS	NS	**130**	**65**	**160**
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	13 U	0.40 U	5.0 U	NS	NS	0.40 U	NS	NS	1.3 U	2.5 U	5.0 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 U	13 UJ	0.50 U	5.0 U	NS	NS	0.50 U	NS	NS	2.0 U	2.5 U	5.0 U
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U	13 U	1.0 U	8.3 U	NS	NS	1.0 U	NS	NS	5.0 U	8.3 U	8.3 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 UJ	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U	13 U	0.40 U	5.0 U	NS	NS	0.40 U	NS	NS	1.3 U	2.5 U	5.0 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U	25 U	1.0 U	10 U	NS	NS	1.0 U	NS	NS	5.0 U	5.0 U	10 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 UJ	20 UJ
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	50 U	**2.1**	20 U	NS	NS	**4.7**	NS	NS	5.0 U	10 U	20 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	**12 J+**	**5200**	1.0 U	**2800**	NS	NS	1.0 U	NS	NS	**590**	**3900 J+**	**2900**
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 U	130 UJ	2.5 U	50 U	NS	NS	2.5 U	NS	NS	13 U	25 U	50 U
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	13 UJ	0.40 U	5.0 U	NS	NS	0.40 U	NS	NS	1.3 U	2.5 U	5.0 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**42**	**8000**	1.0 U	**6000**	NS	NS	1.0 U	NS	NS	**550**	**4400**	**3700**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U	50 U	1.0 U	20 U	NS	NS	1.0 U	NS	NS	5.0 U	10 U	20 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	**8.7 J+**	13 U	1.0 U	5.0 U	NS	NS	1.0 U	NS	NS	**13**	**3.4**	**5.1**
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U	50 U	1 U	20 U	NS	NS	1 U	NS	NS	5 U	10 U	20 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group Location ID Sample ID Sample Date Sample Type Depth Interval Former Tank Farm AE100R-5 22A-AE100R5-100422-1 10/4/2022 N 88.68 - 93.68 ft	Transect A AE101D 22A-AE101D-100622-1 10/6/2022 N 20 - 25 ft	Transect A AE101R-2 22A-AE101R2-100322-1 10/3/2022 N 55 - 60 ft	Transect A AE101R-4 22A-AE101R4-100322-1 10/3/2022 N 153 - 158 ft	Transect A AE101R-6 22A-AE101R6-100322-1 10/3/2022 N 227 - 232 ft	Transect A AE102M 22A-AE102M-100322-1 10/3/2022 N 23 - 28 ft	Transect A AE102RR-1 22A-AE102RR1-092822-1 9/28/2022 N 43 - 48 ft	Transect A AE102RR-2 22A-AE102RR2-092822-1 9/28/2022 N 75 - 80 ft	Transect A AE102RR-4 22A-AE102RR4-092822-1 9/28/2022 N 125 - 130 ft	Transect A AE102RR-5 22A-AE102RR5-092822-1 9/28/2022 N 141 - 146 ft	Transect A AE102RR-5 22A-AE102RR5-092822-2 9/28/2022 FD 141 - 146 ft	Transect A AE102RR-6 22A-AE102RR6-092822-1 9/28/2022 N 153 - 158 ft
CSIA (‰ VPDB)																		
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	**-22.7**	NS	NS	NS	NS	NS	**-20.5**	NS	NS	NS	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	**-24.3**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	**-24.9**	NS	NS	NS	NS	NS	**-3.4**	NS	NS	NS	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloride	ug/l	NE	NE	NE	NE	**427000**	NS	NS	**41700**	**78600**	**828000**	**105000**	NS	NS	NS	NS	**139000**	
Nitrate	ug/l	NE	NE	NE	NE	**720**	NS	NS	50 U	50 U	50 U	50 U	NS	NS	NS	NS	50 U	
Nitrite as N	ug/l	NE	NE	NE	NE	50 U	NS	NS	10 U	10 U	100 U	10 U	NS	NS	NS	NS	20 U	
Sulfate	ug/l	NE	NE	NE	NE	**29600**	NS	NS	**30600**	**75600**	**7900**	**12500**	NS	NS	NS	NS	**26400**	
Sulfide	ug/l	NE	NE	NE	NE	50 U	NS	NS	**80**	**90**	50 U	**70**	NS	NS	NS	NS	50 U	
Total Organic Carbon	ug/l	NE	NE	NE	NE	**1400**	NS	NS	**2100**	**7800**	**2400**	1000 U	NS	NS	NS	NS	1000 U	
Dissolved Gases (ug/l)																		
Acetylene	ug/l	NE	NE	NE	NE	0.13 U	NS	NS	0.13 U	0.13 U	0.13 U	0.13 U	NS	NS	NS	NS	0.13 U	
Ethane	ug/l	NE	NE	NE	NE	**1.7 J-**	NS	NS	**0.36 J-**	**2.1 J-**	**6.5 J-**	**0.55 J**	NS	NS	NS	NS	**0.62 J**	
Ethene	ug/l	NE	NE	NE	NE	**5.9 J-**	NS	NS	**4.5 J-**	**38 J-**	**0.52 J-**	**30**	NS	NS	NS	NS	**6.0**	
Hydrogen	ug/l	NE	NE	NE	NE	**1.3 J**	NS	NS	NS	NS	NS	**0.77 J**	NS	NS	NS	NS	NS	
Methane	ug/l	NE	NE	NE	NE	**110 J**	NS	NS	**56 J**	**56 J**	**36 J**	**110**	NS	NS	NS	NS	**36**	
Propane	ug/l	NE	NE	NE	NE	0.29 U	NS	NS	0.29 U	**0.90 J+**	0.29 U	0.29 U	NS	NS	NS	NS	0.29 U	
EPH with PAHs (ug/l)																		
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
VPH (ug/l)																		
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Dissolved Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	**9**	NS	NS	NS	NS	NS	NS	
Iron	ug/l	NE	NE	NE	NE	**19**	NS	NS	**1090**	**2730**	**3650**	**231**	NS	NS	NS	NS	**611**	
Manganese	ug/l	NE	NE	NE	NE	**674**	NS	NS	**965**	**574**	**15600**	**734**	NS	NS	NS	NS	**608**	
Total Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	**9**	NS	NS	NS	NS	NS	NS	
Iron	ug/l	NE	NE	NE	NE	**30**	NS	NS	**1150**	**3020**	**3260**	**440**	NS	NS	NS	NS	**674**	
Manganese	ug/l	NE	NE	NE	NE	**762**	NS	NS	**941**	**577**	**17000**	**746**	NS	NS	NS	NS	**647**	
SVOCs (ug/l)																		
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	**6.9**	**0.28**	**4.7**	NS	**12**	**0.49**	NS	**5.4**	NS	NS	NS	**20**	
VOCs (ug/l)																		
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 U	10 U	
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	2.5 U	0.50 U	0.50 U	1.0 U	5.0 U	0.50 U	2.0 U	2.0 U	2.0 U	5.0 UJ	5.0 UJ	10 U	
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	**30**	1.0 U	**8.6**	**9.2**	**61**	**3.0**	**11**	**13**	**11**	**39**	**39**	**68**	
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	**10**	1.0 U	1.0 U	2.0 U	**20**	**1.3**	5.0 U	5.0 U	5.0 U	**9.6**	**9.6**	**18**	
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	7.0 UJ	1.0 U	1.0 U	2.0 U	7.0 U	1.0 U	5.0 U	5.0 U	5.0 U	7.0 U	7.0 U	10 U	
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	2.5 U	1.0 U	0.25 U	0.50 U	5.0 U	0.25 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	10 U	
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	5.0 UJ	1.0 UJ	0.50 U	1.0 U	10 U	0.50 U	2.5 UJ	2.5 UJ	2.5 UJ	10 UJ	10 UJ	20 UJ	
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	2.5 U	1.0 U	0.25 U	0.50 U	5.0 U	0.25 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	10 U	
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	5.0 U	0.60 U	0.60 U	1.2 U	5.0 U	0.60 U	3.0 U	3.0 U	3.0 U	5.0 U	5.0 U	10 U	
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	3.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	3.0 U	3.0 U	3.0 U	5.0 U	5.0 U	10 U	
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	5.0 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	400 U	100 U	NS	80 U	NS	NS	200 U	200 U	200 U	800 U	800 U	1600 U	
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	10 U	1.0 UJ	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	38 UJ	5.0 UJ	5.0 U	10 U	40 U	5.0 U	25 UJ	25 UJ	25 UJ	40 UJ	40 UJ	80 UJ	
2-Chlorotoluene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
2-Hexanone	ug/l	NE	NE	NE	NE	38 UJ	5.0 U	5.0 U	10 U	40 U	5.0 U	25 UJ	25 UJ	25 UJ	40 UJ	40 UJ	80 UJ	
2-Phenylbutane	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	
4-Chlorotoluene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U	

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Former Tank Farm	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE100R-5	AE101D	AE101R-2	AE101R-4	AE101R-6	AE102M	AE102RR-1	AE102RR-2	AE102RR-4	AE102RR-5	AE102RR-5	AE102RR-6
					Sample ID	22A-AE100R5-100422-1	22A-AE101D-100622-1	22A-AE101R2-100322-1	22A-AE101R4-100322-1	22A-AE101R6-100322-1	22A-AE102M-100322-1	22A-AE102RR1-092822-1	22A-AE102RR2-092822-1	22A-AE102RR4-092822-1	22A-AE102RR5-092822-1	22A-AE102RR5-092822-2	22A-AE102RR6-092822-1
					Sample Date	10/4/2022	10/6/2022	10/3/2022	10/3/2022	10/3/2022	10/3/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	FD	N
					Depth Interval	88.68 - 93.68 ft	20 - 25 ft	55 - 60 ft	153 - 158 ft	227 - 232 ft	23 - 28 ft	43 - 48 ft	75 - 80 ft	125 - 130 ft	141 - 146 ft	141 - 146 ft	153 - 158 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	50 U	5.0 U	5.0 U	10 U	100 U	5.0 U	25 UJ	25 UJ	25 UJ	100 UJ	100 UJ	200 UJ
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	250 UJ	25 UJ	25 U	50 U	500 U	25 U	130 UJ	130 UJ	130 UJ	500 UJ	500 UJ	1000 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	5.0 U	0.70 U	0.70 U	1.4 U	5.0 U	0.70 U	3.5 U	3.5 U	3.5 U	5.0 U	5.0 U	10 U
Bromobenzene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Bromochloromethane	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	3.0 U	0.50 U	0.50 U	1.0 U	5.0 U	0.50 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	10 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	4.0 UJ	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	4.0 UJ	4.0 UJ	4.0 UJ	5.0 UJ	5.0 UJ	10 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	7.0 UJ	1.0 U	1.0 UJ	2.0 UJ	7.0 UJ	1.0 UJ	5.0 U	5.0 U	5.0 U	7.0 U	7.0 U	10 U
Carbon Disulfide	ug/l	NE	NE	NE	NE	50 U	5.0 U	5.0 U	10 U	100 U	5.0 U	25 U	25 U	25 U	100 U	100 U	200 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	2.5 U	1.0 U	1.0 U	2.0 U	5.0 U	1.0 U	2.0 U	2.0 U	2.0 U	5.0 U	5.0 U	10 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Chloroethane	ug/l	NE	NE	NE	NE	10 U	1.0 UJ	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
chloromethane	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	**950**	**80**	**68**	**240**	**970**	**53**	**410**	**190**	**70**	**180**	**180**	**140**
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	2.5 U	0.40 U	0.40 U	0.50 U	5.0 U	0.40 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	10 U
Cymene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	2.5 U	0.50 U	0.50 U	1.0 U	5.0 U	0.50 U	2.0 UJ	2.0 UJ	2.0 UJ	5.0 UJ	5.0 UJ	10 UJ
Dibromomethane	ug/l	NE	NE	NE	NE	8.3 U	1.0 U	1.0 U	2.0 U	8.3 U	1.0 U	5.0 U	5.0 U	5.0 U	8.3 U	8.3 U	10 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	10 U	1.0 UJ	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Diethyl Ether	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	2.5 U	0.40 U	0.40 U	0.60 U	5.0 U	0.40 U	1.3 U	1.3 U	1.3 U	5.0 U	5.0 U	10 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	5.0 U	1.0 U	1.0 U	2.0 U	10 U	1.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	20 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	10 UJ	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	**3.0**	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	**980**	**7.8 J+**	**25**	**53**	**630**	**7.1**	**6.6**	**130**	**300**	**1500**	**1400**	**3900**
Tetrahydrofuran	ug/l	NE	NE	NE	NE	25 U	2.5 U	2.5 U	5.0 U	50 U	2.5 U	13 UJ	13 UJ	13 UJ	50 UJ	50 UJ	100 UJ
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	**13**	1.0 U	1.0 U	2.0 U	**52**	**1.2**	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	2.5 U	0.40 U	0.40 U	0.50 U	5.0 U	0.40 U	1.3 UJ	1.3 UJ	1.3 UJ	5.0 UJ	5.0 UJ	10 UJ
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**1400**	**10**	**75**	**160**	**3200**	**24**	**100**	**460**	**480**	**2100**	**2100**	**4900**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	10 U	1.0 U	1.0 U	2.0 U	20 U	1.0 U	5.0 U	5.0 U	5.0 U	20 U	20 U	40 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	**43**	**2.4 J+**	**18**	**13**	**320**	**16**	**50**	**13**	2.0 U	**7.4**	**7.5**	10 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	10 U	1 U	1 U	2 U	20 U	1 U	5 U	5 U	5 U	20 U	20 U	40 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group Location ID Sample ID Sample Date Sample Type Depth Interval	Transect A AE103D 22A-AE103D-100322-1 10/3/2022 N 35 - 40 ft	Transect A AE103R-1 22A-AE103R1-092822-1 9/28/2022 N 48 - 53 ft	Transect A AE103R-2 22A-AE103R2-092822-1 9/28/2022 N 62 - 67 ft	Transect A AE103R-3 22A-AE103R3-092822-1 9/28/2022 N 70 - 76 ft	Transect A AE103R-4 22A-AE103R4-092822-1 9/28/2022 N 98 - 105 ft	Transect A AE103R-5 22A-AE103R5-092822-1 9/28/2022 N 122 - 128 ft	Transect A AE103R-7 22A-AE103R7-092822-1 9/28/2022 N 162.5 - 168 ft	Transect A AE103S 22A-AE103S-100322-1 10/3/2022 N 15 - 20 ft	Transect A AE104D 22A-AE104D-100322-1 10/3/2022 N 35 - 40 ft	Transect A AE104D 22A-AE104D-100322-2 10/3/2022 FD 35 - 40 ft	Transect A AE104R-1 22A-AE104R1-092822-1 9/28/2022 N 48 - 54 ft	Transect A AE104R-3 22A-AE104R3-092822-1 9/28/2022 N 97 - 102 ft
CSIA (‰ VPDB)																		
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	**-21.8**	NS	NS	NS	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	**-22.9**	NS	NS	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	**-25.5**	NS	NS	NS	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloride	ug/l	NE	NE	NE	NE		**909000**	NS	**763000**	NS	NS	**279000**	NS	NS	NS	NS	NS	NS
Nitrate	ug/l	NE	NE	NE	NE		**4410**	NS	**3960**	NS	NS	50 U	NS	NS	NS	NS	NS	NS
Nitrite as N	ug/l	NE	NE	NE	NE		100 U	NS	100 U	NS	NS	50 U	NS	NS	NS	NS	NS	NS
Sulfate	ug/l	NE	NE	NE	NE		**39200**	NS	**36400**	NS	NS	**36600**	NS	NS	NS	NS	NS	NS
Sulfide	ug/l	NE	NE	NE	NE		50 U	NS	50 U	NS	NS	50 U	NS	NS	NS	NS	NS	NS
Total Organic Carbon	ug/l	NE	NE	NE	NE		**1600**	NS	1000 U	NS	NS	1000 U	NS	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)																		
Acetylene	ug/l	NE	NE	NE	NE		0.13 U	NS	0.13 U	NS	NS	0.13 U	NS	NS	NS	NS	NS	NS
Ethane	ug/l	NE	NE	NE	NE		0.17 UJ	NS	**0.19 J**	NS	NS	**0.64 J**	NS	NS	NS	NS	NS	NS
Ethene	ug/l	NE	NE	NE	NE		0.24 UJ	NS	**2.1**	NS	NS	**50**	NS	NS	NS	NS	NS	NS
Hydrogen	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	**0.52 J**	NS	NS	NS	NS	NS	NS
Methane	ug/l	NE	NE	NE	NE		**7.2 J**	NS	**18**	NS	NS	**71**	NS	NS	NS	NS	NS	NS
Propane	ug/l	NE	NE	NE	NE		0.29 U	NS	0.29 U	NS	NS	0.29 U	NS	NS	NS	NS	NS	NS
EPH with PAHs (ug/l)																		
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VPH (ug/l)																		
Benzene	ug/l	**5**	**1000**	**10000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**		4 U	4 U	NS	NS	NS	NS	NS	**172**	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE		11 U	NS	11 U	NS	NS	**205**	NS	NS	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE		**2150**	NS	**2530**	NS	NS	**989**	NS	NS	NS	NS	NS	NS
Total Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**		4 U	4 U	NS	NS	NS	NS	NS	**522**	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE		**38**	NS	**17**	NS	NS	**225**	NS	NS	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE		**2170**	NS	**2490**	NS	NS	**899**	NS	NS	NS	NS	NS	NS
SVOCs (ug/l)																		
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**		**0.49**	NS	NS	NS	**31 J**	**29**	NS	NS	0.20 U	0.20 U	**9.3**	**8.3**
VOCs (ug/l)																		
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**		1.0 U	NS	5.0 UJ	5.0 U	25 U	13 UJ	10 U	NS	1.0 U	1.0 U	2.0 U	5.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**		0.50 U	NS	5.0 U	5.0 UJ	25 UJ	13 U	10 UJ	NS	0.50 U	0.50 U	1.0 U	5.0 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**		1.0 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	1.0 U	1.0 U	2.0 U	5.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**		**2.3**	NS	**34**	**110**	**110**	**71**	NS	NS	1.0 U	1.0 U	**38**	**45**
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**		1.0 U	NS	**9.7**	**7.7**	**28**	**31**	**18**	NS	1.0 U	1.0 U	**6.7**	**11**
1,1-Dichloropropene	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE		1.0 U	NS	7.0 U	7.0 U	25 U	13 U	10 U	NS	1.0 U	1.0 U	2.0 U	7.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE		0.25 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	0.25 U	0.25 U	0.50 U	5.0 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE		1.0 U	NS	20 U	20 U	70 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	56 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE		0.50 U	NS	10 UJ	10 UJ	50 UJ	25 UJ	20 UJ	NS	0.50 U	0.50 U	1.0 UJ	10 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**		0.25 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	0.25 U	0.25 U	0.50 U	5.0 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**		0.60 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	0.60 U	0.60 U	1.2 U	5.0 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**		1.0 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	1.0 U	1.0 U	2.0 U	5.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	60 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**		1.0 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	1.0 U	1.0 U	2.0 U	5.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**		NS	NS	800 U	800 U	4000 U	2000 U	1600 U	NS	40 U	40 U	80 U	800 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**		5.0 U	NS	40 UJ	40 UJ	200 UJ	100 UJ	80 UJ	NS	5.0 U	5.0 U	10 UJ	40 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
2-Hexanone	ug/l	NE	NE	NE	NE		5.0 U	NS	40 UJ	40 UJ	200 UJ	100 UJ	80 UJ	NS	5.0 U	5.0 U	10 UJ	40 UJ
2-Phenylbutane	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE		1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	AE103D	AE103R-1	AE103R-2	AE103R-3	AE103R-4	AE103R-5	AE103R-7	AE103S	AE104D	AE104D	AE104R-1	AE104R-3
					Sample ID	22A-AE103D-100322-1	22A-AE103R1-092822-1	22A-AE103R2-092822-1	22A-AE103R3-092822-1	22A-AE103R4-092822-1	22A-AE103R5-092822-1	22A-AE103R7-092822-1	22A-AE103S-100322-1	22A-AE104D-100322-1	22A-AE104D-100322-2	22A-AE104R1-092822-1	22A-AE104R3-092822-1
					Sample Date	10/3/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022	9/28/2022	10/3/2022	10/3/2022	10/3/2022	9/28/2022	9/28/2022
					Sample Type	N	N	N	N	N	N	N	N	N	FD	N	N
					Depth Interval	35 - 40 ft	48 - 53 ft	62 - 67 ft	70 - 76 ft	98 - 105 ft	122 - 128 ft	162.5 - 168 ft	15 - 20 ft	35 - 40 ft	35 - 40 ft	48 - 54 ft	97 - 102 ft
Analyte	**REPORT_RESULT_UNIT**	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**												
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 U	NS	100 UJ	100 UJ	350 UJ	250 UJ	200 UJ	NS	5.0 U	5.0 U	10 UJ	100 UJ
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 U	NS	500 UJ	500 UJ	2500 UJ	1300 UJ	1000 UJ	NS	25 U	25 U	50 UJ	500 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	0.70 U	0.70 U	1.4 U	5.0 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	62 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	83 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	0.50 U	0.50 U	1.0 U	5.0 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 U	NS	5.0 UJ	5.0 UJ	25 UJ	13 UJ	10 UJ	NS	1.0 U	1.0 U	2.0 UJ	5.0 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 UJ	NS	7.0 U	7.0 U	25 U	13 U	10 U	NS	1.0 UJ	1.0 UJ	2.0 U	7.0 U
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U	NS	100 U	100 U	500 U	250 U	200 U	NS	5.0 U	5.0 U	10 U	100 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	1.0 U	1.0 U	2.0 U	5.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U	NS	20 U	20 U	50 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	**6.6**	NS	**190**	**210**	**840**	**1000**	**310**	NS	1.0 U	1.0 U	**250**	**220**
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	0.40 U	0.40 U	0.50 U	5.0 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 U	NS	5.0 UJ	5.0 UJ	25 UJ	13 UJ	10 UJ	NS	0.50 U	0.50 U	1.0 UJ	5.0 UJ
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U	NS	8.3 U	8.3 U	25 U	13 U	10 U	NS	1.0 U	1.0 U	2.0 U	8.3 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U	NS	5.0 U	5.0 U	25 U	13 U	10 U	NS	0.40 U	0.40 U	0.60 U	5.0 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U	NS	20 U	20 U	70 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U	NS	10 U	10 U	50 U	25 U	20 U	NS	1.0 U	1.0 U	2.0 U	10 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	**54**	NS	**1500**	**1200**	**4600**	**5700**	**3300**	NS	**1.2**	**1.1**	**320**	**1300**
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 U	NS	50 UJ	50 UJ	250 UJ	130 UJ	100 UJ	NS	2.5 U	2.5 U	5.0 UJ	50 UJ
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	1.0 U	NS	20 U	20 U	80 U	50 U	40 U	NS	1.0 U	1.0 U	**11**	20 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	NS	5.0 UJ	5.0 UJ	25 UJ	13 UJ	10 UJ	NS	0.40 U	0.40 U	0.50 UJ	5.0 UJ
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**93**	NS	**2100**	**1900**	**7400**	**8300**	**5200**	NS	**1.7**	**1.8**	**1100**	**2700**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1.0 U	1.0 U	2.0 U	20 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	1.0 U	NS	**12**	**38**	**100**	**130**	**28**	NS	1.0 U	1.0 U	**40**	**14**
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U	NS	20 U	20 U	100 U	50 U	40 U	NS	1 U	1 U	2 U	20 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Upgradient
					Location ID	AE104R-5	AE108R-1	AE108R-3	AE108R-5	EMW-10D	GZA-12
					Sample ID	22A-AE104R5-092822-1	22A-AE108R1-092822-1	22A-AE108R3-092822-1	22A-AE108R5-092822-1	22A-EMW10D-100422-1	22A-GZA12-100422-1
					Sample Date	9/28/2022	9/28/2022	9/28/2022	9/28/2022	10/4/2022	10/4/2022
					Sample Type	N	N	N	N	N	N
					Depth Interval	156 - 162 ft	36.5 - 43.5 ft	84 - 89 ft	163 - 168 ft	18.49 - 28.49 ft	9.5 - 24.5 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):						
CSIA (‰ VPDB)											
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Chloride	ug/l	NE	NE	NE	NE	**248000**	**799000**	NS	NS	NS	**727000**
Nitrate	ug/l	NE	NE	NE	NE	**50**	50 U	NS	NS	NS	**8420**
Nitrite as N	ug/l	NE	NE	NE	NE	20 U	100 U	NS	NS	NS	100 U
Sulfate	ug/l	NE	NE	NE	NE	**23600**	5000 U	NS	NS	NS	**32200**
Sulfide	ug/l	NE	NE	NE	NE	**160**	50 U	NS	NS	NS	50 U
Total Organic Carbon	ug/l	NE	NE	NE	NE	**2400**	**5000**	NS	NS	NS	**1100**
Dissolved Gases (ug/l)											
Acetylene	ug/l	NE	NE	NE	NE	0.13 U	0.13 U	NS	NS	NS	0.13 U
Ethane	ug/l	NE	NE	NE	NE	**0.73 J**	**0.45 J**	NS	NS	NS	0.17 UJ
Ethene	ug/l	NE	NE	NE	NE	**77**	**0.32 J**	NS	NS	NS	0.24 UJ
Hydrogen	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Methane	ug/l	NE	NE	NE	NE	**180**	**2900**	NS	NS	NS	2.0 UJ
Propane	ug/l	NE	NE	NE	NE	0.29 U	0.29 U	NS	NS	NS	0.29 U
EPH with PAHs (ug/l)											
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
VPH (ug/l)											
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)											
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	4 U
Iron	ug/l	NE	NE	NE	NE	**147**	**515**	NS	NS	NS	11 U
Manganese	ug/l	NE	NE	NE	NE	**275**	**428**	NS	NS	NS	**436**
Total Metals (ug/l)											
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	NS	NS	NS	**5**
Iron	ug/l	NE	NE	NE	NE	**156**	**1420**	NS	NS	NS	**55**
Manganese	ug/l	NE	NE	NE	NE	**270**	**771**	NS	NS	NS	**473**
SVOCs (ug/l)											
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	**14**	NS	NS	NS	NS	0.20 U
VOCs (ug/l)											
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	5.0 U	1.0 U	1.0 U	5.0 UJ	1.0 U	1.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	5.0 U	0.50 UJ	0.50 UJ	2.0 U	0.50 U	0.50 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	**64**	1.0 U	1.0 U	5.0 U	**1.4**	1.0 U
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	**14**	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	7.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	5.0 U	0.25 U	0.25 U	1.3 U	0.25 U	0.25 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	10 UJ	0.50 UJ	0.50 UJ	2.5 UJ	0.50 UJ	0.50 U
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	5.0 U	0.25 U	0.25 U	1.3 U	0.25 U	0.25 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	5.0 U	0.60 U	0.60 U	3.0 U	0.60 U	0.60 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	5.0 U	1.0 U	1.0 U	3.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	800 U	40 U	40 U	200 U	40 U	40 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	40 UJ	5.0 UJ	5.0 UJ	25 UJ	5.0 UJ	5.0 U
2-Chlorotoluene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
2-Hexanone	ug/l	NE	NE	NE	NE	40 UJ	5.0 UJ	5.0 UJ	25 UJ	5.0 UJ	5.0 U
2-Phenylbutane	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

						Location Group	Transect A	Transect A	Transect A	Transect A	Transect A	Upgradient
						Location ID	AE104R-5	AE108R-1	AE108R-3	AE108R-5	EMW-10D	GZA-12
						Sample ID	22A-AE104R5-092822-1	22A-AE108R1-092822-1	22A-AE108R3-092822-1	22A-AE108R5-092822-1	22A-EMW10D-100422-1	22A-GZA12-100422-1
						Sample Date	9/28/2022	9/28/2022	9/28/2022	9/28/2022	10/4/2022	10/4/2022
						Sample Type	N	N	N	N	N	N
						Depth Interval	156 - 162 ft	36.5 - 43.5 ft	84 - 89 ft	163 - 168 ft	18.49 - 28.49 ft	9.5 - 24.5 ft
Analyte	**REPORT_RESULT_UNIT**	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**							
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	100 UJ	5.0 UJ	5.0 UJ	25 UJ	5.0 U	5.0 U
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	500 UJ	25 UJ	25 UJ	130 UJ	25 UJ	25 U
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	5.0 U	0.70 U	0.70 U	3.5 U	0.70 U	0.70 U
Bromobenzene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Bromochloromethane	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	5.0 U	0.50 U	0.50 U	2.5 U	0.50 U	0.50 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	5.0 UJ	1.0 UJ	1.0 UJ	4.0 UJ	1.0 UJ	1.0 U
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	7.0 U	1.0 U	1.0 U	5.0 U	1.0 UJ	1.0 UJ
Carbon Disulfide	ug/l	NE	NE	NE	NE	100 U	5.0 U	5.0 U	25 U	5.0 U	5.0 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	5.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chloroethane	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
chloromethane	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	**680**	**7.2**	**12**	**36**	**22**	1.0 U
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	5.0 U	0.40 U	0.40 U	1.3 U	0.40 U	0.40 U
Cymene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	5.0 UJ	0.50 UJ	0.50 UJ	2.0 UJ	0.50 U	0.50 U
Dibromomethane	ug/l	NE	NE	NE	NE	8.3 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Diethyl Ether	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	5.0 U	0.40 U	0.40 U	1.3 U	0.40 U	0.40 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	10 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	**1700**	1.0 U	**30**	**13**	**99**	1.0 U
Tetrahydrofuran	ug/l	NE	NE	NE	NE	50 UJ	2.5 UJ	2.5 UJ	13 UJ	2.5 U	2.5 U
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	**22**	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	5.0 UJ	0.40 UJ	0.40 UJ	1.3 UJ	0.40 U	0.40 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**4200**	**1.5**	**23**	**32**	**41**	1.0 U
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	20 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	**78**	1.0 U	1.0 U	2.0 U	**3.2**	1.0 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	20 U	1 U	1 U	5 U	1 U	1 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

ATTACHMENT C

Groundwater Laboratory Analytical Data Sheets

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51231

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethane	39	20	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethene	10	7.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/15/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/15/22	MH	SW8260C

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51231

Client ID: 22A-AE26R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	320	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/15/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Tetrachloroethene	1700	100	ug/L	100	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/15/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Trichloroethene	2000	100	ug/L	100	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Vinyl chloride	26	20	ug/L	20	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	95		%	20	10/15/22	MH	70 - 130 %
% Toluene-d8 (20x)	103		%	20	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	100		%	100	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	96		%	100	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	99		%	100	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51231
Client ID: 22A-AE26R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	100		%	100	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	21	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	89		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51232

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R3-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/11/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethane	58	50	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethene	16	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Hexanone	ND	100	ug/L	50	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51232

Client ID: 22A-AE28R3-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	1300	ug/L	50	10/11/22	MH	SW8260C
Benzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromodichloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromoform	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	13	ug/L	50	10/11/22	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	440	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromochloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	50	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methylene chloride	ND	25	ug/L	50	10/11/22	MH	SW8260C
Naphthalene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
o-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Styrene	ND	50	ug/L	50	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Tetrachloroethene	4400	250	ug/L	250	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/11/22	MH	SW8260C
Toluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	110	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Trichloroethene	4100	250	ug/L	250	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Vinyl chloride	550	50	ug/L	50	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	101		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	94		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	92		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	99		%	50	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (250x)	100		%	250	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (250x)	97		%	250	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51232
Client ID: 22A-AE28R3-100522-1

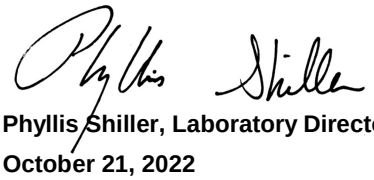
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (250x)	98		%	250	10/15/22	MH	70 - 130 %
% Toluene-d8 (250x)	98		%	250	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	15:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51233

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethane	84	50	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethene	24	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Hexanone	ND	100	ug/L	50	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/11/22	MH	SW8260C
Acetone	ND	1300	ug/L	50	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51233

Client ID: 22A-AE28R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromodichloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromoform	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	13	ug/L	50	10/11/22	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	790	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromochloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	50	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methylene chloride	ND	25	ug/L	50	10/11/22	MH	SW8260C
Naphthalene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
o-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Styrene	ND	50	ug/L	50	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Tetrachloroethene	6200	500	ug/L	500	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/11/22	MH	SW8260C
Toluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	130	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Trichloroethene	8700	500	ug/L	500	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Vinyl chloride	360	50	ug/L	50	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	102		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	96		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	93		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	103		%	50	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	100		%	500	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	95		%	500	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	96		%	500	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51233
Client ID: 22A-AE28R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	98		%	500	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	9:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51246

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA105R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,1-Dichloroethane	85	50	ug/L	50	10/12/22	HM	SW8260C
1,1-Dichloroethene	25	13	ug/L	50	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/12/22	HM	SW8260C
2-Hexanone	ND	100	ug/L	50	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/12/22	HM	SW8260C
Acetone	ND	1300	ug/L	50	10/12/22	HM	SW8260C

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51246

Client ID: 22A-GZA105R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Benzene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Bromobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Bromochloromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Bromodichloromethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Bromoform	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Bromomethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Carbon Disulfide	ND	250	ug/L	50	10/12/22	HM	SW8260C	
Carbon tetrachloride	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Chlorobenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Chloroethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Chloroform	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Chloromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
cis-1,2-Dichloroethene	210	50	ug/L	50	10/12/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Dibromochloromethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Dibromomethane	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Dichlorodifluoromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Ethylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Hexachlorobutadiene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Isopropylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
m&p-Xylene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Methyl ethyl ketone	ND	100	ug/L	50	10/12/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Methylene chloride	ND	25	ug/L	50	10/12/22	HM	SW8260C	B
Naphthalene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
n-Butylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
n-Propylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
o-Xylene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
p-Isopropyltoluene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
sec-Butylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Styrene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
tert-Butylbenzene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Tetrachloroethene	5200	500	ug/L	500	10/16/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/12/22	HM	SW8260C	
Toluene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	50	ug/L	50	10/12/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/12/22	HM	SW8260C	
Trichloroethene	8000	500	ug/L	500	10/16/22	HM	SW8260C	
Trichlorofluoromethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	50	ug/L	50	10/12/22	HM	SW8260C	
Vinyl chloride	ND	13	ug/L	50	10/12/22	HM	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4 (50x)	103		%	50	10/12/22	HM	70 - 130 %	
% Bromofluorobenzene (50x)	94		%	50	10/12/22	HM	70 - 130 %	
% Dibromofluoromethane (50x)	94		%	50	10/12/22	HM	70 - 130 %	
% Toluene-d8 (50x)	102		%	50	10/12/22	HM	70 - 130 %	
% 1,2-dichlorobenzene-d4 (500x)	98		%	500	10/16/22	HM	70 - 130 %	
% Bromofluorobenzene (500x)	96		%	500	10/16/22	HM	70 - 130 %	
% Dibromofluoromethane (500x)	103		%	500	10/16/22	HM	70 - 130 %	

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51246
Client ID: 22A-GZA105R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	99		%	500	10/16/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/12/22	MH	SW8260C (OXY)

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51247

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA105S-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.177	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	0.194	0.004	mg/L	1	10/17/22	TH	SW6010D
EPH Extraction	Completed				10/10/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/10/22	M/AL/K	SW3520C
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/06/22		MADEP EPH-19
	Completed				10/07/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51247

Client ID: 22A-GZA105S-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
2-Hexanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Acetone	ND	25	ug/L	1	10/16/22	HM	SW8260C	
Benzene	ND	0.70	ug/L	1	10/16/22	HM	SW8260C	
Bromobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Bromoform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Dibromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methylene chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	B
Naphthalene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
o-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Styrene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
tert-Butylbenzene	2.1	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	HM	SW8260C	
Toluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Trichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/16/22	HM	70 - 130 %
% Bromofluorobenzene	99		%	1	10/16/22	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	10/16/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/16/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.20	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/11/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/11/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/11/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/11/22	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	10/11/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/11/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	10/11/22	WB	40 - 140 %
% Nitrobenzene-d5	80		%	1	10/11/22	WB	40 - 140 %
% Terphenyl-d14	50		%	1	10/11/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/12/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	88		%	1	10/12/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	10/12/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	92		%	1	10/12/22	AW	40 - 140 %
% o-terphenyl (aromatic)	91		%	1	10/12/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51247

Client ID: 22A-GZA105S-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	310	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	210	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
o-Xylene	1.6	1.0	ug/L	1	10/07/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	10/07/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	10/07/22	V	70 - 130 %

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52357

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE101D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE101D-100622-1

Phoenix I.D.: CM52357

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	80	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	7.8	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	10	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	2.4	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

Ver 1

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE101D-100622-1

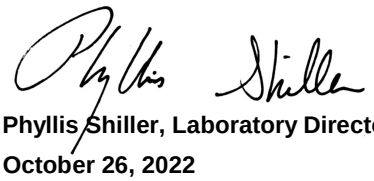
Phoenix I.D.: CM52357

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.28	0.20	ug/l	1	10/12/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	91		%	1	10/12/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/11/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52358

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA105D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/10/22	cv/CV	SW3510C
Semi-Volatile Extraction	Completed				10/11/22	X/K	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				10/07/22		MADEP EPH-19
	Completed				10/10/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	2.0	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	1.4	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA105D-100622-1

Phoenix I.D.: CM52358

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	65	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	12	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	42	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	8.7	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	104		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	95		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/12/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/12/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/12/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/12/22	WB	SW8270D (SIM)
Naphthalene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.49	ug/L	1	10/12/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/12/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	75		%	1	10/12/22	WB	40 - 140 %
% Nitrobenzene-d5	83		%	1	10/12/22	WB	40 - 140 %
% Terphenyl-d14	67		%	1	10/12/22	WB	40 - 140 %
1,4-dioxane							
1,4-dioxane	0.43	0.20	ug/l	1	10/12/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/12/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/11/22	G/G	
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/11/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	87		%	1	10/11/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	10/11/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	95		%	1	10/11/22	AW	40 - 140 %
% o-terphenyl (aromatic)	90		%	1	10/11/22	AW	40 - 140 %

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA105D-100622-1

Phoenix I.D.: CM52358

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/10/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	85		%	1	10/10/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	82		%	1	10/10/22	V	70 - 130 %

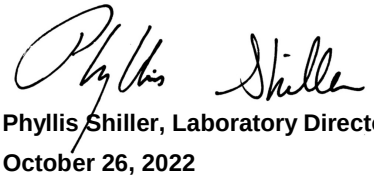
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	14:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52359

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TRC201R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	82	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	23	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TRC201R-100622-1

Phoenix I.D.: CM52359

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	180	50	ug/L	50	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	34	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	40	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	2.9	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/16/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	95		%	50	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	100		%	50	10/15/22	MH	70 - 130 %

Project ID: LMC WIMINGTON 60688023
Client ID: 22A-TRC201R-100622-1

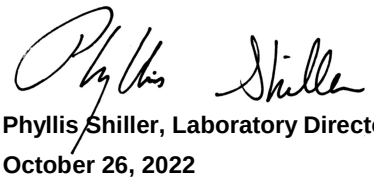
Phoenix I.D.: CM52359

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (50x)	96		%	50	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	100	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	15:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52360

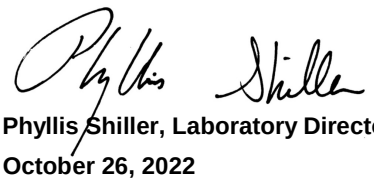
Project ID: LMC WIMINGTON 60688023
Client ID: 22A-GZA6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.008	0.004	mg/L	1	10/21/22	TH	SW6010D
Arsenic (Dissolved)	0.008	0.004	mg/L	1	10/17/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/08/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44228

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.231	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	0.734	0.001	mg/L	1	09/30/22	TH	SW6010D
Iron	0.440	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	0.746	0.001	mg/L	1	10/04/22	TH	SW6010D
Chloride	105	10.0	mg/L	2	09/30/22	CL/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	09/29/22 08:08	CL/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/29/22 08:08	CL/GD	E300.0
Sulfate	12.5	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	0.07	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	11	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44228

Client ID: 22A-AE102RR1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	410	20	ug/L	20	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	6.6	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44228
Client ID: 22A-AE102RR1-092822-1

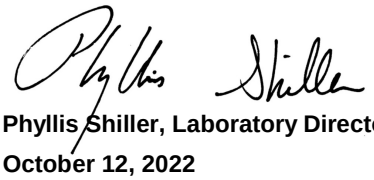
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	100	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	50	5.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	102		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/09/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	100		%	20	10/09/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	98		%	20	10/09/22	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44229

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	13	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44229

Client ID: 22A-AE102RR2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	190	20	ug/L	20	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	130	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	460	20	ug/L	20	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	13	5.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	102		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	96		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	100		%	5	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/09/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	10/09/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	10/09/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	5.4	0.20	ug/l	1	09/30/22	KCA	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	82		%	1	09/30/22	KCA	70 - 130 %
Extraction for 1,4-Dioxane	Completed				09/29/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44230

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR4-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	11	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	70	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	300	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	480	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	104		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	97		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	99		%	5	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	10/10/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44230
Client ID: 22A-AE102RR4-092822-1

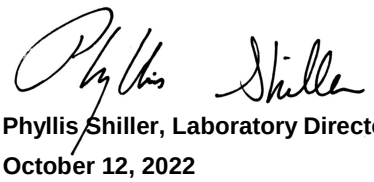
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44231

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/04/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	09/30/22	TH	SW6010D
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44232

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	< 0.011	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	2.53	0.011	mg/L	10	10/07/22	TH	SW6010D
Iron	0.017	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	2.49	0.010	mg/L	10	10/07/22	TH	SW6010D
Chloride	763	125	mg/L	25	09/29/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	09/29/22 21:12	C/E/G	E300.0
Nitrate as Nitrogen	3.96	0.50	mg/L	10	09/29/22 21:12	C/E/G	E300.0
Sulfate	36.4	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethane	34	20	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethene	9.7	7.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44232

Client ID: 22A-AE103R2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/11/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/11/22	MH	SW8260C
Benzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	190	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/11/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Tetrachloroethene	1500	400	ug/L	400	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/11/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44232
Client ID: 22A-AE103R2-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Trichloroethene	2100	400	ug/L	400	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Vinyl chloride	12	5.0	ug/L	20	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	10/11/22	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	102		%	400	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (400x)	98		%	400	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (400x)	95		%	400	10/10/22	MH	70 - 130 %
% Toluene-d8 (400x)	100		%	400	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44233

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,1-Dichloroethane	34	20	ug/L	20	10/10/22	MH	SW8260C
1,1-Dichloroethene	7.7	7.0	ug/L	20	10/10/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/10/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/10/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/10/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/10/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/10/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/10/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/10/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/10/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/10/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/10/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,2-Dichloroethene	210	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/10/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/10/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/10/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/10/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/10/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/10/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/10/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/10/22	MH	SW8260C
Tetrachloroethene	1200	200	ug/L	200	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/10/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/10/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/10/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/10/22	MH	SW8260C
Trichloroethene	1900	200	ug/L	200	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/10/22	MH	SW8260C
Vinyl chloride	38	20	ug/L	20	10/10/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	99		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	10/10/22	MH	70 - 130 %
% Toluene-d8 (20x)	103		%	20	10/10/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	102		%	200	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (200x)	94		%	200	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (200x)	95		%	200	10/11/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	96		%	200	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/10/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/10/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44234

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.205	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	0.989	0.001	mg/L	1	09/30/22	TH	SW6010D
Iron	0.225	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	0.899	0.001	mg/L	1	10/04/22	TH	SW6010D
Chloride	279	25.0	mg/L	5	09/29/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	09/29/22 21:28	C/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/29/22 08:26	CL/GD	E300.0
Sulfate	36.6	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethane	110	50	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloroethene	31	13	ug/L	50	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	25	ug/L	50	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	13	ug/L	50	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44234

Client ID: 22A-AE103R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	13	ug/L	50	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
2-Hexanone	ND	100	ug/L	50	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	250	ug/L	50	10/11/22	MH	SW8260C
Acetone	ND	1300	ug/L	50	10/11/22	MH	SW8260C
Benzene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromochloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Bromodichloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromoform	ND	13	ug/L	50	10/11/22	MH	SW8260C
Bromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Carbon Disulfide	ND	250	ug/L	50	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	13	ug/L	50	10/11/22	MH	SW8260C
Chlorobenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	50	10/11/22	MH	SW8260C
Chloromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	1000	50	ug/L	50	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromochloromethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dibromomethane	ND	13	ug/L	50	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Ethylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Isopropylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
m&p-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	100	ug/L	50	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	50	ug/L	50	10/11/22	MH	SW8260C
Methylene chloride	ND	25	ug/L	50	10/11/22	MH	SW8260C
Naphthalene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
n-Propylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
o-Xylene	ND	50	ug/L	50	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Styrene	ND	50	ug/L	50	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	50	ug/L	50	10/11/22	MH	SW8260C
Tetrachloroethene	5700	400	ug/L	400	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	130	ug/L	50	10/11/22	MH	SW8260C
Toluene	ND	50	ug/L	50	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	50	ug/L	50	10/11/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	13	ug/L	50	10/11/22	MH	SW8260C
Trichloroethene	8300	400	ug/L	400	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	50	ug/L	50	10/11/22	MH	SW8260C
Vinyl chloride	130	50	ug/L	50	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	102		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	95		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	94		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	102		%	50	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	103		%	400	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (400x)	99		%	400	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (400x)	97		%	400	10/10/22	MH	70 - 130 %
% Toluene-d8 (400x)	99		%	400	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	2000	ug/L	50	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	50	ug/L	50	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	29	0.20	ug/l	1	10/03/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	92		%	1	10/03/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/03/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44235

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE108R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.515	0.011	mg/L	1	09/30/22	TH	SW6010D
Manganese (Dissolved)	0.428	0.001	mg/L	1	09/30/22	TH	SW6010D
Iron	1.42	0.010	mg/L	1	10/04/22	TH	SW6010D
Manganese	0.771	0.001	mg/L	1	10/04/22	TH	SW6010D
Chloride	799	125	mg/L	25	09/29/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	09/29/22 21:51	C/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/29/22 08:35	CL/GD	E300.0
Sulfate	< 5.0	5.0	mg/L	1	09/29/22	CL/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	09/29/22	GD	SM4500S-D-11
Total Organic Carbon	5.0	1.0	mg/L	1	10/01/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/28/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44235

Client ID: 22A-AE108R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	7.2	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	1.5	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 12, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44236

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE108R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44236

Client ID: 22A-AE108R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	12	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	30	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	23	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44236

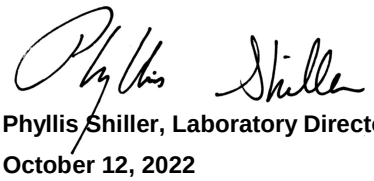
Client ID: 22A-AE108R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 12, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/28/22	16:55
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM44228
Phoenix ID: CM44237

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE108R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44237
Client ID: 22A-AE108R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/11/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/11/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/11/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	36	5.0	ug/L	5	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrachloroethene	13	5.0	ug/L	5	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/11/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/11/22	MH	SW8260C
Trichloroethene	32	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/11/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	102		%	5	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	94		%	5	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/11/22	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM44237

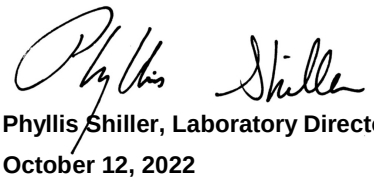
Client ID: 22A-AE108R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45644

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethane	39	20	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethene	9.6	7.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/11/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45644

Client ID: 22A-AE102RR5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	180	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/11/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Tetrachloroethene	1500	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/11/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Trichloroethene	2100	100	ug/L	100	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Vinyl chloride	7.4	5.0	ug/L	20	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	94		%	20	10/11/22	MH	70 - 130 %
% Toluene-d8 (20x)	99		%	20	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	102		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	98		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45645

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR5-092822-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethane	39	20	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloroethene	9.6	7.0	ug/L	20	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/11/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/11/22	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45645

Client ID: 22A-AE102RR5-092822-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/11/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/11/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	180	20	ug/L	20	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/11/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/11/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/11/22	MH	SW8260C
Tetrachloroethene	1400	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/11/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/11/22	MH	SW8260C
Trichloroethene	2100	100	ug/L	100	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/11/22	MH	SW8260C
Vinyl chloride	7.5	5.0	ug/L	20	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	93		%	20	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	93		%	20	10/11/22	MH	70 - 130 %
% Toluene-d8 (20x)	100		%	20	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	98		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	99		%	100	10/10/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45645
Client ID: 22A-AE102RR5-092822-2

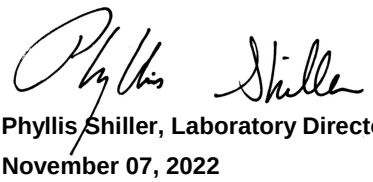
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45646

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R4-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/11/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,1-Dichloroethane	110	100	ug/L	100	10/11/22	MH	SW8260C
1,1-Dichloroethene	28	25	ug/L	100	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	100	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	100	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
2-Hexanone	ND	200	ug/L	100	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	350	ug/L	100	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45646

Client ID: 22A-AE103R4-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	2500	ug/L	100	10/11/22	MH	SW8260C
Benzene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	10/11/22	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	10/11/22	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Bromoform	ND	25	ug/L	100	10/11/22	MH	SW8260C
Bromomethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	100	10/11/22	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Chloroform	ND	50	ug/L	100	10/11/22	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	840	100	ug/L	100	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Dibromomethane	ND	25	ug/L	100	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	100	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	10/11/22	MH	SW8260C
Methylene chloride	ND	50	ug/L	100	10/11/22	MH	SW8260C
Naphthalene	ND	100	ug/L	100	10/11/22	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Styrene	ND	100	ug/L	100	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	10/11/22	MH	SW8260C
Tetrachloroethene	4600	500	ug/L	500	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	10/11/22	MH	SW8260C
Toluene	ND	100	ug/L	100	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	80	ug/L	100	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	25	ug/L	100	10/11/22	MH	SW8260C
Trichloroethene	7400	500	ug/L	500	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/11/22	MH	SW8260C
Vinyl chloride	100	100	ug/L	100	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	104		%	100	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	94		%	100	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	10/11/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	103		%	500	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/11/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (500x)	98		%	500	10/11/22	MH	70 - 130 %
% Toluene-d8 (500x)	96		%	500	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	100	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	30	0.20	ug/l	1	10/07/22	PS	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	Interference		%	1	10/07/22	PS	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

Dioxane:
Due to matrix interference from non target compounds in the sample, surrogate could not be reported.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	14:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45647

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103R7-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,1-Dichloroethane	71	40	ug/L	40	10/11/22	MH	SW8260C
1,1-Dichloroethene	18	10	ug/L	40	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	40	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	40	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
2-Hexanone	ND	80	ug/L	40	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	10/11/22	MH	SW8260C
Acetone	ND	1000	ug/L	40	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45647

Client ID: 22A-AE103R7-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Bromoform	ND	10	ug/L	40	10/11/22	MH	SW8260C
Bromomethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	40	10/11/22	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Chloroethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Chloroform	ND	40	ug/L	40	10/11/22	MH	SW8260C
Chloromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	310	40	ug/L	40	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Dibromomethane	ND	10	ug/L	40	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	80	ug/L	40	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	10/11/22	MH	SW8260C
Methylene chloride	ND	20	ug/L	40	10/11/22	MH	SW8260C
Naphthalene	ND	40	ug/L	40	10/11/22	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
o-Xylene	ND	40	ug/L	40	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Styrene	ND	40	ug/L	40	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	10/11/22	MH	SW8260C
Tetrachloroethene	3300	500	ug/L	500	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	10/11/22	MH	SW8260C
Toluene	ND	40	ug/L	40	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	10	ug/L	40	10/11/22	MH	SW8260C
Trichloroethene	5200	500	ug/L	500	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	10/11/22	MH	SW8260C
Vinyl chloride	28	10	ug/L	40	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	101		%	40	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (40x)	95		%	40	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (40x)	95		%	40	10/11/22	MH	70 - 130 %
% Toluene-d8 (40x)	100		%	40	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	103		%	500	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	94		%	500	10/11/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	96		%	500	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1600	ug/L	40	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	15:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45648

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1-Dichloroethane	38	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1-Dichloroethene	6.7	2.0	ug/L	2	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45648

Client ID: 22A-AE104R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	10/12/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	250	20	ug/L	20	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Tetrachloroethene	320	20	ug/L	20	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	11	2.0	ug/L	2	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	MH	SW8260C
Trichloroethene	1100	50	ug/L	50	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	MH	SW8260C
Vinyl chloride	40	2.0	ug/L	2	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	102		%	2	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	87		%	2	10/12/22	MH	70 - 130 %
% Toluene-d8 (2x)	119		%	2	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	10/10/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45648
Client ID: 22A-AE104R1-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	102		%	20	10/10/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	103		%	50	10/11/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	93		%	50	10/11/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	94		%	50	10/11/22	MH	70 - 130 %
% Toluene-d8 (50x)	96		%	50	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.3	0.20	ug/l	1	10/03/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	10/03/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/03/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	15:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45649

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	45	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	11	7.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45649

Client ID: 22A-AE104R3-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	220	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	1300	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	2700	100	ug/L	100	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	14	5.0	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	93		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	98		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	10/10/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	100		%	100	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	8.3	0.20	ug/l	1	10/03/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	77		%	1	10/03/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/03/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	15:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45650

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.147	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	0.275	0.001	mg/L	1	10/06/22	TH	SW6010D
Iron	0.156	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	0.270	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	248	25.0	mg/L	5	10/01/22	CL/GD	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	09/30/22 03:11	CL/GD	E300.0
Nitrate as Nitrogen	0.05	0.05	mg/L	1	09/30/22 03:11	C/E/G	E300.0
Sulfate	23.6	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	0.16	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	2.4	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	64	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	14	7.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45650

Client ID: 22A-AE104R5-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	680	100	ug/L	100	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	1700	100	ug/L	100	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	22	20	ug/L	20	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	4200	500	ug/L	500	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	78	20	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	96		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	104		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	101		%	100	10/10/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	97		%	100	10/10/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	96		%	100	10/10/22	MH	70 - 130 %
% Toluene-d8 (100x)	100		%	100	10/10/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	101		%	500	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	92		%	500	10/12/22	MH	70 - 130 %
% Toluene-d8 (500x)	95		%	500	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	14	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	88		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

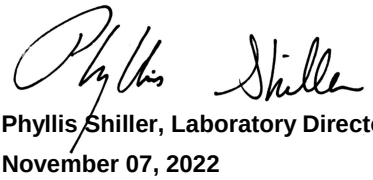
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45651

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE105D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	35.9	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	3.21	0.011	mg/L	10	10/11/22	TH	SW6010D
Iron	35.7	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	3.09	0.010	mg/L	10	10/13/22	TH	SW6010D
Chloride	175	25.0	mg/L	5	09/30/22	C/E/G	E300.0
Nitrite as Nitrogen	0.64	0.05	mg/L	5	09/30/22 07:42	C/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/30/22 03:19	C/E/G	E300.0
Sulfate	18.0	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45651

Client ID: 22A-AE105D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	23	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	2.4	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	21	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	10/09/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.97	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	88		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/28/22	13:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45655

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102RR6-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.611	0.011	mg/L	1	10/05/22	TH	SW6010D
Manganese (Dissolved)	0.608	0.001	mg/L	1	10/05/22	TH	SW6010D
Iron	0.674	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	0.647	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	139	25.0	mg/L	5	09/30/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	09/30/22 03:50	CL/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	09/30/22 03:50	C/E/G	E300.0
Sulfate	26.4	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,1-Dichloroethane	68	40	ug/L	40	10/12/22	MH	SW8260C
1,1-Dichloroethene	18	10	ug/L	40	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	20	ug/L	40	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	10	ug/L	40	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45655

Client ID: 22A-AE102RR6-092822-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	10	ug/L	40	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	40	ug/L	40	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	10	ug/L	40	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	40	ug/L	40	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
2-Hexanone	ND	80	ug/L	40	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	200	ug/L	40	10/12/22	MH	SW8260C
Acetone	ND	1000	ug/L	40	10/12/22	MH	SW8260C
Benzene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Bromobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Bromochloromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Bromodichloromethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Bromoform	ND	10	ug/L	40	10/12/22	MH	SW8260C
Bromomethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Carbon Disulfide	ND	200	ug/L	40	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	10	ug/L	40	10/12/22	MH	SW8260C
Chlorobenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Chloroethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Chloroform	ND	40	ug/L	40	10/12/22	MH	SW8260C
Chloromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	140	40	ug/L	40	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Dibromochloromethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Dibromomethane	ND	10	ug/L	40	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Ethylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Isopropylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
m&p-Xylene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	80	ug/L	40	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	40	ug/L	40	10/12/22	MH	SW8260C
Methylene chloride	ND	20	ug/L	40	10/12/22	MH	SW8260C
Naphthalene	ND	40	ug/L	40	10/12/22	MH	SW8260C
n-Butylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
n-Propylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
o-Xylene	ND	40	ug/L	40	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Styrene	ND	40	ug/L	40	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	40	ug/L	40	10/12/22	MH	SW8260C
Tetrachloroethene	3900	500	ug/L	500	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	100	ug/L	40	10/12/22	MH	SW8260C
Toluene	ND	40	ug/L	40	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	40	ug/L	40	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	10	ug/L	40	10/12/22	MH	SW8260C
Trichloroethene	4900	500	ug/L	500	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	40	ug/L	40	10/12/22	MH	SW8260C
Vinyl chloride	ND	10	ug/L	40	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (40x)	102		%	40	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (40x)	95		%	40	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (40x)	94		%	40	10/12/22	MH	70 - 130 %
% Toluene-d8 (40x)	101		%	40	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	102		%	500	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	95		%	500	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	93		%	500	10/12/22	MH	70 - 130 %
% Toluene-d8 (500x)	96		%	500	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	1600	ug/L	40	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	40	ug/L	40	10/12/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	20	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	96		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	10:40
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46668

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE03-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.035	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.032	0.004	mg/L	1	10/05/22	TH	SW6010D
Client MS/MSD	Completed				10/06/22		
EPH Extraction	Completed				10/05/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				09/30/22	X/K	SW3520C
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	3.0	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/03/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Naphthalene	3.5	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pyrene	ND	0.07	ug/L	1	10/03/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	60		%	1	10/03/22	WB	40 - 140 %
% Nitrobenzene-d5	86		%	1	10/03/22	WB	40 - 140 %
% Terphenyl-d14	56		%	1	10/03/22	WB	40 - 140 %

MA EPH Aliphatic/Aromatic Ranges

C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	59		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	86		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	90		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	86		%	1	10/07/22	AW	40 - 140 %

MA Volatile Petroleum Hydrocarbons (VPH)

Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	650	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	450	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	200	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	5.8	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	2.1	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	113		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	109		%	1	10/05/22	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

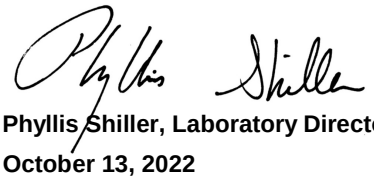
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	9:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46669

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE04-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				09/30/22	X/K	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/03/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/03/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/03/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/03/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/03/22	WB	40 - 140 %
% Nitrobenzene-d5	81		%	1	10/03/22	WB	40 - 140 %
% Terphenyl-d14	58		%	1	10/03/22	WB	40 - 140 %

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46669
Client ID: 22A-AE04-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	65		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	80		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	81		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	71		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	112		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	109		%	1	10/05/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	11:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46670

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC103-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				09/30/22	X/K	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/04/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/04/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/04/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/04/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/04/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/04/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/04/22	WB	40 - 140 %
% Nitrobenzene-d5	68		%	1	10/04/22	WB	40 - 140 %
% Terphenyl-d14	45		%	1	10/04/22	WB	40 - 140 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46670
Client ID: 22A-TRC103-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	69		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	83		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	87		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	82		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	118		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	110		%	1	10/05/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Ver 1

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/30/22	13:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46671

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC102-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.052	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	0.047	0.004	mg/L	1	10/05/22	TH	SW6010D
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/04/22	X/K	SW3520C
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				09/30/22		MADEP EPH-19
	Completed				10/05/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46671

Client ID: 22A-TRC102-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	4.7	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/05/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/05/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/05/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/05/22	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	10/05/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/05/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	10/05/22	WB	40 - 140 %
% Nitrobenzene-d5	80		%	1	10/05/22	WB	40 - 140 %
% Terphenyl-d14	68		%	1	10/05/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	67		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	83		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	85		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	82		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46671

Client ID: 22A-TRC102-093022-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/05/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	117		%	1	10/05/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	113		%	1	10/05/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

October 13, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	9:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47534

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE101R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	8.6	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47534

Client ID: 22A-AE101R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	68	10	ug/L	10	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	25	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	75	10	ug/L	10	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	18	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	100		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	101		%	10	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (10x)	95		%	10	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (10x)	99		%	10	10/12/22	HM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	101		%	10	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	4.7	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	80		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47535

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE101R4-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	1.09	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.965	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	1.15	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.941	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	41.7	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/03/22 20:01	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/03/22 20:01	BS/GD	E300.0
Sulfate	30.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	0.08	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	2.1	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	9.2	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47535

Client ID: 22A-AE101R4-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	240	20	ug/L	20	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	53	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47535
Client ID: 22A-AE101R4-100322-1

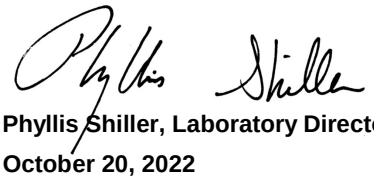
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	160	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	13	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	95		%	2	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (2x)	96		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	99		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	96		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	90		%	20	10/12/22	HM	70 - 130 %
% Toluene-d8 (20x)	99		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47536

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE101R6-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	2.73	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.574	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	3.02	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.577	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	78.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/03/22 20:11	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/03/22 20:11	BS/GD	E300.0
Sulfate	75.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	0.09	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	7.8	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	61	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	20	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47536

Client ID: 22A-AE101R6-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	970	500	ug/L	500	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	630	500	ug/L	500	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	52	20	ug/L	20	10/12/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	3200	500	ug/L	500	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	320	20	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	101		%	500	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	94		%	500	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	89		%	500	10/13/22	MH	70 - 130 %
% Toluene-d8 (500x)	96		%	500	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	12	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	9:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47537

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE102M-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/06/22	TH	SW6010D
Arsenic (Dissolved)	0.009	0.004	mg/L	1	10/12/22	TH	SW6010D
Iron (Dissolved)	3.65	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	15.6	0.011	mg/L	10	10/14/22	TH	SW6010D
Iron	3.26	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	17.0	0.010	mg/L	10	10/14/22	TH	SW6010D
Chloride	828	125	mg/L	25	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/03/22 22:38	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/03/22 20:21	BS/GD	E300.0
Sulfate	7.9	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	2.4	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	3.0	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	1.3	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	53	10	ug/L	10	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	3.0	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	7.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47537
Client ID: 22A-AE102M-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	1.2	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	24	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	16	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	103		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	98		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	100		%	10	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (10x)	97		%	10	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (10x)	97		%	10	10/12/22	HM	70 - 130 %
% Toluene-d8 (10x)	100		%	10	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.49	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	83		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47538

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103D-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/06/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/12/22	TH	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	2.15	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	0.038	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	2.17	0.010	mg/L	10	10/14/22	TH	SW6010D
Chloride	909	125	mg/L	25	10/03/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/03/22 23:09	BS/GD	E300.0
Nitrate as Nitrogen	4.41	0.10	mg/L	2	10/03/22 22:59	BS/GD	E300.0
Sulfate	39.2	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.6	1.0	mg/L	1	10/04/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	2.3	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	6.6	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	54	10	ug/L	10	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	93	10	ug/L	10	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	98		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	97		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	103		%	10	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (10x)	95		%	10	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (10x)	93		%	10	10/12/22	HM	70 - 130 %
% Toluene-d8 (10x)	100		%	10	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.49	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47539

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE103S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.522	0.004	mg/L	1	10/06/22	TH	SW6010D
Arsenic (Dissolved)	0.172	0.004	mg/L	1	10/12/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47540

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA102S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.563	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.406	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	0.584	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.405	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	212	25.0	mg/L	5	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/04/22 00:21	BS/GD	E300.0
Nitrate as Nitrogen	0.27	0.05	mg/L	1	10/03/22 20:52	BS/GD	E300.0
Sulfate	11.8	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	6.8	1.0	mg/L	1	10/04/22	EG	SM5310B-14
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/06/22	X/MQ	SW3520C
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/03/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47540

Client ID: 22A-GZA102S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrachloroethene	2.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.4	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	100		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/07/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/07/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	63		%	1	10/07/22	WB	40 - 140 %
% Nitrobenzene-d5	68		%	1	10/07/22	WB	40 - 140 %
% Terphenyl-d14	58		%	1	10/07/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47540
Client ID: 22A-GZA102S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	83		%	1	10/08/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	88		%	1	10/08/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	92		%	1	10/08/22	AW	40 - 140 %
% o-terphenyl (aromatic)	91		%	1	10/08/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	116		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	109		%	1	10/06/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47541

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA102S-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.570	0.011	mg/L	1	10/12/22	TH	SW6010D
Manganese (Dissolved)	0.410	0.001	mg/L	1	10/12/22	TH	SW6010D
Iron	0.567	0.010	mg/L	1	10/06/22	TH	SW6010D
Manganese	0.399	0.001	mg/L	1	10/06/22	TH	SW6010D
Chloride	218	25.0	mg/L	5	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/04/22 00:41	BS/GD	E300.0
Nitrate as Nitrogen	0.28	0.05	mg/L	1	10/03/22 21:02	BS/GD	E300.0
Sulfate	11.6	5.0	mg/L	1	10/03/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	6.8	1.0	mg/L	1	10/04/22	EG	SM5310B-14
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/06/22	X/MQ	SW3520C
Dissolved Metals Preparation	Completed				10/04/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/03/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47541

Client ID: 22A-GZA102S-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrachloroethene	2.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.3	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	95		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/07/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluorene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	10/07/22	WB	SW8270D (SIM)
Naphthalene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.48	ug/L	1	10/07/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/07/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/07/22	WB	40 - 140 %
% Nitrobenzene-d5	63		%	1	10/07/22	WB	40 - 140 %
% Terphenyl-d14	52		%	1	10/07/22	WB	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/07/22	AW	MAEPH 5/2019

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47541
Client ID: 22A-GZA102S-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	54		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	80		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	85		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	81		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	101		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	94		%	1	10/06/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	11:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47542

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PZ2S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/06/22	X/MQ	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				10/03/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/07/22	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/07/22	WB	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/07/22	WB	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/07/22	WB	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	56		%	1	10/07/22	WB	40 - 140 %
% Nitrobenzene-d5	78		%	1	10/07/22	WB	40 - 140 %
% Terphenyl-d14	53		%	1	10/07/22	WB	40 - 140 %

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47542
Client ID: 22A-PZ2S-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/07/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	63		%	1	10/07/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	94		%	1	10/07/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	104		%	1	10/07/22	AW	40 - 140 %
% o-terphenyl (aromatic)	83		%	1	10/07/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	510	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	390	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	120	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	2.9	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	103		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	1	10/06/22	V	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Ver 1

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:10
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49146

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-IP1R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethane	75	20	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloroethene	19	7.0	ug/L	20	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/12/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/12/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49146

Client ID: 22A-IP1R2-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/12/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/12/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	84	20	ug/L	20	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/12/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/12/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/12/22	MH	SW8260C
Tetrachloroethene	2800	400	ug/L	400	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/12/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
Trichloroethene	6000	400	ug/L	400	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/12/22	MH	SW8260C
Vinyl chloride	ND	5.0	ug/L	20	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	91		%	20	10/12/22	MH	70 - 130 %
% Toluene-d8 (20x)	102		%	20	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (400x)	102		%	400	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (400x)	95		%	400	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (400x)	91		%	400	10/13/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49146
Client ID: 22A-IP1R2-100322-1

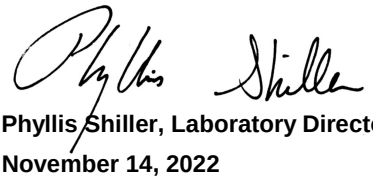
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (400x)	95		%	400	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49147

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-TRC101-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/06/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/07/22	X/MQ	SW3520C
MA Petroleum Hydrocarbon (EPH)	Completed				10/04/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	0.51	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/10/22	KCA	SW8270D (SIM)
QA/QC Surrogates							
% 2-Fluorobiphenyl	52		%	1	10/10/22	KCA	40 - 140 %
% Nitrobenzene-d5	66		%	1	10/10/22	KCA	40 - 140 %
% Terphenyl-d14	34		%	1	10/10/22	KCA	40 - 140 % 3

Ver 2

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49147
Client ID: 22A-TRC101-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	190	ug/L	1	10/08/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	71		%	1	10/08/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	90		%	1	10/08/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	103		%	1	10/08/22	AW	40 - 140 %
% o-terphenyl (aromatic)	77		%	1	10/08/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	530	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	340	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	190	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	1.2	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	1	10/06/22	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Semi-Volatile Comment:
Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

November 14, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49148

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE2R-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49148
Client ID: 22A-AE2R-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	6.0	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	96		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

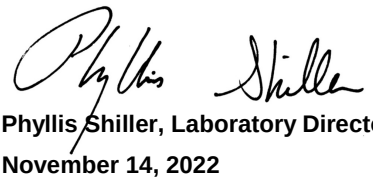
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49148
Client ID: 22A-AE2R-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49149

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104D-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49149
Client ID: 22A-AE104D-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	1.2	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.7	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	95		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Ver 2

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49149
Client ID: 22A-AE104D-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	15:00
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49150

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE104D-100322-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49150
Client ID: 22A-AE104D-100322-2

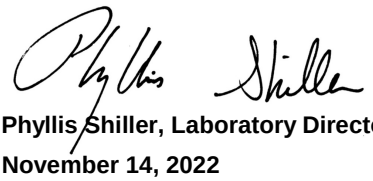
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	1.1	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.8	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	94		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	99		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	76		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	9:30
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49151

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA12-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.005	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/10/22	CPP	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.436	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.055	0.010	mg/L	1	10/07/22	TH	SW6010D
Manganese	0.473	0.001	mg/L	1	10/07/22	TH	SW6010D
Chloride	727	50.0	mg/L	10	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/04/22 23:14	BS/GD	E300.0
Nitrate as Nitrogen	8.42	0.50	mg/L	10	10/04/22 23:14	BS/GD	E300.0
Sulfate	32.2	5.0	mg/L	1	10/04/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	10/05/22	EG	SM5310B-14
Client MS/MSD	Completed				10/11/22		
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49151

Client ID: 22A-GZA12-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	97		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	101		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	86		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49152

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA101R-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.005	0.004	mg/L	1	10/10/22	CPP	SW6010D
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	7.9	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	220	20	ug/L	20	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	150	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	102		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	93		%	2	10/12/22	HM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (2x)	99		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	95		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	99		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	97		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	99		%	20	10/12/22	HM	70 - 130 %
% Toluene-d8 (20x)	101		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	8:42
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49153

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE29R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/04/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	1.7	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	94		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	96		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)

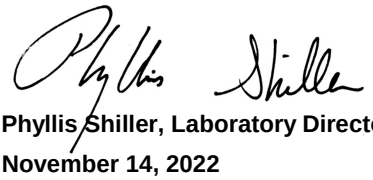
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49153
Client ID: 22A-AE29R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	9:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49154

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22AAE29R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	5.0	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49154
Client ID: 22AAE29R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	13	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	12	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	19	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 2

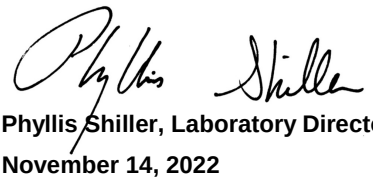
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49154
Client ID: 22AAE29R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	10:23
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49155

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE29R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	45	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethene	9.1	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	160	20	ug/L	20	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	6.1	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	78	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	21	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	102		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	92		%	2	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (2x)	94		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	99		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	103		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	95		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	97		%	20	10/12/22	HM	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49155
Client ID: 22A-AE29R5-100422-1

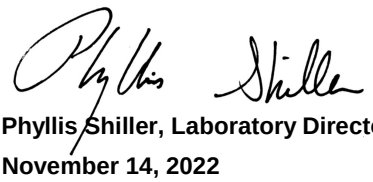
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (20x)	100		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:08
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49156

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE29R6-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	1.01	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.821	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	1.09	0.010	mg/L	1	10/07/22	TH	SW6010D
Manganese	0.879	0.001	mg/L	1	10/07/22	TH	SW6010D
Chloride	443	50.0	mg/L	10	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	10/04/22 23:25	BS/GD	E300.0
Nitrate as Nitrogen	< 0.25	0.25	mg/L	5	10/04/22 23:25	BS/GD	E300.0
Sulfate	35.2	25.0	mg/L	5	10/04/22	BS/GD	E300.0
Sulfide	0.09	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	10/05/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	

Volatiles

1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloroethane	59	20	ug/L	20	10/12/22	HM	SW8260C
1,1-Dichloroethene	15	2.0	ug/L	2	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/12/22	HM	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49156

Client ID: 22A-AE29R6-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
2-Hexanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Acetone	ND	50	ug/L	2	10/12/22	HM	SW8260C
Benzene	ND	1.4	ug/L	2	10/12/22	HM	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Bromoform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloroform	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	370	20	ug/L	20	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/12/22	HM	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/12/22	HM	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Styrene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrachloroethene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/12/22	HM	SW8260C
Toluene	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	25	2.0	ug/L	2	10/12/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/12/22	HM	SW8260C
Trichloroethene	70	20	ug/L	20	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/12/22	HM	SW8260C
Vinyl chloride	14	2.0	ug/L	2	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (2x)	92		%	2	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (2x)	98		%	2	10/12/22	HM	70 - 130 %
% Toluene-d8 (2x)	98		%	2	10/12/22	HM	70 - 130 %
% 1,2-dichlorobenzene-d4 (20x)	100		%	20	10/12/22	HM	70 - 130 %
% Bromofluorobenzene (20x)	98		%	20	10/12/22	HM	70 - 130 %
% Dibromofluoromethane (20x)	95		%	20	10/12/22	HM	70 - 130 %
% Toluene-d8 (20x)	98		%	20	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/12/22	HM	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	26	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	72		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	10:35
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49157

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.027	0.004	mg/L	1	10/07/22	TH	SW6010D
Arsenic (Dissolved)	0.059	0.004	mg/L	1	10/10/22	CPP	SW6010D
EPH Extraction	Completed				10/10/22	CV/CV	SW3510C
Semi-Volatile Extraction	Completed				10/07/22	X/MQ	SW3520C
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
MA Petroleum Hydrocarbon (EPH)	Completed				10/04/22		MADEP EPH-19
	Completed				10/06/22	V	MA VPH 2/20182.1, 201
Semivolatiles by SIM, PAH							
2-Methylnaphthalene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Acenaphthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Acenaphthylene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benz(a)anthracene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Chrysene	ND	0.05	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Fluoranthene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Fluorene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.09	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Naphthalene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Phenanthrene	ND	0.47	ug/L	1	10/10/22	KCA	SW8270D (SIM)
Pyrene	ND	0.07	ug/L	1	10/10/22	KCA	SW8270D (SIM)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 2-Fluorobiphenyl	61		%	1	10/10/22	KCA	40 - 140 %
% Nitrobenzene-d5	71		%	1	10/10/22	KCA	40 - 140 %
% Terphenyl-d14	50		%	1	10/10/22	KCA	40 - 140 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	200	ug/L	1	10/12/22	AW	MAEPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	74		%	1	10/12/22	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	67		%	1	10/12/22	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	82		%	1	10/12/22	AW	40 - 140 %
% o-terphenyl (aromatic)	76		%	1	10/12/22	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	710	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Unadjusted C9-C12 Aliphatics (*1)	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C5-C8 Aliphatic Hydrocarbons *1,2	700	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C12 Aliphatic Hydrocarbons *1,3	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
C9-C10 Aromatic Hydrocarbons *1	ND	100	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Benzene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Ethyl Benzene	1.5	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
MTBE	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Naphthalene	ND	5.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
Toluene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
m,p-Xylenes	ND	2.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
o-Xylene	ND	1.0	ug/L	1	10/06/22	V	MA VPH 2/20182.1, 201
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	94		%	1	10/06/22	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	85		%	1	10/06/22	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

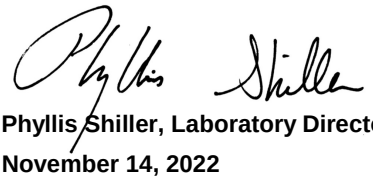
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:05
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49158

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1-Dichloroethane	6.5	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/12/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/12/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49158
Client ID: 22A-AE100R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/12/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/12/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/12/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/12/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	130	5.0	ug/L	5	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/12/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Tetrachloroethene	590	50	ug/L	50	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/12/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/12/22	MH	SW8260C
Trichloroethene	550	50	ug/L	50	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/12/22	MH	SW8260C
Vinyl chloride	13	5.0	ug/L	5	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	91		%	5	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	99		%	5	10/12/22	MH	70 - 130 %
% Toluene-d8 (5x)	98		%	5	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (50x)	89		%	50	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (50x)	98		%	50	10/12/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49158
Client ID: 22A-AE100R2-100422-1

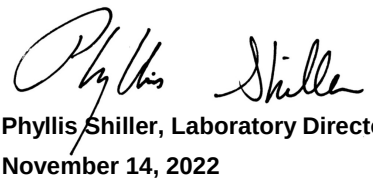
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (50x)	100		%	50	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:15
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49159

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethane	42	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethene	13	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Hexanone	ND	38	ug/L	10	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	10/15/22	MH	SW8260C
Acetone	ND	250	ug/L	10	10/15/22	MH	SW8260C

Ver 2

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49159
Client ID: 22A-AE100R3-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromodichloromethane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	10	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroform	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	65	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	38	ug/L	10	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Naphthalene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
o-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Styrene	ND	10	ug/L	10	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Tetrachloroethene	3900	500	ug/L	500	10/18/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	10/15/22	MH	SW8260C
Toluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	10	ug/L	10	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Trichloroethene	4400	500	ug/L	500	10/18/22	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Vinyl chloride	3.4	2.5	ug/L	10	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	97		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	99		%	10	10/15/22	MH	70 - 130 %
% Toluene-d8 (10x)	87		%	10	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (500x)	100		%	500	10/18/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	97		%	500	10/18/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	102		%	500	10/18/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49159
Client ID: 22A-AE100R3-100422-1

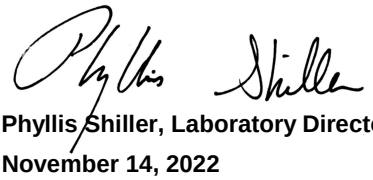
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (500x)	99		%	500	10/18/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	400	ug/L	10	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:25
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49160

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethane	41	20	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloroethene	13	7.0	ug/L	20	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	10	ug/L	20	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
2-Hexanone	ND	40	ug/L	20	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	100	ug/L	20	10/15/22	MH	SW8260C
Acetone	ND	500	ug/L	20	10/15/22	MH	SW8260C

Ver 2

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49160

Client ID: 22A-AE100R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromochloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Bromodichloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromoform	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	20	10/15/22	MH	SW8260C
Carbon Disulfide	ND	100	ug/L	20	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Chlorobenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloroform	ND	20	ug/L	20	10/15/22	MH	SW8260C
Chloromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	160	20	ug/L	20	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromochloromethane	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	20	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Ethylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Isopropylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
m&p-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	40	ug/L	20	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	20	ug/L	20	10/15/22	MH	SW8260C
Methylene chloride	ND	10	ug/L	20	10/15/22	MH	SW8260C
Naphthalene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
n-Propylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
o-Xylene	ND	20	ug/L	20	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Styrene	ND	20	ug/L	20	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	20	ug/L	20	10/15/22	MH	SW8260C
Tetrachloroethene	2900	200	ug/L	200	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	50	ug/L	20	10/15/22	MH	SW8260C
Toluene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	20	ug/L	20	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	5.0	ug/L	20	10/15/22	MH	SW8260C
Trichloroethene	3700	200	ug/L	200	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	20	ug/L	20	10/15/22	MH	SW8260C
Vinyl chloride	5.1	5.0	ug/L	20	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (20x)	101		%	20	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (20x)	94		%	20	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (20x)	101		%	20	10/15/22	MH	70 - 130 %
% Toluene-d8 (20x)	93		%	20	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (200x)	97		%	200	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (200x)	93		%	200	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (200x)	105		%	200	10/15/22	MH	70 - 130 %

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49160
Client ID: 22A-AE100R4-100422-1

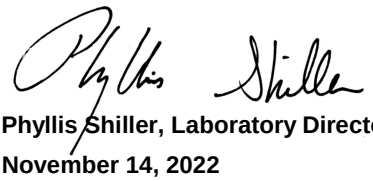
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (200x)	98		%	200	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	800	ug/L	20	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	20	ug/L	20	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.7	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	70		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	11:40
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49161

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE100R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.019	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.674	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.030	0.010	mg/L	1	10/07/22	TH	SW6010D
Manganese	0.762	0.001	mg/L	1	10/07/22	TH	SW6010D
Chloride	427	50.0	mg/L	10	10/04/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	10/05/22 00:31	BS/GD	E300.0
Nitrate as Nitrogen	0.72	0.05	mg/L	1	10/04/22 22:43	BS/GD	E300.0
Sulfate	29.6	5.0	mg/L	1	10/04/22	BS/GD	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.4	1.0	mg/L	1	10/05/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethane	30	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloroethene	10	10	ug/L	10	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C

Ver 2

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49161

Client ID: 22A-AE100R5-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
2-Hexanone	ND	38	ug/L	10	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	50	ug/L	10	10/15/22	MH	SW8260C
Acetone	ND	250	ug/L	10	10/15/22	MH	SW8260C
Benzene	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Bromobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromochloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Bromodichloromethane	ND	3.0	ug/L	10	10/15/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	10	10/15/22	MH	SW8260C
Bromomethane	ND	7.0	ug/L	10	10/15/22	MH	SW8260C
Carbon Disulfide	ND	50	ug/L	10	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Chlorobenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloroform	ND	10	ug/L	10	10/15/22	MH	SW8260C
Chloromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	950	100	ug/L	100	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromochloromethane	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Dibromomethane	ND	8.3	ug/L	10	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Ethylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Isopropylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
m&p-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	38	ug/L	10	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/L	10	10/15/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	10	10/15/22	MH	SW8260C
Naphthalene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
n-Propylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
o-Xylene	ND	10	ug/L	10	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Styrene	ND	10	ug/L	10	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	10	ug/L	10	10/15/22	MH	SW8260C
Tetrachloroethene	980	100	ug/L	100	10/12/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	25	ug/L	10	10/15/22	MH	SW8260C
Toluene	ND	10	ug/L	10	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	13	10	ug/L	10	10/15/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	2.5	ug/L	10	10/15/22	MH	SW8260C
Trichloroethene	1400	100	ug/L	100	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	10	ug/L	10	10/15/22	MH	SW8260C
Vinyl chloride	43	10	ug/L	10	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	92		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	100		%	10	10/15/22	MH	70 - 130 %
% Toluene-d8 (10x)	94		%	10	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	99		%	100	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	90		%	100	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/12/22	MH	70 - 130 %
% Toluene-d8 (100x)	98		%	100	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	400	ug/L	10	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	10	ug/L	10	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	6.9	0.20	ug/l	1	10/06/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	78		%	1	10/06/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/06/22	G/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 14, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:45
Location Code:	AECOM-WILMINGTN	Received by:	SW	10/04/22	16:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM49146
Phoenix ID: CM49163

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2
Client ID: 22A-EMW10D-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethane	1.4	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	MH	SW8260C

Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49163
Client ID: 22A-EMW10D-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,2-Dichloroethene	22	1.0	ug/L	1	10/12/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Tetrachloroethene	99	10	ug/L	10	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	MH	SW8260C
Trichloroethene	41	10	ug/L	10	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	MH	SW8260C
Vinyl chloride	3.2	1.0	ug/L	1	10/12/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/12/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/12/22	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	10/12/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	98		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	93		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	104		%	10	10/15/22	MH	70 - 130 %

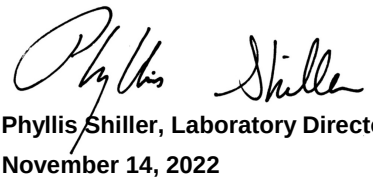
Project ID: LOCKHEAD-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM49163
Client ID: 22A-EMW10D-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	99		%	10	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 14, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	14:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50294

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-GZA10-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.046	0.004	mg/L	1	10/11/22	CPP	SW6010D
Arsenic (Dissolved)	0.038	0.004	mg/L	1	10/10/22	CPP	SW6010D
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50295

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/11/22	CPP	SW6010D
Arsenic (Dissolved)	0.006	0.004	mg/L	1	10/10/22	CPP	SW6010D
Iron (Dissolved)	0.118	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.728	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.227	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	0.748	0.001	mg/L	1	10/11/22	CPP	SW6010D
Chloride	155	10.0	mg/L	2	10/06/22	B/E/G	E300.0
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/06/22 23:13	B/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 07:51	BS/GD	E300.0
Sulfate	16.4	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.17	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1-Dichloroethane	26	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50295

Client ID: 22A-AE26R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/13/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/13/22	MH	SW8260C
Benzene	ND	3.5	ug/L	5	10/13/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/13/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/13/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/13/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	45	5.0	ug/L	5	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/13/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Tetrachloroethene	410	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/13/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	9.5	5.0	ug/L	5	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/13/22	MH	SW8260C
Trichloroethene	730	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/13/22	MH	SW8260C
Vinyl chloride	75	5.0	ug/L	5	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	103		%	5	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	95		%	5	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/13/22	MH	70 - 130 %
% Toluene-d8 (5x)	102		%	5	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	90		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/13/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	16	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	81		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C12 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude conc.s of any surrogate(s) and/or Int. std.s eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbon

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50296

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethane	24	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethene	5.1	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/14/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50296

Client ID: 22A-AE26R4-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/14/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/14/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/14/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,2-Dichloroethene	600	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Tetrachloroethene	360	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/14/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,2-Dichloroethene	39	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Trichloroethene	490	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Vinyl chloride	140	5.0	ug/L	5	10/14/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	101		%	5	10/14/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	10/14/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	90		%	5	10/14/22	MH	70 - 130 %
% Toluene-d8 (5x)	101		%	5	10/14/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	92		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	10/13/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50296
Client ID: 22A-AE26R4-100522-1

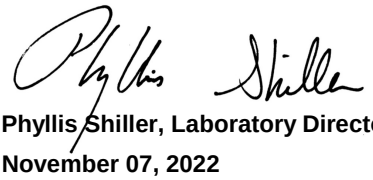
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	97		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/14/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	13:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50297

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE26S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/11/22	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/10/22	CPP	SW6010D
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50297

Client ID: 22A-AE26S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	27	10	ug/L	10	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	20	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	1.0	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	11	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	1.1	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/13/22	MH	70 - 130 %

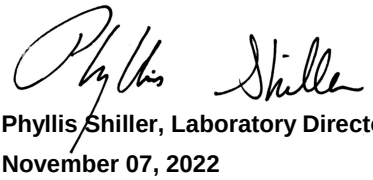
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50297
Client ID: 22A-AE26S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	92		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	98		%	10	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	94		%	10	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	88		%	10	10/15/22	MH	70 - 130 %
% Toluene-d8 (10x)	98		%	10	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50298

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE27R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.070	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	1.07	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.069	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	1.01	0.001	mg/L	1	10/11/22	CPP	SW6010D
Chloride	967	125	mg/L	25	10/06/22	B/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/06/22 23:33	B/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 08:01	BS/GD	E300.0
Sulfate	21.1	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.70	0.10	mg/L	2	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	6.5	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50298

Client ID: 22A-AE27R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/13/22	MH	SW8260C
Benzene	ND	1.4	ug/L	2	10/13/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	120	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/13/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Tetrachloroethene	130	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/13/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50298
Client ID: 22A-AE27R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Trichloroethene	240	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	95		%	2	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	92		%	2	10/13/22	MH	70 - 130 %
% Toluene-d8 (2x)	100		%	2	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	92		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50299

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE24-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/14/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/14/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/14/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/14/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,2-Dichloroethene	11	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Tetrachloroethene	710	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/14/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Trichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	103		%	5	10/14/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	96		%	5	10/14/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	94		%	5	10/14/22	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	10/14/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	104		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	90		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	95		%	100	10/13/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50299
Client ID: 22A-AE24-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	97		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/14/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	79		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50300

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE24-100522-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,1-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
1,1,2-Trichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,1-Dichloropropene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,3-Trichloropropane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
1,2-Dibromoethane	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloroethane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,2-Dichloropropane	ND	3.0	ug/L	5	10/14/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,3-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
1,4-Dichlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2,2-Dichloropropane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
2-Hexanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
4-Chlorotoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
4-Methyl-2-pentanone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Acetone	ND	130	ug/L	5	10/14/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	3.5	ug/L	5	10/14/22	MH	SW8260C
Bromobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromochloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Bromodichloromethane	ND	2.5	ug/L	5	10/14/22	MH	SW8260C
Bromoform	ND	4.0	ug/L	5	10/14/22	MH	SW8260C
Bromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Carbon Disulfide	ND	25	ug/L	5	10/14/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Chlorobenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloroform	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Chloromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,2-Dichloroethene	13	5.0	ug/L	5	10/14/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Dibromochloromethane	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
Dibromomethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Dichlorodifluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Ethylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Hexachlorobutadiene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Isopropylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
m&p-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methyl ethyl ketone	ND	25	ug/L	5	10/14/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Methylene chloride	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Naphthalene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
n-Propylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
o-Xylene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
p-Isopropyltoluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
sec-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Styrene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
tert-Butylbenzene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Tetrachloroethene	650	100	ug/L	100	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/L	5	10/14/22	MH	SW8260C
Toluene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	1.3	ug/L	5	10/14/22	MH	SW8260C
Trichloroethene	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorofluoromethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Trichlorotrifluoroethane	ND	5.0	ug/L	5	10/14/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	5	10/14/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (5x)	103		%	5	10/14/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	97		%	5	10/14/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	90		%	5	10/14/22	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	10/14/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	100		%	100	10/13/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50300
Client ID: 22A-AE24-100522-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	200	ug/L	5	10/14/22	MH	SW8260C (OXY)
Diethyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	5.0	ug/L	5	10/14/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	80		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50301

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE23S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50301

Client ID: 22A-AE23S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	9.6	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	94	10	ug/L	10	10/17/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	16	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	90		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10x)	99		%	10	10/17/22	MH	70 - 130 %
% Bromofluorobenzene (10x)	96		%	10	10/17/22	MH	70 - 130 %
% Dibromofluoromethane (10x)	94		%	10	10/17/22	MH	70 - 130 %

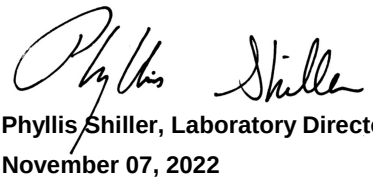
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50301
Client ID: 22A-AE23S-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10x)	97		%	10	10/17/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50302

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE23R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	1100	500	ug/L	500	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,1-Dichloroethane	890	500	ug/L	500	10/15/22	MH	SW8260C
1,1-Dichloroethene	530	500	ug/L	500	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	500	ug/L	500	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	250	ug/L	500	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	370	ug/L	500	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	500	ug/L	500	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	240	ug/L	500	10/15/22	MH	SW8260C
2-Hexanone	ND	1000	ug/L	500	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	250	ug/L	500	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	1000	ug/L	500	10/15/22	MH	SW8260C
Acetone	ND	6300	ug/L	500	10/15/22	MH	SW8260C

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50302

Client ID: 22A-AE23R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromochloromethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromodichloromethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromoform	ND	130	ug/L	500	10/15/22	MH	SW8260C
Bromomethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Carbon Disulfide	ND	810	ug/L	500	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	130	ug/L	500	10/15/22	MH	SW8260C
Chlorobenzene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Chloroethane	ND	500	ug/L	500	10/15/22	MH	SW8260C
Chloroform	ND	130	ug/L	500	10/15/22	MH	SW8260C
Chloromethane	ND	190	ug/L	500	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	140	130	ug/L	500	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Dibromochloromethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Dibromomethane	ND	130	ug/L	500	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	200	ug/L	500	10/15/22	MH	SW8260C
Ethylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Isopropylbenzene	ND	450	ug/L	500	10/15/22	MH	SW8260C
m&p-Xylene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	1000	ug/L	500	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	130	ug/L	500	10/15/22	MH	SW8260C
Methylene chloride	ND	250	ug/L	500	10/15/22	MH	SW8260C
Naphthalene	ND	250	ug/L	500	10/15/22	MH	SW8260C
n-Butylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
n-Propylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
o-Xylene	ND	500	ug/L	500	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	500	ug/L	500	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Styrene	ND	130	ug/L	500	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	500	ug/L	500	10/15/22	MH	SW8260C
Tetrachloroethene	39000	10000	ug/L	10000	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	1300	ug/L	500	10/15/22	MH	SW8260C
Toluene	3300	500	ug/L	500	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	130	ug/L	500	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	130	ug/L	500	10/15/22	MH	SW8260C
Trichloroethene	140000	10000	ug/L	10000	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	500	ug/L	500	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	500	ug/L	500	10/15/22	MH	SW8260C
Vinyl chloride	ND	130	ug/L	500	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (500x)	100		%	500	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (500x)	96		%	500	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (500x)	94		%	500	10/15/22	MH	70 - 130 %
% Toluene-d8 (500x)	112		%	500	10/15/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (10000x)	99		%	10000	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (10000x)	95		%	10000	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (10000x)	93		%	10000	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50302
Client ID: 22A-AE23R-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (10000x)	99		%	10000	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	20000	ug/L	500	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	500	ug/L	500	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	9.6	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	Interference		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

The 1,4-Dioxane surrogate was impacted by the large concentration of trichloroethylene. The 1,4-Dioxane was not impacted.

Dioxane
Due to matrix interference from non-target compounds in the sample, surrogate could not be reported.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50303

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethane	160	100	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethene	65	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Hexanone	ND	200	ug/L	100	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	350	ug/L	100	10/13/22	MH	SW8260C
Acetone	ND	2500	ug/L	100	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50303

Client ID: 22A-AE28R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	10/13/22	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	10/13/22	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromoform	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	100	10/13/22	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroform	ND	50	ug/L	100	10/13/22	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	4900	1000	ug/L	1000	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	100	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	10/13/22	MH	SW8260C
Methylene chloride	ND	50	ug/L	100	10/13/22	MH	SW8260C
Naphthalene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Styrene	ND	100	ug/L	100	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Tetrachloroethene	8600	1000	ug/L	1000	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	10/13/22	MH	SW8260C
Toluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	760	100	ug/L	100	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Trichloroethene	18000	1000	ug/L	1000	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Vinyl chloride	930	100	ug/L	100	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	105		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	88		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	97		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	95		%	100	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (1000x)	101		%	1000	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (1000x)	95		%	1000	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (1000x)	95		%	1000	10/15/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50303
Client ID: 22A-AE28R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (1000x)	98		%	1000	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	100	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	10:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50304

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE28R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	1.04	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	2.11	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	1.08	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	2.22	0.010	mg/L	10	10/18/22	TH	SW6010D
Chloride	39.0	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/06/22 08:11	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 08:11	BS/GD	E300.0
Sulfate	19.4	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.27	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethane	190	100	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloroethene	65	25	ug/L	100	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	70	ug/L	100	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	56	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	50	ug/L	100	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	25	ug/L	100	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50304

Client ID: 22A-AE28R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	25	ug/L	100	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	60	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
2-Hexanone	ND	200	ug/L	100	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	350	ug/L	100	10/13/22	MH	SW8260C
Acetone	ND	2500	ug/L	100	10/13/22	MH	SW8260C
Benzene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromobenzene	ND	62	ug/L	100	10/13/22	MH	SW8260C
Bromochloromethane	ND	83	ug/L	100	10/13/22	MH	SW8260C
Bromodichloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromoform	ND	25	ug/L	100	10/13/22	MH	SW8260C
Bromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Carbon Disulfide	ND	500	ug/L	100	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	25	ug/L	100	10/13/22	MH	SW8260C
Chlorobenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Chloroform	ND	50	ug/L	100	10/13/22	MH	SW8260C
Chloromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	1700	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromochloromethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dibromomethane	ND	25	ug/L	100	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Ethylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Isopropylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
m&p-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	200	ug/L	100	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	70	ug/L	100	10/13/22	MH	SW8260C
Methylene chloride	ND	50	ug/L	100	10/13/22	MH	SW8260C
Naphthalene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
n-Propylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
o-Xylene	ND	100	ug/L	100	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Styrene	ND	100	ug/L	100	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	100	ug/L	100	10/13/22	MH	SW8260C
Tetrachloroethene	26000	1000	ug/L	1000	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	250	ug/L	100	10/13/22	MH	SW8260C
Toluene	ND	100	ug/L	100	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	260	100	ug/L	100	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50304
Client ID: 22A-AE28R2-100522-1

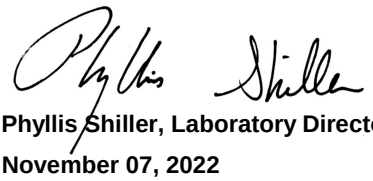
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	25	ug/L	100	10/13/22	MH	SW8260C
Trichloroethene	26000	1000	ug/L	1000	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	100	ug/L	100	10/13/22	MH	SW8260C
Vinyl chloride	260	100	ug/L	100	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (100x)	106		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	89		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	95		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	95		%	100	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (1000x)	101		%	1000	10/15/22	MH	70 - 130 %
% Bromofluorobenzene (1000x)	96		%	1000	10/15/22	MH	70 - 130 %
% Dibromofluoromethane (1000x)	95		%	1000	10/15/22	MH	70 - 130 %
% Toluene-d8 (1000x)	99		%	1000	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	4000	ug/L	100	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	100	ug/L	100	10/13/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	35	0.40	ug/l	1	10/15/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	86		%	1	10/15/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/13/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Sample Results

22A-AE104R5-092822-1	**Collect Date**	09/29/2022 15:15	**Lab ID**	22210013802
	Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 12:42	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.73J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**77**	0.24	1.0	ug/L
74-82-8	**Methane**	**180**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE103R5-092822-1	**Collect Date**	09/28/2022 16:15	**Lab ID**	22210013806
	Receive Date	09/30/2022 10:05	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 12:25	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**0.52J**	0.49	1.9	nM

22A-AE103R5-092822-1	**Collect Date**	09/28/2022 14:10	**Lab ID**	22210013807
	Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 13:06	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.64J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**50**	0.24	1.0	ug/L
74-82-8	**Methane**	**71**	2.0	5.0	ug/L

Sample Results

22A-AE103R5-092822-1

Collect Date	09/28/2022 14:10	**Lab ID**	22210013807
Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 13:06	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE102RR1-092822-1

Collect Date	09/28/2022 17:52	**Lab ID**	22210013808
Receive Date	09/30/2022 10:05	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 12:37	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**0.77J**	0.49	1.9	nM

22A-AE102RR1-092822-1

Collect Date	09/28/2022 13:05	**Lab ID**	22210013809
Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:08	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.55J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**30**	0.24	1.0	ug/L
74-82-8	**Methane**	**110**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE102RR6-0928822-1

Collect Date	09/28/2022 13:30	**Lab ID**	22210013810
Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:20	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.62J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**6.0**	0.24	1.0	ug/L
74-82-8	**Methane**	**36**	2.0	5.0	ug/L

Sample Results

22A-AE102RR6-0928822-1				
	Collect Date	09/28/2022 13:30	**Lab ID**	22210013810
	Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:20	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE108R1-092822-1				
	Collect Date	09/28/2022 13:30	**Lab ID**	22210013811
	Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:32	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.45J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.32J**	0.24	1.0	ug/L
74-82-8	**Methane**	**2900**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE103R2-092822-1	Collect Date	09/28/2022 13:55	Lab ID	22210013813
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:57	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.19J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**2.1**	0.24	1.0	ug/L
74-82-8	**Methane**	**18**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-GZA-102S-100322-1

Collect Date 10/03/2022 10:15 **Lab ID** 22210082601
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/11/22 12:03	751599	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**61**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-GZA-102S-100322-2

Collect Date 10/03/2022 10:15 **Lab ID** 22210082602
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/11/22 12:15	751599	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**70**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE103D-100322-1

Collect Date 10/03/2022 10:50 **Lab ID** 22210082603
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/11/22 12:27	751599	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**7.2**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE102M-100322-1

Collect Date 10/03/2022 09:15 **Lab ID** 22210082604
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 07:40	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**6.5**	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.52J**	0.24	1.0	ug/L
74-82-8	**Methane**	**36**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE101R4-100322-1

Collect Date 10/03/2022 10:00 **Lab ID** 22210082605
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 07:52	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.36J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**4.5**	0.24	1.0	ug/L
74-82-8	**Methane**	**56**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE101R6-100322-1

Collect Date 10/03/2022 11:00 **Lab ID** 22210082606
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:05	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**2.1**	0.17	1.0	ug/L
74-85-1	**Ethene**	**38**	0.24	1.0	ug/L
74-82-8	**Methane**	**56**	2.0	5.0	ug/L
74-98-6	**Propane**	**0.90J**	0.29	1.0	ug/L

Sample Results

22A-GZA12-100422-1

Collect Date	10/04/2022 09:30	**Lab ID**	22210082607
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:20	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-GZA12-100422-1-MS

Collect Date	10/04/2022 09:30	**Lab ID**	22210082608
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:32	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**33**	0.13	0.50	ug/L
74-84-0	**Ethane**	**48**	0.17	1.0	ug/L
74-85-1	**Ethene**	**46**	0.24	1.0	ug/L
74-82-8	**Methane**	**580**	2.0	5.0	ug/L
74-98-6	**Propane**	**68**	0.29	1.0	ug/L

22A-GZA12-100422-1-MSD

Collect Date	10/04/2022 09:30	**Lab ID**	22210082609
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 08:47	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**40**	0.13	0.50	ug/L
74-84-0	**Ethane**	**45**	0.17	1.0	ug/L
74-85-1	**Ethene**	**43**	0.24	1.0	ug/L
74-82-8	**Methane**	**510**	2.0	5.0	ug/L
74-98-6	**Propane**	**64**	0.29	1.0	ug/L

Sample Results

22A-AE100R5-100422-1

Collect Date 10/04/2022 13:12 **Lab ID** 22210082613
Receive Date 10/07/2022 09:26 **Matrix** Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 07:59	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**1.3J**	0.49	1.9	nM

22A-AE100R5-100422-1

Collect Date 10/04/2022 11:40 **Lab ID** 22210082614
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:25	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.7**	0.17	1.0	ug/L
74-85-1	**Ethene**	**5.9**	0.24	1.0	ug/L
74-82-8	**Methane**	**110**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE29R6-100422-1

Collect Date 10/04/2022 11:08 **Lab ID** 22210082615
Receive Date 10/07/2022 09:26 **Matrix** Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:41	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.65J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**1.5**	0.24	1.0	ug/L
74-82-8	**Methane**	**610**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE29R6-100422-1

Collect Date	10/04/2022 12:22	**Lab ID**	22210082616
Receive Date	10/07/2022 09:26	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:11	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**9.2**	0.49	1.9	nM

22A-AE28R2-100522-1

Collect Date	10/05/2022 10:45	**Lab ID**	22210082617
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:53	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**0.46J**	0.13	0.50	ug/L
74-84-0	**Ethane**	**5.1**	0.17	1.0	ug/L
74-85-1	**Ethene**	**10**	0.24	1.0	ug/L
74-82-8	**Methane**	**120**	2.0	5.0	ug/L
74-98-6	**Propane**	**0.48J**	0.29	1.0	ug/L

22A-AE28R2-100522-1

Collect Date	10/05/2022 11:52	**Lab ID**	22210082618
Receive Date	10/07/2022 09:26	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:23	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**16**	0.49	1.9	nM

22A-AE27R-100522-1

Collect Date	10/05/2022 10:45	**Lab ID**	22210082619
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:06	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**1.7**	0.17	1.0	ug/L
74-85-1	**Ethene**	**10**	0.24	1.0	ug/L
74-82-8	**Methane**	**150**	2.0	5.0	ug/L

Sample Results

22A-AE27R-100522-1

Collect Date	10/05/2022 10:45	**Lab ID**	22210082619
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:06	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	**Propane**	**0.31J**	0.29	1.0	ug/L

22A-AE26R1-100522-1

Collect Date	10/05/2022 10:10	**Lab ID**	22210082620
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:18	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.88J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**12**	0.24	1.0	ug/L
74-82-8	**Methane**	**170**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **AECOM**
Project: LMC Wilmington

MI Project Number: **131TI**
Date Received: 09/30/2022

Sample Information

Client Sample ID:	**22A-AE102RR1-092822-1**	**22A-AE103R5-092822-1**
Sample Date:	09/28/2022	09/28/2022
Analyst/Reviewer:	SB/MW	SB/MW

Carbon	Units		
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-20.5**	**-21.8**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**-22.9**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-3.4**	**-25.5**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**ND**	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **AECOM**
Project: LMC Wilmington

MI Project Number: **131TI**
Date Received: 09/30/2022

Sample Information

Client Sample ID:	**22A-AE28R2-100522-1**	**22A-AE29R6-100422-1**	**22A-AE100R5-100422-1**
Sample Date:	10/05/2022	10/04/2022	10/04/2022
Analyst/Reviewer:	SB/MW	SB/MW	SB/MW

Carbon	**Units**			
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-28.3 (J)**	**-25.8**	**-22.7**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-24.2**	**NA**	**-24.3**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-26.6**	**2.0**	**-24.9**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**	**-28.1 (J)**	**ND**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

Results

Table 1: Summary of the QuantArray®-Chlor results obtained for samples 22A-AE106R3-092922-1, 22A-AE105R2-092922-1, 22A-AE102RR1-092822-1, 22A-AE103R5-092822-1, and 22A-TRC301R4-092922-1.

Sample Name Sample Date	22A-AE102RR1-092822-1 09/28/2022	22A-AE103R5-092822-1 09/28/2022
Reductive Dechlorination	cells/mL	cells/mL
Dehalococcoides (DHC)	**1.18E+04**	**5.07E+02**
tceA Reductase (TCE)	<5.00E-01	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	**1.02E+03**	**2.00E-01 (J)**
Vinyl Chloride Reductase (VCR)	**1.32E+02**	**4.53E+01**
Dehalobacter spp. (DHBt)	**1.88E+03**	**2.08E+02**
Dehalobacter DCM (DCM)	<5.00E+00	<5.00E+00
Dehalogenimonas spp. (DHG)	**3.16E+04**	**1.33E+04**
cerA Reductase (CER)	<5.00E+00	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00
Desulfitobacterium spp. (DSB)	**1.20E+03**	**1.87E+04**
Dehalobium chlorocoercia (DECO)	**1.49E+03**	**1.40E+02**
Desulfuromonas spp. (DSM)	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	**1.25E+02**
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00
Aerobic (Co)Metabolic		
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00
Toluene Dioxygenase (TOD)	**2.10E+00 (J)**	**1.80E+00 (J)**
Phenol Hydroxylase (PHE)	<5.00E+00	**3.28E+01**
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	**2.03E+01**	**3.70E+02**
Toluene Monooxygenase (RMO)	**5.35E+01**	**1.18E+01**
Ethene Monooxygenase (EtnC)	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00
Other		
Total Eubacteria (EBAC)	**2.74E+05**	**4.38E+05**
Sulfate Reducing Bacteria (APS)	**5.40E+04**	**1.53E+04**
Methanogens (MGN)	**7.90E+01**	**3.50E+00 (J)**

Legend:
NA = Not Analyzed
I = Inhibited
NS = Not Sampled
< = Result Not Detected
J = Estimated Gene Copies Below PQL but Above LQL

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

Table 2: Summary of the QuantArray®-Chlor results obtained for samples 22A-AE28R2-100522-1, 22A-AE29R6-100422-1, 22A-AE100R5-100422-1, and 22A-AE112R5-100622-1.

Sample Name	**22A-AE28R2-100522-1**	**22A-AE29R6-100422-1**	**22A-AE100R5-100422-1**
Sample Date	**10/05/2022**	**10/04/2022**	**10/04/2022**
Reductive Dechlorination	cells/mL	cells/mL	cells/mL
Dehalococcoides (DHC)	**5.20E+04**	**1.64E+03**	**4.22E+02**
tceA Reductase (TCE)	**1.12E+03**	**2.94E+02**	**1.20E+00**
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01	<5.00E-01	**1.00E+00**
Vinyl Chloride Reductase (VCR)	<5.00E-01	<5.00E-01	**7.35E+01**
Dehalobacter spp. (DHBt)	**4.87E+03**	**1.35E+03**	<5.00E+00
Dehalobacter DCM (DCM)	<5.00E+00	**1.00E+01**	<5.00E+00
Dehalogenimonas spp. (DHG)	**9.36E+04**	**7.02E+04**	**1.38E+03**
cerA Reductase (CER)	<5.00E+00	<5.00E+00	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00	<5.00E+00	<5.00E+00
Desulfitobacterium spp. (DSB)	**5.76E+03**	**2.99E+03**	**2.75E+04**
Dehalobium chlorocoercia (DECO)	**2.59E+03**	**1.70E+03**	**1.22E+03**
Desulfuromonas spp. (DSM)	**4.14E+03**	<5.00E+00	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00	<5.00E+00	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00	<5.00E+00	<5.00E+00
Chloroform Reductase (CFR)	<5.00E+00	<5.00E+00	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00	<5.00E+00	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00	<5.00E+00	<5.00E+00
Aerobic (Co)Metabolic			
Soluble Methane Monooxygenase (SMMO)	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Dioxygenase (TOD)	<5.00E+00	<5.00E+00	<5.00E+00
Phenol Hydroxylase (PHE)	**6.20E+00**	<5.00E+00	**1.18E+03**
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00	<5.00E+00	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00	<5.00E+00	**2.79E+02**
Toluene Monooxygenase (RMO)	<5.00E+00	<5.00E+00	<5.00E+00
Ethene Monooxygenase (EtnC)	**9.60E+01**	<5.00E+00	<5.00E+00
Epoxyalkane Transferase (EtnE)	**4.09E+02**	<5.00E+00	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00	<5.00E+00	<5.00E+00
Other			
Total Eubacteria (EBAC)	**1.31E+06**	**6.38E+05**	**5.36E+05**
Sulfate Reducing Bacteria (APS)	**2.79E+05**	**7.56E+04**	**4.62E+04**
Methanogens (MGN)	<5.00E+00	<5.00E+00	<5.00E+00

Legend:

NA = Not Analyzed
NS = Not Sampled
J = Estimated Gene Copies Below PQL but Above LQL
I = Inhibited
< = Result Not Detected

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 22, 2022

Mr. Ken Polk
Facility Manager, International Family Church
99 Concord St
N. Reading, MA 01864

Subject: September - October 2022 Groundwater Analytical Results
50 Fordham Road, Wilmington, MA

Dear Mr. Polk,

In September – October 2022, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from 12 monitoring wells (MW-5, MW-7, AE-109D, AE-109R (R1, R2, R4, R6, and R8), and AE-110R (R1, R2, R5, and R7) located on your property at 99 Concord Street in N. Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the owner of the property. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September-October 2022 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September-October 2022 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.
Attachments

ATTACHMENT A

BWSC-123 Notification Form

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ken Polk - International Family Church

2. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 99 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☐ 4 commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

MW-5, MW-7, AE-109D, AE-109R-1, 2, 4, 6, and 8, and AE-110R-1, 2, 5 and 7

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

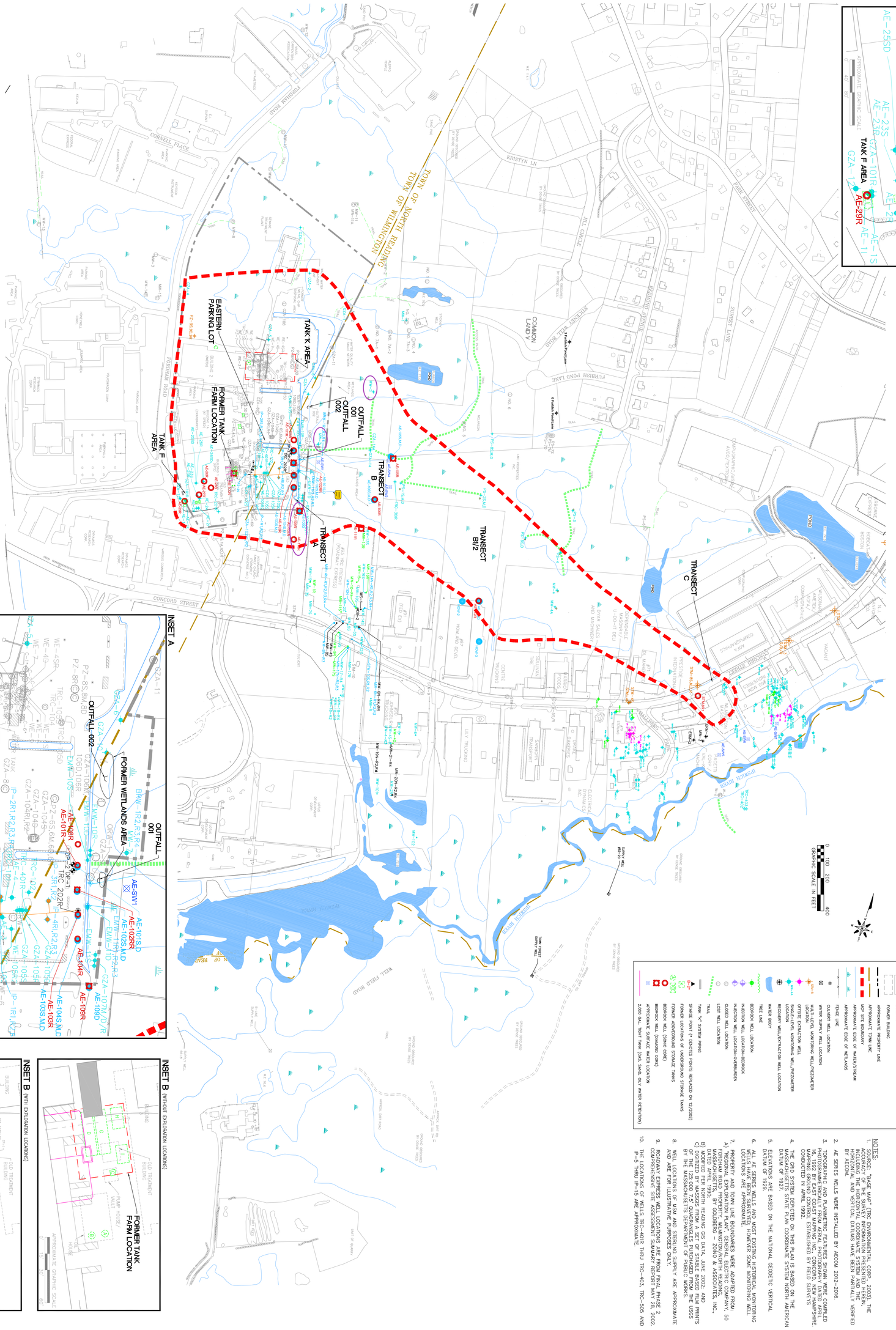
ATTACHMENT B

Groundwater Sampling Location Map

and Analytical Results Summary Tables

Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON 2017-2022\900-CAD-GIS\910 CAD\09_GW MEMO 2018\FIG 1_MONITORING WELL LOCATIONS.DWG Last saved by: BARRYK Last Plotted: 2018-10-16

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ARCH C 18" x 24"
K.P.B. S.O. A.T.



LEGEND

- BUILDING
- FORMER BUILDING
- APPROXIMATE PROPERTY LINE
- APPROXIMATE TOWN LINE
- MCP SITE BOUNDARY
- APPROXIMATE EDGE OF WATER/STREAM
- APPROXIMATE EDGE OF WETLANDS
- FENCE LINE
- CULVERT WELL LOCATION
- WATER SUPPLY WELL LOCATION
- MULTI-LEVEL MONITORING WELL/PIEZOMETER
- OFFSET EXTRACTION WELL
- SINGLE-LEVEL MONITORING WELL/PIEZOMETER LOCATION
- RECOVERY WELL/EXTRACTION WELL LOCATION
- WATER BODY
- TREE LINE
- BEDROCK WELL LOCATION
- INJECTION WELL LOCATION-BEDROCK
- INJECTION WELL LOCATION-OVERBURDEN
- CLOSED WELL LOCATION
- LOST WELL LOCATION
- TRAIL
- TANK "X" SYSTEM PIPING
- SPARGE POINT (* DENOTES POINTS REPLACED ON 12/2002)
- FORMER ABOVEGROUND STORAGE TANKS
- FORMER LOCATIONS OF UNDERGROUND STORAGE TANKS
- BEDROCK WELL (SONIC CORE)
- BEDROCK WELL (DIAMOND CORE)
- APPROXIMATE SURFACE WATER LOCATION
- 2,000 GAL TIGHT TANK (GAS, SAND, OIL/ WATER RETENTION)

NOTES:

1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. AE SERIES WELLS WERE INSTALLED BY AECOM 2012-2016.
3. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 1991 BY MASSACHUSETTS GEODETIC, INC. FIELD SURVEY BY HAMPSHIRE MAPPING GROUND CONTROL ESTABLISHED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
4. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1927.
5. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
6. WELLS AE-1S, AE-1D, AE-1R, AE-2S, AE-2D, AE-2R, AE-3S, AE-3D, AE-3R, AE-4S, AE-4D, AE-4R, AE-5S, AE-5D, AE-5R, AE-6S, AE-6D, AE-6R, AE-7S, AE-7D, AE-7R, AE-8S, AE-8D, AE-8R, AE-9S, AE-9D, AND AE-9R WERE SURVEYED BY CHESTER ENGINEERS. WELL LOCATIONS ARE APPROXIMATE.
7. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM: A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 TYNGSBORO ROAD, PROPERTY BOUNDARY SURVEY BY GOLDBERG ZOINO & ASSOCIATES, INC., MASSACHUSETTS, DATED APRIL 1990; B) NORTH READING DPW, DATED JUNE 2002; AND C) DIGITIZED BY MASSGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 1:25,000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.
8. WELL LOCATIONS OF MSM AND STERLING SUPPLY ARE APPROXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.
9. ROADWAY EXPRESS WELL LOCATIONS ARE FROM FINAL PHASE 2 COMPREHENSIVE SITE ASSESSMENT SUMMARY REPORT MAY 28, 2002.
10. THE LOCATIONS OF WELLS TRC-401R THRU TRC-403, TRC-505 AND IP-5 THRU IP-15 ARE APPROXIMATE.

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

MONITORING WELL LOCATIONS

AECOM

60552044 Date: 2018-10-18

FIGURE: 1

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	Location Group	Downgradient Wetland	Downgradient Wetland	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
						Location ID	MW-5	MW-7	AE109D	AE109R-1	AE109R-2	AE109R-4	AE109R-6	AE109R-8	AE110R-1	AE110R-2	AE110R-5	AE110R-7
						Sample ID	22A-MW5-100322-1	22A-MW7-100322-1	22A-AE109D-100622-1	22A-AE109R1-100422-1	22A-AE109R2-100422-1	22A-AE109R4-100422-1	22A-AE109R6-100422-1	22A-AE109R8-100422-1	22A-AE110R1-100522-1	22A-AE110R2-100522-1	22A-AE110R5-100522-1	22A-AE110R7-100522-1
						Sample Date	10/3/2022	10/3/2022	10/6/2022	10/4/2022	10/4/2022	10/4/2022	10/4/2022	10/4/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022
						Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
						Depth Interval	28 - 38 ft	15 - 25 ft	18 - 23 ft	38 - 43 ft	66 - 76 ft	174 - 180.5 ft	196 - 201 ft	245 - 250 ft	34 - 44 ft	70 - 80 ft	171 - 182 ft	224 - 234 ft
CSIA (‰ VPDB)																		
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Conventional (ug/l)																		
Chloride	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**45500**	NS	NS	NS	NS	NS
Nitrate	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	50 U	NS	NS	NS	NS	NS
Nitrite as N	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	10 U	NS	NS	NS	NS	NS
Sulfate	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**7900**	NS	NS	NS	NS	NS
Sulfide	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**100**	NS	NS	NS	NS	NS
Total Organic Carbon	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**1200**	NS	NS	NS	NS	NS
Dissolved Gases (ug/l)																		
Acetylene	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	0.13 U	NS	NS	NS	NS	NS
Ethane	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**0.72 J-**	NS	NS	NS	NS	NS
Ethene	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**10 J-**	NS	NS	NS	NS	NS
Hydrogen	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methane	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**810 J**	NS	NS	NS	NS	NS
Propane	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	0.29 U	NS	NS	NS	NS	NS
EPH with PAHs (ug/l)																		
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VPH (ug/l)																		
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	4 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**141**	NS	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**222**	NS	NS	NS	NS	NS
Total Metals (ug/l)																		
Arsenic	ug/l	**10**	NE	**900**	**9000**	NS	NS	4 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**154**	NS	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	**237**	NS	NS	NS	NS	NS
SVOCs (ug/l)																		
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	NS	NS	**0.30**	NS	**4.6**	NS	**1.3**	NS	NS	NS	NS	**2.0**	
VOCs (ug/l)																		
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	**3.1**	**5.3**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.50 U	0.50 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	1.0 UJ	1.0 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.50 U	0.50 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	1.2 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	40 U	40 U	50 U	40 U	40 U	80 U	80 U	40 U	40 U	40 U	40 U	40 U	40 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	10 UJ	10 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	ug/l	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	10 UJ	10 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
2-Phenylbutane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	10 UJ	10 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 U	25 U	25 U	25 UJ	25 UJ	50 UJ	50 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	1.4 U	1.4 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Downgradient Wetland	Downgradient Wetland	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A	Transect A
					Location ID	MW-5	MW-7	AE109D	AE109R-1	AE109R-2	AE109R-4	AE109R-6	AE109R-8	AE110R-1	AE110R-2	AE110R-5	AE110R-7
					Sample ID	22A-MW5-100322-1	22A-MW7-100322-1	22A-AE109D-100622-1	22A-AE109R1-100422-1	22A-AE109R2-100422-1	22A-AE109R4-100422-1	22A-AE109R6-100422-1	22A-AE109R8-100422-1	22A-AE110R1-100522-1	22A-AE110R2-100522-1	22A-AE110R5-100522-1	22A-AE110R7-100522-1
					Sample Date	10/3/2022	10/3/2022	10/6/2022	10/4/2022	10/4/2022	10/4/2022	10/4/2022	10/4/2022	10/5/2022	10/5/2022	10/5/2022	10/5/2022
					Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
					Depth Interval	28 - 38 ft	15 - 25 ft	18 - 23 ft	38 - 43 ft	66 - 76 ft	174 - 180.5 ft	196 - 201 ft	245 - 250 ft	34 - 44 ft	70 - 80 ft	171 - 182 ft	224 - 234 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):												
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	2.0 UJ	2.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	2.0 UJ	2.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	10 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	**13**	**26**	1.0 U	**3.1**	**3.2**	**180**	**180**	**6.0**	1.0 U	1.0 U	**1.9**	**1.9**
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.50 U	0.50 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 U	0.50 U	0.50 U	0.50 UJ	0.50 UJ	1.0 UJ	1.0 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.60 U	0.60 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.9**	**7.0**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	5.0 UJ	5.0 UJ	2.5 UJ	2.5 UJ	**4.3 J+**	2.5 UJ	2.5 UJ
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	**1.3**	1.0 U	1.0 U	1.0 U	1.0 U	**2.3**	**3.0**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.40 UJ	0.40 UJ	0.50 UJ	0.50 U	0.40 UJ	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	1.0 U	**9.3**	1.0 U	**1.0**	1.0 U	**27**	**120**	**1.6**	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	1.0 U	**1.9**	1.0 U	1.0 U	1.0 U	2.0 U	**3.9**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U

Notes:

1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

ATTACHMENT C

Groundwater Laboratory Analytical Form 1s

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50289

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50289

Client ID: 22A-AE109R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	3.1	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	1.0	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 2

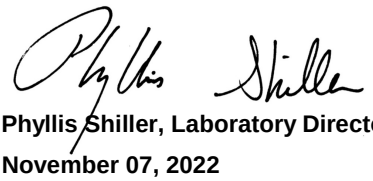
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50289
Client ID: 22A-AE109R1-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50290

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50290
Client ID: 22A-AE109R2-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	3.2	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	88		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	96		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	4.6	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	78		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	14:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50291

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethane	3.1	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50291

Client ID: 22A-AE109R4-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	1.4	ug/L	2	10/13/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	180	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/13/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/13/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Tetrachloroethene	2.9	2.0	ug/L	2	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/13/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	2.3	2.0	ug/L	2	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/13/22	MH	SW8260C
Trichloroethene	27	2.0	ug/L	2	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
Vinyl chloride	ND	2.0	ug/L	2	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	103		%	2	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	95		%	2	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	95		%	2	10/13/22	MH	70 - 130 %
% Toluene-d8 (2x)	96		%	2	10/13/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	103		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/13/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50291
Client ID: 22A-AE109R4-100422-1

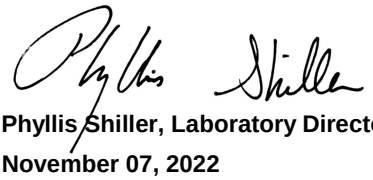
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8 (100x)	98		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	13:45
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50292

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R6-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.141	0.011	mg/L	1	10/10/22	CPP	SW6010D
Manganese (Dissolved)	0.222	0.001	mg/L	1	10/10/22	CPP	SW6010D
Iron	0.154	0.010	mg/L	1	10/11/22	CPP	SW6010D
Manganese	0.237	0.001	mg/L	1	10/11/22	CPP	SW6010D
Chloride	45.5	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/06/22 01:07	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/06/22 01:07	BS/GD	E300.0
Sulfate	7.9	5.0	mg/L	1	10/06/22	BS/GD	E300.0
Sulfide	0.10	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.2	1.0	mg/L	1	10/08/22	EG	SM5310B-14
Client MS/MSD	Completed				10/17/22		
Dissolved Metals Preparation	Completed				10/05/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1,1-Trichloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C
1,1,2-Trichloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1-Dichloroethane	5.3	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1-Dichloroethene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,1-Dichloropropene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50292

Client ID: 22A-AE109R6-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromoethane	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
1,2-Dichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,2-Dichloroethane	ND	1.2	ug/L	2	10/17/22	MH	SW8260C
1,2-Dichloropropane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,3-Dichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,3-Dichloropropane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
1,4-Dichlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
2,2-Dichloropropane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
2-Chlorotoluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
2-Hexanone	ND	10	ug/L	2	10/17/22	MH	SW8260C
4-Chlorotoluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
4-Methyl-2-pentanone	ND	10	ug/L	2	10/17/22	MH	SW8260C
Acetone	ND	50	ug/L	2	10/17/22	MH	SW8260C
Benzene	ND	1.4	ug/L	2	10/17/22	MH	SW8260C
Bromobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Bromochloromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Bromodichloromethane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C
Bromoform	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Bromomethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Carbon Disulfide	ND	10	ug/L	2	10/17/22	MH	SW8260C
Carbon tetrachloride	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chlorobenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chloroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chloroform	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Chloromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
cis-1,2-Dichloroethene	180	100	ug/L	100	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
Dibromochloromethane	ND	1.0	ug/L	2	10/17/22	MH	SW8260C
Dibromomethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Dichlorodifluoromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Ethylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Hexachlorobutadiene	ND	0.60	ug/L	2	10/17/22	MH	SW8260C
Isopropylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
m&p-Xylene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Methyl ethyl ketone	ND	10	ug/L	2	10/17/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Methylene chloride	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Naphthalene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
n-Butylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
n-Propylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
o-Xylene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
p-Isopropyltoluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
sec-Butylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Styrene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
tert-Butylbenzene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Tetrachloroethene	7.0	2.0	ug/L	2	10/17/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	5.0	ug/L	2	10/17/22	MH	SW8260C
Toluene	ND	2.0	ug/L	2	10/17/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,2-Dichloroethene	3.0	2.0	ug/L	2	10/17/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.50	ug/L	2	10/17/22	MH	SW8260C
Trichloroethene	120	100	ug/L	100	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Trichlorotrifluoroethane	ND	2.0	ug/L	2	10/17/22	MH	SW8260C
Vinyl chloride	3.9	2.0	ug/L	2	10/17/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (2x)	101		%	2	10/17/22	MH	70 - 130 %
% Bromofluorobenzene (2x)	98		%	2	10/17/22	MH	70 - 130 %
% Dibromofluoromethane (2x)	90		%	2	10/17/22	MH	70 - 130 %
% Toluene-d8 (2x)	102		%	2	10/17/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (100x)	104		%	100	10/13/22	MH	70 - 130 %
% Bromofluorobenzene (100x)	91		%	100	10/13/22	MH	70 - 130 %
% Dibromofluoromethane (100x)	98		%	100	10/13/22	MH	70 - 130 %
% Toluene-d8 (100x)	99		%	100	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	80	ug/L	2	10/17/22	MH	SW8260C (OXY)
Diethyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	2.0	ug/L	2	10/17/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	1.3	0.20	ug/l	1	10/10/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	76		%	1	10/10/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/07/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Volatile Comment:
Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/04/22	14:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/05/22	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM50288
Phoenix ID: CM50293

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109R8-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/13/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/13/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50293
Client ID: 22A-AE109R8-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/13/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,2-Dichloroethene	6.0	1.0	ug/L	1	10/13/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/13/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/13/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/13/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/13/22	MH	SW8260C
Trichloroethene	1.6	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/13/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	10/13/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/13/22	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	10/13/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/13/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/13/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

Ver 2

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM50293

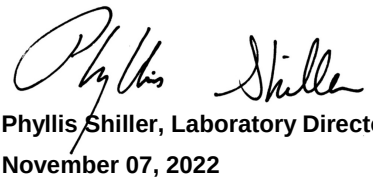
Client ID: 22A-AE109R8-100422-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/13/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

November 07, 2022

Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51234

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51234

Client ID: 22A-AE110R1-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	92		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51234

Client ID: 22A-AE110R1-100522-1

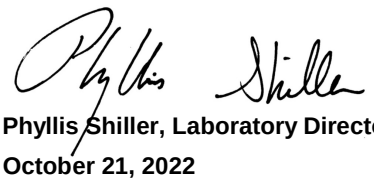
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

CM51234 - The pH in the preserved volatile vial was greater than 2. A negative bias may have occurred.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51235

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	4.3	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51235

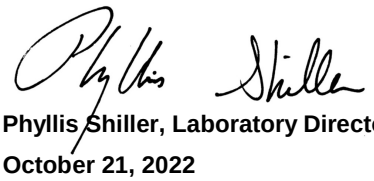
Client ID: 22A-AE110R2-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51236

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51236

Client ID: 22A-AE110R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	1.9	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51236

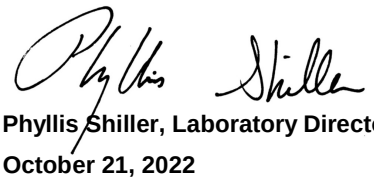
Client ID: 22A-AE110R5-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/05/22	14:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51237

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE110R7-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51237

Client ID: 22A-AE110R7-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	1.9	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

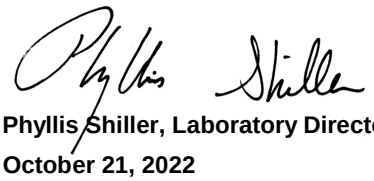
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51237
Client ID: 22A-AE110R7-100522-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	2.0	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	82		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51245

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE109D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/17/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51245

Client ID: 22A-AE109D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
2-Hexanone	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
Acetone	ND	25	ug/L	1	10/15/22	HM	SW8260C	
Benzene	ND	0.70	ug/L	1	10/15/22	HM	SW8260C	
Bromobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C	
Bromoform	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Bromomethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chloroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chloroform	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Chloromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	HM	SW8260C	
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	HM	SW8260C	
Dibromomethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	HM	SW8260C	
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Methylene chloride	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	B
Naphthalene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
o-Xylene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Styrene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	HM	SW8260C	
Toluene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	HM	SW8260C	
Trichloroethene	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	HM	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	10/15/22	HM	70 - 130 %	
% Bromofluorobenzene	96		%	1	10/15/22	HM	70 - 130 %	

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51245
Client ID: 22A-AE109D-100622-1

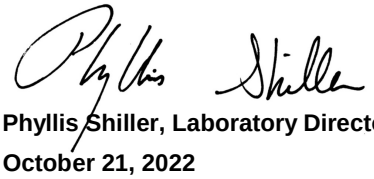
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	100		%	1	10/15/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/15/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/15/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	HM	SW8260C (OXY)

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 26, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/07/22	16:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM52356
Phoenix ID: CM52356

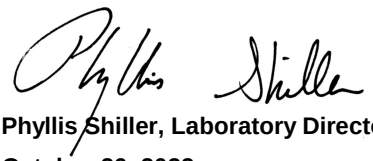
Project ID: LMC WIMINGTON 60688023
Client ID: 22A-AE109D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,4-dioxane							
1,4-dioxane	0.30	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	73		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 26, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	11:15
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47543

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-MW5-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47543
Client ID: 22A-MW5-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	13	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	1.3	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	96		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	103		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Ver 1

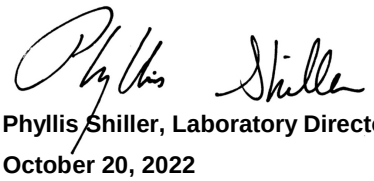
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47543
Client ID: 22A-MW5-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 20, 2022
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 20, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/03/22	12:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/03/22	14:50
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM47533
Phoenix ID: CM47544

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-MW7-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/12/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/12/22	HM	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47544

Client ID: 22A-MW7-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/12/22	HM	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Bromoform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloroform	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,2-Dichloroethene	26	1.0	ug/L	1	10/12/22	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/12/22	HM	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/12/22	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Styrene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/12/22	HM	SW8260C
Toluene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/12/22	HM	SW8260C
Trichloroethene	9.3	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/12/22	HM	SW8260C
Vinyl chloride	1.9	1.0	ug/L	1	10/12/22	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	10/12/22	HM	70 - 130 %
% Bromofluorobenzene	98		%	1	10/12/22	HM	70 - 130 %
% Dibromofluoromethane	98		%	1	10/12/22	HM	70 - 130 %
% Toluene-d8	100		%	1	10/12/22	HM	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/12/22	HM	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM47544

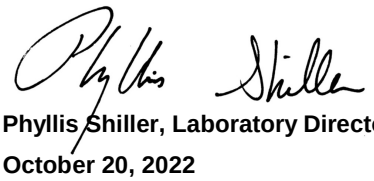
Client ID: 22A-MW7-100322-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/12/22	HM	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 20, 2022

Reviewed and Released by: Phyllis Shiller, Laboratory Director

Sample Results

22A-AE109R6-100422-1

Collect Date	10/04/2022 13:45	**Lab ID**	22210082610
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 09:46	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.72J**	0.17	1.0	ug/L
74-85-1	**Ethene**	**10**	0.24	1.0	ug/L
74-82-8	**Methane**	**810**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE109R6-100422-1-MS

Collect Date	10/04/2022 13:45	**Lab ID**	22210082611
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:00	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**28**	0.13	0.50	ug/L
74-84-0	**Ethane**	**41**	0.17	1.0	ug/L
74-85-1	**Ethene**	**42**	0.24	1.0	ug/L
74-82-8	**Methane**	**650**	2.0	5.0	ug/L
74-98-6	**Propane**	**58**	0.29	1.0	ug/L

22A-AE109R6-100422-1-MSD

Collect Date	10/04/2022 13:45	**Lab ID**	22210082612
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 10:13	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	**Acetylene**	**28**	0.13	0.50	ug/L
74-84-0	**Ethane**	**41**	0.17	1.0	ug/L
74-85-1	**Ethene**	**43**	0.24	1.0	ug/L
74-82-8	**Methane**	**690**	2.0	5.0	ug/L
74-98-6	**Propane**	**57**	0.29	1.0	ug/L

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 22, 2022

Mr. Patrick St. Pierre
Howland Development
155 West Street
Wilmington, MA 01887

Subject: September - October 2022 Groundwater Sampling Analytical Results
Property at 87 Concord Street – North Reading, MA

Dear Mr. St. Pierre,

In September - October 2022, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from four monitoring wells AE-112D and AE-112R (ports R1, R3, and R5) located on your property at 87 Concord Road in North Reading, MA. Monitoring wells HOW-2 and HOW-3 (also known as MW-2 and MW-3) were not sampled in 2022.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September-October 2022 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September-October 2022 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corporation

Attachments

ATTACHMENT A

BWSC-123 Notification Form

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Patrick St. Pierre - Howland Development Corp.

2. Street Address: 155 West Street

City/Town: Wilmington, MA Zip Code: 01867

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 87 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☐4☐ commerical ☐4☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Monitoring Wells AE-112D and AE-112R (ports R1, R3, and R5)

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

ATTACHMENT B

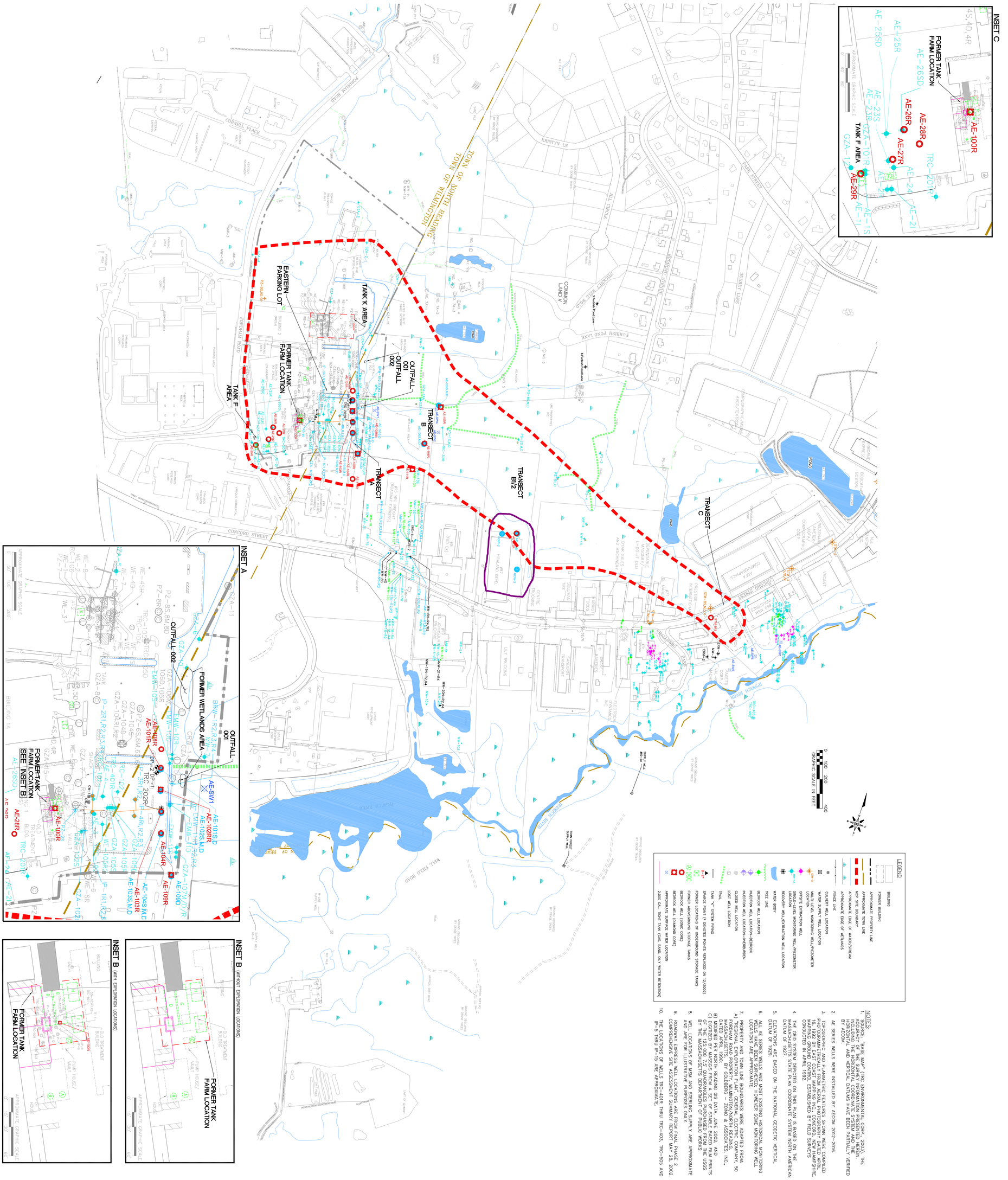
Groundwater Sampling Location Map

and Analytical Results Summary Tables

Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON 2017-2022\900-CAD-GIS\910 CAD\09_GW MEMO 2018\FIG 1_MONITORING WELL LOCATIONS.DWG Last saved by: BARRYK Last Plotted: 2018-10-16

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ARCH C 18" x 24"

K.P.B. S.O. A.T.



Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

MONITORING WELL LOCATIONS

AECOM

FIGURE: 1

60552044 Date: 2018-10-18

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2
					Location ID	AE112D	AE112R-1	AE112R-3	AE112R-5
					Sample ID	22A-AE112D-100622-1	22A-AE112R1-100622-1	22A-AE112R3-100622-1	22A-AE112R5-100622-1
					Sample Date	10/6/2022	10/6/2022	10/6/2022	10/6/2022
					Sample Type	N	N	N	N
					Depth Interval	24.5 - 29.5 ft	41 - 50 ft	91 - 101 ft	136 - 146 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):				
CSIA (‰ VPDB)									
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**-31.4**
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**-0.2**
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS
Conventional (ug/l)									
Chloride	ug/l	NE	NE	NE	NE	NS	NS	NS	**225000**
Nitrate	ug/l	NE	NE	NE	NE	NS	NS	NS	50 U
Nitrite as N	ug/l	NE	NE	NE	NE	NS	NS	NS	50 U
Sulfate	ug/l	NE	NE	NE	NE	NS	NS	NS	**13400**
Sulfide	ug/l	NE	NE	NE	NE	NS	NS	NS	50 U
Total Organic Carbon	ug/l	NE	NE	NE	NE	NS	NS	NS	1000 U
Dissolved Gases (ug/l)									
Acetylene	ug/l	NE	NE	NE	NE	NS	NS	NS	0.26 U
Ethane	ug/l	NE	NE	NE	NE	NS	NS	NS	0.34 UJ
Ethene	ug/l	NE	NE	NE	NE	NS	NS	NS	0.48 UJ
Hydrogen	ug/l	NE	NE	NE	NE	NS	NS	NS	**1.6 J**
Methane	ug/l	NE	NE	NE	NE	NS	NS	NS	**160 J**
Propane	ug/l	NE	NE	NE	NE	NS	NS	NS	0.58 U
EPH with PAHs (ug/l)									
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS
VPH (ug/l)									
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS
Dissolved Metals (ug/l)									
Arsenic	ug/l	**10**	NE	**900**	**9000**	4 U	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	**3440**
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	**1430**
Total Metals (ug/l)									
Arsenic	ug/l	**10**	NE	**900**	**9000**	4 U	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	NS	**3750**
Manganese	ug/l	NE	NE	NE	NE	NS	NS	NS	**1390**
SVOCs (ug/l)									
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	NS	NS	NS	NS
VOCs (ug/l)									
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	0.50 UJ	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	40 U	50 U	50 U	50 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 UJ
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	ug/l	NE	NE	NE	NE	5.0 UJ	5.0 U	5.0 U	5.0 U
2-Phenylbutane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 UJ	5.0 U	5.0 U	5.0 U
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 UJ	25 U	25 UJ	25 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Transect B 1/2	Transect B 1/2	Transect B 1/2	Transect B 1/2
					Location ID	AE112D	AE112R-1	AE112R-3	AE112R-5
					Sample ID	22A-AE112D-100622-1	22A-AE112R1-100622-1	22A-AE112R3-100622-1	22A-AE112R5-100622-1
					Sample Date	10/6/2022	10/6/2022	10/6/2022	10/6/2022
					Sample Type	N	N	N	N
					Depth Interval	24.5 - 29.5 ft	41 - 50 ft	91 - 101 ft	136 - 146 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):				
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 UJ	1.0 UJ	1.0 U	1.0 U
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 U	1.0 UJ	1.0 U	1.0 U
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	1.0 U	1.0 U	**4.4**	**9.5**
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 UJ
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	**1.1**	1.0 U	1.0 UJ	1.0 UJ
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 UJ	2.5 U	2.5 U	2.5 U
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	**1.1**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U	1 U	1 U	1 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

ATTACHMENT C

Groundwater Laboratory Analytical Data Sheets

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	10:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51244

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/17/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/17/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/17/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/17/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/17/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/17/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/17/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/17/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/17/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/17/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Tetrachloroethene	1.1	1.0	ug/L	1	10/17/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/17/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/17/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/17/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/17/22	MH	70 - 130 %
% Bromofluorobenzene	98		%	1	10/17/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51244
Client ID: 22A-AE112D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	92		%	1	10/17/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/17/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/17/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/17/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:20
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51248

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	HM	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Benzene	ND	0.70	ug/L	1	10/16/22	HM	SW8260C	
Bromobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Bromoform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Bromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloroform	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Chloromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	HM	SW8260C	
Dibromomethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	HM	SW8260C	
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Methylene chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	B
Naphthalene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
o-Xylene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Styrene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	HM	SW8260C	
Toluene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	HM	SW8260C	
Trichloroethene	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	HM	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	10/16/22	HM	70 - 130 %	
% Bromofluorobenzene	95		%	1	10/16/22	HM	70 - 130 %	
% Dibromofluoromethane	100		%	1	10/16/22	HM	70 - 130 %	
% Toluene-d8	101		%	1	10/16/22	HM	70 - 130 %	

Oxygenates& Dioxane

1,4-dioxane	ND	50	ug/L	1	10/16/22	HM	SW8260C (OXY)	
Diethyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)	

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51248

Client ID: 22A-AE112R1-100622-1

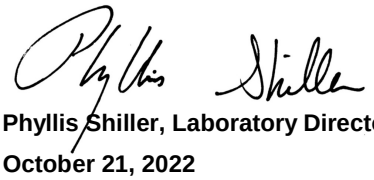
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	HM	SW8260C (OXY)

B = Present in blank, no bias suspected.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51249

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112R3-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51249

Client ID: 22A-AE112R3-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	4.4	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

Ver 1

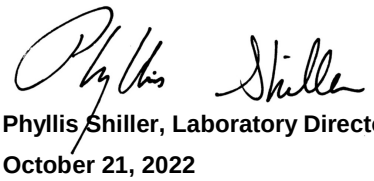
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51249
Client ID: 22A-AE112R3-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51250

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE112R5-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	3.44	0.011	mg/L	1	10/17/22	TH	SW6010D
Manganese (Dissolved)	1.43	0.001	mg/L	1	10/17/22	TH	SW6010D
Iron	3.75	0.010	mg/L	1	10/14/22	TH	SW6010D
Manganese	1.39	0.001	mg/L	1	10/14/22	TH	SW6010D
Chloride	225	25.0	mg/L	5	10/08/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.05	0.05	mg/L	5	10/08/22 02:49	BS/GD	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/07/22 04:29	B/E/G	E300.0
Sulfate	13.4	5.0	mg/L	1	10/07/22	B/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	< 1.0	1.0	mg/L	1	10/10/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/07/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51250

Client ID: 22A-AE112R5-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	9.5	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51250
Client ID: 22A-AE112R5-100622-1

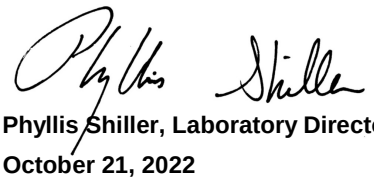
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	1.1	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Sample Results

22A-AE112R5-100622-1				
	Collect Date	10/06/2022 11:50	**Lab ID**	22210082621
	Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

*Results and limits are adjusted for dilution.

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	2	10/12/22 11:31	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.26U	0.26	1.0	ug/L
74-84-0	Ethane	0.34U	0.34	2.0	ug/L
74-85-1	Ethene	0.48U	0.48	2.0	ug/L
74-82-8	**Methane**	**160**	4.0	10	ug/L
74-98-6	Propane	0.58U	0.58	2.0	ug/L

Sample Results

22A-AE112R5-100622-1	Collect Date	10/06/2022 14:25	Lab ID	22210082622
	Receive Date	10/07/2022 09:26	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:35	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	1.6J	0.49	1.9	nM

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **AECOM**
Project: LMC Wilmington

MI Project Number: **131TI**
Date Received: 09/30/2022

Sample Information

Client Sample ID:	**22A-AE112R5-1 00622-1**
Sample Date:	10/06/2022
Analyst/Reviewer:	SB/MW

Carbon	Units	
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-31.4**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**NA**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-0.2 (J)**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

Table 2: Summary of the QuantArray®-Chlor results obtained for samples 22A-AE28R2-100522-1, 22A-AE29R6-100422-1, 22A-AE100R5-100422-1, and 22A-AE112R5-100622-1.

Sample Name Sample Date	22A-AE112R5-100622-1 10/06/2022
Reductive Dechlorination	cells/mL
Dehalococcoides (DHC)	**1.97E+01**
tceA Reductase (TCE)	<5.00E-01
BAV1 Vinyl Chloride Reductase (BVC)	<5.00E-01
Vinyl Chloride Reductase (VCR)	<5.00E-01
Dehalobacter spp. (DHBt)	**3.29E+02**
Dehalobacter DCM (DCM)	<5.00E+00
Dehalogenimonas spp. (DHG)	**1.35E+03**
cerA Reductase (CER)	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00
Desulfitobacterium spp. (DSB)	**2.56E+02**
Dehalobium chlorocoercia (DECO)	**8.70E+01**
Desulfuromonas spp. (DSM)	<5.00E+00
PCE Reductase (PCE-1)	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00
Chloroform Reductase (CFR)	<5.00E+00
1,1 DCA Reductase (DCA)	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00
Aerobic (Co)Metabolic	
Soluble Methane Monooxygenase (SMMO)	<5.00E+00
Toluene Dioxygenase (TOD)	<5.00E+00
Phenol Hydroxylase (PHE)	<5.00E+00
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00
Toluene Monooxygenase (RMO)	<5.00E+00
Ethene Monooxygenase (EtnC)	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00
Other	
Total Eubacteria (EBAC)	**1.34E+05**
Sulfate Reducing Bacteria (APS)	**2.56E+04**
Methanogens (MGN)	**3.73E+01**

Legend:

NA = Not Analyzed
NS = Not Sampled
J = Estimated Gene Copies Below PQL but Above LQL
I = Inhibited
< = Result Not Detected

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 22, 2022

Mr. Mark Clark
Town of N. Reading
235 North Street
N. Reading, MA 01864

Subject: September - October 2022 Groundwater Analytical Results
Former GE Facility – 50 Fordham Road, Wilmington, MA

Dear Mr. Clark,

In September - October 2022, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from two monitoring wells (STM-8D and -8R) located within the right-of-way along Concord St in North Reading and one well (PS-8D) in the woods along the Stickney Well access road.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the groundwater sampling, and a map of the sampling locations close to your property lines. We have included summary tables of the September - October 2022 groundwater analytical results with a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Senior Technical Specialist

cc:

Paul Calligan, Lockheed Martin Corp.

Attachments

ATTACHMENT A

BWSC-123 Notification Form

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Mark Clark - Town of North Reading

2. Street Address: 235 North Street

City/Town: N. Reading Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 51 & 71 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☑ Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☐ 4 commerical ☐ industrial ☐ school/playground ☐ 4 Other municipal right-of-way (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

STM-8D, STM-8R, and PS-8D

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

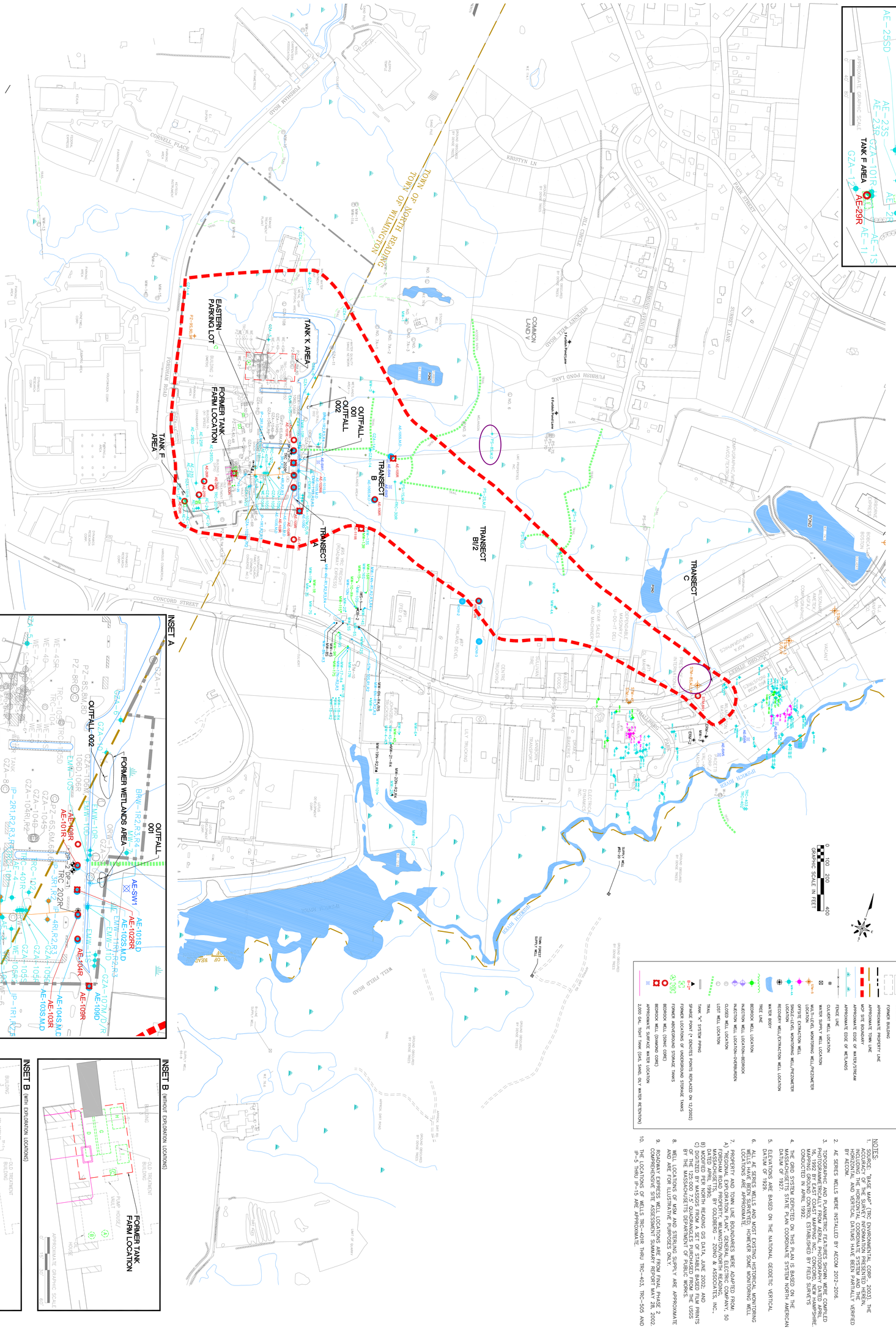
ATTACHMENT B

Groundwater Sampling Location Map

And Analytical Results Summary Tables

Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON 2017-2022\900-CAD-GIS\910 CAD\09_GW MEMO 2018\FIG 1_MONITORING WELL LOCATIONS.DWG Last saved by: BARRYK Last Plotted: 2018-10-16

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ARCH C 18" x 24"
K.P.B. S.O. A.T.



NOTES:
1. SOURCE: "BASE MAP" (TRC ENVIRONMENTAL CORP., 2003). THE ACCURACY OF THE SURVEY INFORMATION PRESENTED HEREIN, INCLUDING THE HORIZONTAL AND VERTICAL DATUMS HAVE BEEN PARTIALLY VERIFIED BY AECOM.
2. AE SERIES WELLS WERE INSTALLED BY AECOM 2012-2016.
3. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN WERE COMPILED PHOTOGRAMMETRICALLY FROM AERIAL PHOTOGRAPHY DATED APRIL 1990 BY MASSACHUSETTS GEODETIC, INC. FOLLOWED BY FIELD SURVEYS CONDUCTED IN APRIL 1992.
4. THE GRID SYSTEM DEPICTED ON THIS PLAN IS BASED ON THE MASSACHUSETTS STATE PLAN COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1927.
5. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
6. ALL AE SERIES WELLS AND MOST EXISTING HISTORICAL MONITORING WELLS HAVE BEEN SURVEYED (HOWEVER SOME MONITORING WELL LOCATIONS ARE APPROXIMATE.
7. PROPERTY AND TOWN LINE BOUNDARIES WERE ADAPTED FROM: A) "REGIONAL EXPLORATION PLAN", GENERAL ELECTRIC COMPANY, 50 FORDHAM ROAD, WILMINGTON, MASSACHUSETTS" BY GOLDBERG, ZOINO & ASSOCIATES, INC., DATED APRIL 1990; B) THE NORTH READING DPW, DATED JUNE 2002; AND C) DIGITIZED BY MASGIS FROM A SET OF STABLE BASED FILM PRINTS OF THE 1:25,000 7.5' QUADRANGLES PURCHASED FROM THE USGS BY THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS.
8. WELL LOCATIONS OF MSM AND STERLING SUPPLY ARE APPROXIMATE AND ARE FOR ILLUSTRATIVE PURPOSES ONLY.
9. ROADWAY EXPRESS WELL LOCATIONS ARE FROM FINAL PHASE 2 COMPREHENSIVE SITE ASSESSMENT SUMMARY REPORT MAY 28, 2002.
10. THE LOCATIONS OF WELLS TRC-401R THRU TRC-403, TRC-505 AND IP-5 THRU IP-15 ARE APPROXIMATE.

Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

MONITORING WELL LOCATIONS

AECOM

60552044 Date: 2018-10-18

FIGURE: 1

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Downgradient Wetland	Transect C	Transect C
					Location ID	PS-8D	STM-8D	STM-8R
					Sample ID	22A-PS8D-092922-1	22A-STM8D-100622-1	22A-STM8R-100622-1
					Sample Date	9/29/2022	10/6/2022	10/6/2022
					Sample Type	N	N	N
					Depth Interval	51.8 - 56.8 ft	34.7 - 39.7 ft	46.5 - 51.5 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):			
CSIA (‰ VPDB)								
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS
Conventional (ug/l)								
Chloride	ug/l	NE	NE	NE	NE	NS	NS	**119000**
Nitrate	ug/l	NE	NE	NE	NE	NS	NS	**1310**
Nitrite as N	ug/l	NE	NE	NE	NE	NS	NS	10 U
Sulfate	ug/l	NE	NE	NE	NE	NS	NS	**23500**
Sulfide	ug/l	NE	NE	NE	NE	NS	NS	**110**
Total Organic Carbon	ug/l	NE	NE	NE	NE	NS	NS	**1700**
Dissolved Gases (ug/l)								
Acetylene	ug/l	NE	NE	NE	NE	NS	NS	0.13 U
Ethane	ug/l	NE	NE	NE	NE	NS	NS	**0.57 J-**
Ethene	ug/l	NE	NE	NE	NE	NS	NS	0.24 UJ
Hydrogen	ug/l	NE	NE	NE	NE	NS	NS	NS
Methane	ug/l	NE	NE	NE	NE	NS	NS	**61 J**
Propane	ug/l	NE	NE	NE	NE	NS	NS	0.29 U
EPH with PAHs (ug/l)								
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS
VPH (ug/l)								
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS
Dissolved Metals (ug/l)								
Arsenic	ug/l	**10**	NE	**900**	**9000**	4 U	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	**113**
Manganese	ug/l	NE	NE	NE	NE	NS	NS	**566**
Total Metals (ug/l)								
Arsenic	ug/l	**10**	NE	**900**	**9000**	4 U	NS	NS
Iron	ug/l	NE	NE	NE	NE	NS	NS	**260**
Manganese	ug/l	NE	NE	NE	NE	NS	NS	**554**
SVOCs (ug/l)								
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	NS	**0.29**	**0.64**
VOCs (ug/l)								
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	0.25 U	0.25 U	0.25 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	0.50 U	0.50 UJ	0.50 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	1.0 U	1.0 U	1.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	50 U	40 U	40 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	5.0 UJ	5.0 UJ	5.0 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
2-Hexanone	ug/l	NE	NE	NE	NE	5.0 U	5.0 UJ	5.0 UJ
2-Phenylbutane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 U	5.0 UJ	5.0 UJ
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 UJ	25 UJ	25 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U	0.70 U	0.70 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Downgradient Wetland	Transect C	Transect C
					Location ID	PS-8D	STM-8D	STM-8R
					Sample ID	22A-PS8D-092922-1	22A-STM8D-100622-1	22A-STM8R-100622-1
					Sample Date	9/29/2022	10/6/2022	10/6/2022
					Sample Type	N	N	N
					Depth Interval	51.8 - 56.8 ft	34.7 - 39.7 ft	46.5 - 51.5 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):			
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U	0.50 U	0.50 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 UJ	1.0 UJ	1.0 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 U	1.0 UJ	1.0 UJ
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U	1.0 U	1.0 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 UJ	1.0 U	1.0 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U	1.0 U	1.0 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	1.0 U	**6.9**	**10**
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 U	0.50 U	0.50 U
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U	0.40 U	0.40 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U	**1.8**	**1.5**
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 UJ	1.0 U	1.0 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	1.0 UJ	1.0 U	**2.8**
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 U	2.5 UJ	2.5 UJ
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	1.0 UJ	1.0 U	**12**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	1.0 U	1.0 U	1.0 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U	1 U	1 U

Notes:
1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

ATTACHMENT C

Groundwater Laboratory Analytical Data Sheets

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	16:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46683

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-PS8D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/05/22	TH	SW6010D
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A
Total Metals Digestion	Completed				09/30/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/09/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46683

Client ID: 22A-PS8D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/09/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/09/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/09/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/09/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/09/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/09/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/09/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	10/09/22	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	10/09/22	MH	70 - 130 %

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46683
Client ID: 22A-PS8D-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	101		%	1	10/09/22	MH	70 - 130 %
% Toluene-d8	102		%	1	10/09/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/09/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/09/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	9:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51238

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-STM8R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Iron (Dissolved)	0.113	0.011	mg/L	1	10/14/22	TH	SW6010D
Manganese (Dissolved)	0.566	0.001	mg/L	1	10/14/22	TH	SW6010D
Iron	0.260	0.010	mg/L	1	10/14/22	TH	SW6010D
Manganese	0.554	0.001	mg/L	1	10/14/22	TH	SW6010D
Chloride	119	10.0	mg/L	2	10/08/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/07/22 04:09	B/E/G	E300.0
Nitrate as Nitrogen	1.31	0.10	mg/L	2	10/08/22 05:22	BS/GD	E300.0
Sulfate	23.5	10.0	mg/L	2	10/08/22	BS/GD	E300.0
Sulfide	0.11	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.7	1.0	mg/L	1	10/10/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/06/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51238

Client ID: 22A-STM8R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	10	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.5	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	2.8	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51238
Client ID: 22A-STM8R-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	12	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	95		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.64	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	10:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51239

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-STM8D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/19/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/19/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/19/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51239
Client ID: 22A-STM8D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/19/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
cis-1,2-Dichloroethene	6.9	1.0	ug/L	1	10/19/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/19/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/19/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	1.8	1.0	ug/L	1	10/19/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/19/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/19/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/19/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/19/22	MH	70 - 130 %
% Bromofluorobenzene	97		%	1	10/19/22	MH	70 - 130 %
% Dibromofluoromethane	91		%	1	10/19/22	MH	70 - 130 %
% Toluene-d8	99		%	1	10/19/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/19/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51239
Client ID: 22A-STM8D-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/19/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.29	0.20	ug/l	1	10/11/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	90		%	1	10/11/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Sample Results

22A-STM8R-100622-1

Collect Date	10/06/2022 09:50	**Lab ID**	22210082625
Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:55	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.57J**	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**61**	2.0	5.0	ug/L

Sample Results

22A-STM8R-100622-1	**Collect Date**	10/06/2022 09:50	**Lab ID**	22210082625
	Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:55	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-98-6	Propane	0.29U	0.29	1.0	ug/L

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 22, 2022

Mr. Roland Gagne
Manager, Wilmington Masonry
62 Concord Street
North Reading, MA 01889

Subject: September - October 2022 Groundwater Analytical Results
62 Concord Street, Wilmington, MA

Dear Mr. Gagne,

In September - October 2022, AECOM under contract to Lockheed Martin Corporation (LMC) collected a groundwater sample from one monitoring well (STM-8R1) located on your property as part of the ongoing work relating to the former GE facility formerly located at 50 Fordham Rd in Wilmington, MA.

The former GE facility is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September – October 2022 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September - October 2022 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.

Attachments

ATTACHMENT A

BWSC-123 Notification Form

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Roland Gagne - Wilmington Masonry

2. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☒ 4 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☒ 4 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 62 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☒ 4 Other Post-Temporary Solution (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☒ 4 commerical ☒ 4 industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

STM-8R1, groundwater

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

ATTACHMENT B

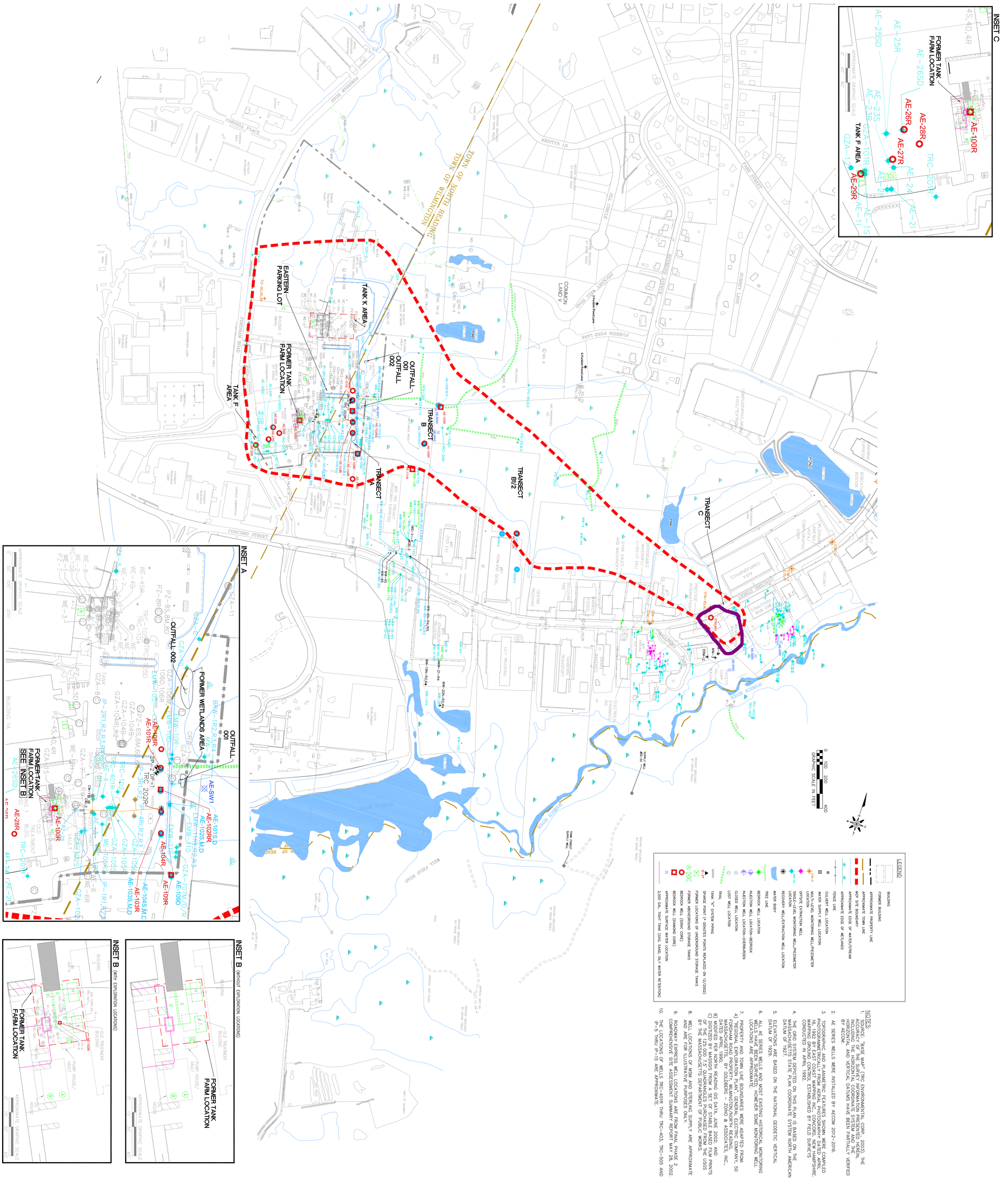
Groundwater Sampling Location Map

and Analytical Results Summary Tables

Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON 2017-2022\900-CAD-GIS\910 CAD\09_GW MEMO 2018\FIG 1_MONITORING WELL LOCATIONS.DWG Last saved by: BARRYK Last Plotted: 2018-10-16

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ARCH C 18" x 24"

K.P.B. S.O. A.T.



Former GE Facility - 50 Fordham Rd, Wilmington, MA
Lockheed Martin Corporation

MONITORING WELL LOCATIONS

AECOM

FIGURE: 1

60552044 Date: 2018-10-18

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Transect C
					Location ID	STM-8R1
					Sample ID	22A-STM8R1-100622-1
					Sample Date	10/6/2022
					Sample Type	N
					Depth Interval	85 - 90 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	
CSIA (‰ VPDB)						
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	**-21.2**
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	**-26.7**
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS
Conventional (ug/l)						
Chloride	ug/l	NE	NE	NE	NE	**109000**
Nitrate	ug/l	NE	NE	NE	NE	50 U
Nitrite as N	ug/l	NE	NE	NE	NE	10 U
Sulfate	ug/l	NE	NE	NE	NE	**25400**
Sulfide	ug/l	NE	NE	NE	NE	**70**
Total Organic Carbon	ug/l	NE	NE	NE	NE	**1300**
Dissolved Gases (ug/l)						
Acetylene	ug/l	NE	NE	NE	NE	0.13 U
Ethane	ug/l	NE	NE	NE	NE	0.17 UJ
Ethene	ug/l	NE	NE	NE	NE	**0.42 J-**
Hydrogen	ug/l	NE	NE	NE	NE	**1.4 J**
Methane	ug/l	NE	NE	NE	NE	2.0 UJ
Propane	ug/l	NE	NE	NE	NE	0.29 U
EPH with PAHs (ug/l)						
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS
Anthracene	ug/l	**60**	NE	**30**	**600**	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS
Chrysene	ug/l	**2**	NE	**70**	**700**	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS
Fluorene	ug/l	**30**	NE	**40**	**400**	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS
Pyrene	ug/l	**60**	NE	**20**	**600**	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS
VPH (ug/l)						
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS
Dissolved Metals (ug/l)						
Arsenic	ug/l	**10**	NE	**900**	**9000**	**11**
Iron	ug/l	NE	NE	NE	NE	11 U
Manganese	ug/l	NE	NE	NE	NE	**198**
Total Metals (ug/l)						
Arsenic	ug/l	**10**	NE	**900**	**9000**	**9**
Iron	ug/l	NE	NE	NE	NE	**49**
Manganese	ug/l	NE	NE	NE	NE	**208**
SVOCs (ug/l)						
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	**0.29**
VOCs (ug/l)						
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	1.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	1.0 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	0.50 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	1.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	1.0 U
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	1.0 U
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	1.0 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	1.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	0.25 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	1.0 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	0.50 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	0.25 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	1.0 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	0.60 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	1.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	1.0 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	1.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	40 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	5.0 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U
2-Hexanone	ug/l	NE	NE	NE	NE	5.0 UJ
2-Phenylbutane	ug/l	NE	NE	NE	NE	1.0 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 UJ
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Transect C
					Location ID	STM-8R1
					Sample ID	22A-STM8R1-100622-1
					Sample Date	10/6/2022
					Sample Type	N
					Depth Interval	85 - 90 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):	
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 UJ
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	1.0 U
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 U
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 U
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	1.0 U
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 UJ
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	1.0 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**2.1**
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	1.0 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U

Notes:

1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

ATTACHMENT C

Groundwater Laboratory Analytical Data Sheets

Sample Results

22A-STM8R1-100622-1				
	Collect Date	10/06/2022 11:00	**Lab ID**	22210082623
	Receive Date	10/07/2022 09:26	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/12/22 11:43	751654	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**0.42J**	0.24	1.0	ug/L
74-82-8	Methane	2.0U	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-STM8R1-100622-1				
	Collect Date	10/06/2022 11:15	**Lab ID**	22210082624
	Receive Date	10/07/2022 09:26	**Matrix**	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/10/22 08:47	751459	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**1.4J**	0.49	1.9	nM

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51240

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-STM8R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.009	0.004	mg/L	1	10/14/22	TH	SW6010D
Arsenic (Dissolved)	0.011	0.004	mg/L	1	10/14/22	TH	SW6010D
Iron (Dissolved)	< 0.011	0.011	mg/L	1	10/14/22	TH	SW6010D
Manganese (Dissolved)	0.198	0.001	mg/L	1	10/14/22	TH	SW6010D
Iron	0.049	0.010	mg/L	1	10/14/22	TH	SW6010D
Manganese	0.208	0.001	mg/L	1	10/14/22	TH	SW6010D
Chloride	109	10.0	mg/L	2	10/08/22	BS/GD	E300.0
Nitrite as Nitrogen	< 0.01	0.01	mg/L	1	10/07/22 04:19	B/E/G	E300.0
Nitrate as Nitrogen	< 0.05	0.05	mg/L	1	10/07/22 04:19	B/E/G	E300.0
Sulfate	25.4	5.0	mg/L	1	10/07/22	B/E/G	E300.0
Sulfide	0.07	0.05	mg/L	1	10/11/22	GD	SM4500S-D-11
Total Organic Carbon	1.3	1.0	mg/L	1	10/10/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				10/06/22	AG	SW3005A
Total Metals Digestion	Completed				10/06/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51240

Client ID: 22A-STM8R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C

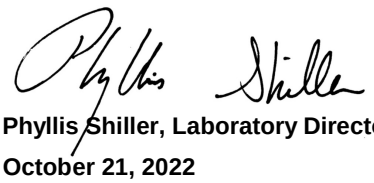
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51240
Client ID: 22A-STM8R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	2.1	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	0.29	0.20	ug/l	1	10/12/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	85		%	1	10/12/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/10/22	DT/DT	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **AECOM**
Project: LMC Wilmington

MI Project Number: **131TI**
Date Received: 09/30/2022

Sample Information

Client Sample ID:	**22A-STM8R1-1 00622-1**
Sample Date:	10/06/2022
Analyst/Reviewer:	SB/MW

Carbon	Units	
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**ND**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-21.2 (J)**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-26.7**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 22, 2022 ******* Via Electronic Mail *******

Mr. Ruben Byerley
YRC Freight
10990 Roe Avenue
Overland Park, KS 66211-1213

Subject: September - October 2022 Groundwater Sampling Analytical Results
YRC Freight Property at 95 Concord Street – N. Reading, MA

Dear Mr. Byerley,

In September - October 2022, AECOM under contract to Lockheed Martin Corporation (LMC) collected groundwater samples from seven monitoring wells (AE-106M, AE-106R [ports R1, R3 and R5], and AE-111R [ports R1, R2, and R6]) located on your property at 95 Concord Street in N. Reading, MA.

This site is a Tier 1A Site (Permit No. 83052) as regulated by the Massachusetts Department of Environmental Protection (MassDEP). Massachusetts environmental regulations require notification to a property owner when environmental samples are collected at a property on behalf of someone other than the property owner. In addition, the property owner must receive a copy of the analytical results following the laboratory analysis of the environmental samples. In accordance with the Massachusetts Contingency Plan, 310 CMR 1403 (10), enclosed is a copy of the analytical results from the September – October 2022 groundwater sampling, as well as a copy of the required Bureau of Waste Site Cleanup (BWSC) Form 123, and a map of the sampling locations on your property. We have included summary tables of the September - October 2022 groundwater analytical results, and have included a comparison to the applicable Massachusetts groundwater criteria. We have also provided a summary table of water level measuresments from wells on YRC property on September 27, 2022.

Should you be interested in more information, additional public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions or comments regarding the results, please contact me at 978-905-2351 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corp.

Attachments

ATTACHMENT A

BWSC-123 Notification Form

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

03 | 0518

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Fordham Road

City/Town: Wilmington, MA Zip Code: 01887

B. This notice is being provided to the following party:

1. Name: Ruben Byerly

2. Street Address: 10990 Roe Avenue

City/Town: Overland Park, KS Zip Code: 66211-1213

C. This notice is being given to inform its recipient (the party listed in Section B):

☐ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☒ 4 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☒ 4 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 95 Concord Street

City/Town: North Reading, MA Zip Code: 01864

2. MCP phase of work during which the sampling will be/has been conducted:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☒ 4 Other Post-Temporary Solution OMM (specify)

3. Description of property where sampling will be/has been conducted:

☐ residential ☒ 4 commerical ☒ 4 industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

AE-106M, AE-106R (R1, R3, and R5) and AE-111R (R1, R2, and R6)

E. Contact information related to the party providing this notice:

Contact Name: Scott Olson

Street Address: AECOM - 250 Apollo Drive

City/Town: Chelmsford, MA Zip Code: 01824

Telephone: (978) 846-5238 Email: scott.olson@aecom.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

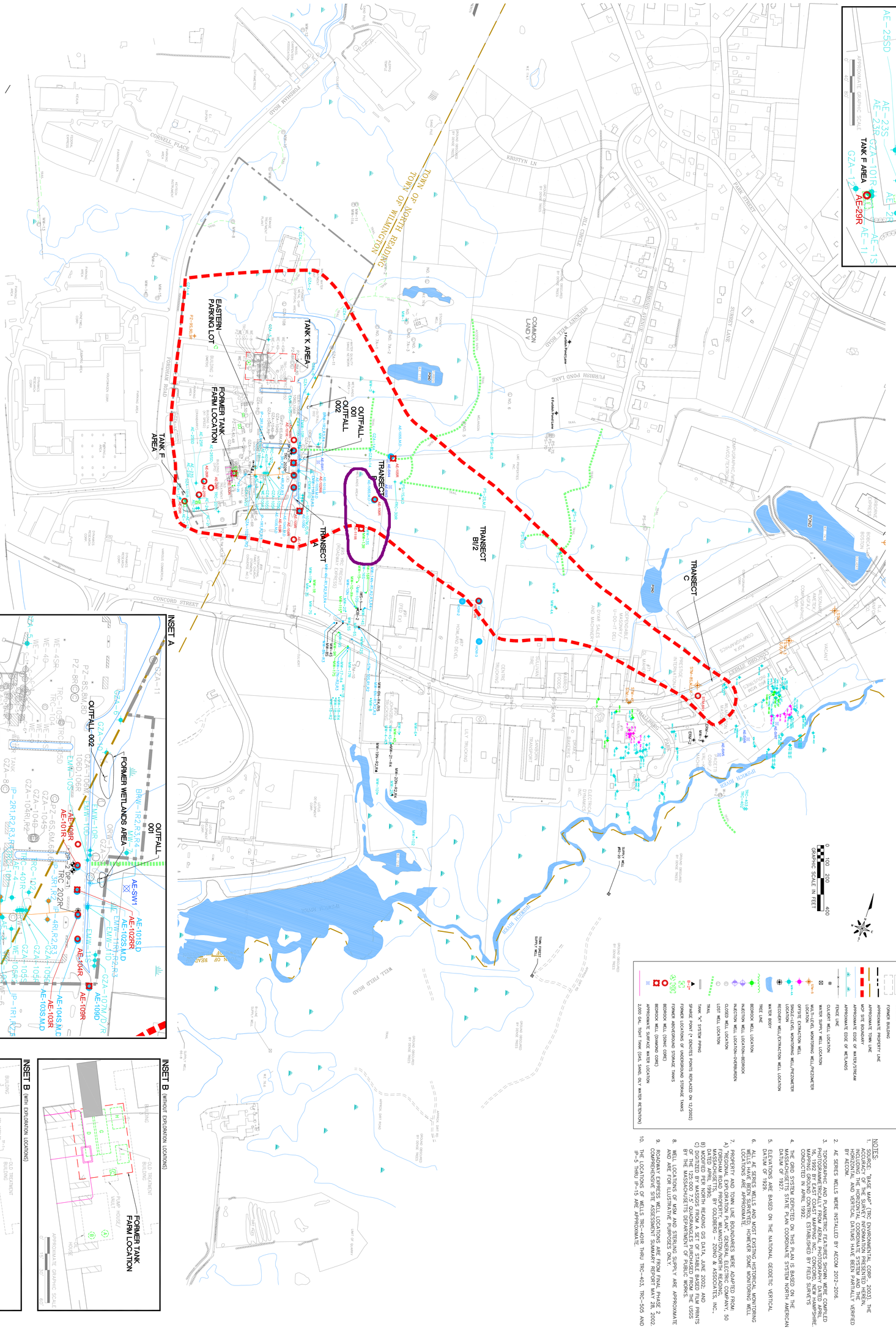
ATTACHMENT B

Groundwater Sampling Location Map

and Analytical Results Summary Tables

Filename: P:\JOBS\REM_ENG\PROJECT FILES\LOCKHEED MARTIN\WILMINGTON 2017-2022\900-CAD-GIS\910 CAD\09_GW MEMO 2018\FIG 1_MONITORING WELL LOCATIONS.DWG Last saved by: BARRYK Last Plotted: 2018-10-16

Project Management Initials: Designer: K.P.B. Checked: S.O. Approved: A.T. ARCH C 18" x 24"
K.P.B. S.O. A.T.



AECOM

Former GE Facility - Wilmington, MA
Water Level Measurements - YRC - 95 Concord Street N.Reading

Weather: Sunny 72 F

Recorders:= Floyd Burton, KJ, Sean Hagget, Dylan Potter

Well	Date	Time	Depth to Water	TOC Ref Elev	Calc'ed Elevation	Comments
Monitoring Wells on YRC Property						
AE 106R 1 (47-52)	9/27/2022	11:28	3.67	79.15	76.17	
AE 106R 2 (69.5-74.5)	9/27/2022	11:29	3.83	79.12	75.98	R=3.14
AE 106R 3 (84-88)	9/27/2022	11:29	3.51	79.13	76.07	
AE 106R 4 (144.5-150.5)	9/27/2022	11:30	3.48	79.15	76.23	
AE 106R 5 (164-169)	9/27/2022	11:30	3.47	79.14	76.31	
AE 106S	9/27/2022	11:34	3.12	78.42	75.82	
AE 106M	9/27/2022	11:35	2.98	78.44	75.99	
AE 106D	9/27/2022	11:36	2.95	78.41	75.92	
AE 111R-1 (44-54)	9/27/2022	14:50	13.28	89.03	76.28	
AE 111R-2 (66-74)	9/27/2022	14:52	13.24	89.01	76.32	
AE 111R-3 (95-103)	9/27/2022	14:53	13.21	89.02	76.37	
AE 111R-4 (140-150)	9/27/2022	14:55	13.14	89.02	76.44	R = 12.58
AE-111R-5 (155-165)	9/27/2022	14:57	13.14	89.05	76.51	
AE 111R-6 (168-173)	9/27/2022	14:58	13.16	89.04	76.49	
AE 111R-7 (181-191)	9/27/2022	15:00	13.14	89.06	76.50	

Notes:

R = replicate field measurement NM = Not Measured

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	**Transect B**	**Transect B**	**Transect B**	**Transect B**	**Transect B**	**Transect B**	**Transect B**	**Transect B**
					Location ID	**AE106M**	**AE106M**	**AE106R-1**	**AE106R-3**	**AE106R-5**	**AE111R-1**	**AE111R-2**	**AE111R-6**
					Sample ID	**22A-AE106M-092922-1**	**22A-AE106M-092922-2**	**22A-AE106R1-092922-1**	**22A-AE106R3-092922-1**	**22A-AE106R5-092922-1**	**22A-AE111R1-100622-1**	**22A-AE111R2-100622-1**	**22A-AE111R6-100622-1**
					Sample Date	**9/29/2022**	**9/29/2022**	**9/29/2022**	**9/29/2022**	**9/29/2022**	**10/6/2022**	**10/6/2022**	**10/6/2022**
					Sample Type	**N**	**FD**	**N**	**N**	**N**	**N**	**N**	**N**
					Depth Interval	**22.5 - 27.5 ft**	**22.5 - 27.5 ft**	**47 - 52 ft**	**84 - 88 ft**	**164 - 169 ft**	**44 - 54 ft**	**66 - 74 ft**	**168 - 173 ft**
Analyte	**REPORT_RESULT_UNIT**	**MCP Method 1 GW-1 Standard:**	**MCP Method 1 GW-2 Standard:**	**MCP Method 1 GW-3 Standard:**	**MCP Upper Concentration Limit (UCL):**								
CSIA (‰ VPDB)													
cis-1,2-Dichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**-19.3**	NS	NS	NS	NS
Tetrachloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**-15.2**	NS	NS	NS	NS
Trichloroethene	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	**-17.1**	NS	NS	NS	NS
Vinyl chloride	**‰ VPDB**	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS
Conventional (ug/l)													
Chloride	ug/l	NE	NE	NE	NE	**616000**	**735000**	NS	**146000**	NS	NS	NS	NS
Nitrate	ug/l	NE	NE	NE	NE	**1550**	**1520**	NS	**210**	NS	NS	NS	NS
Nitrite as N	ug/l	NE	NE	NE	NE	100 U	100 U	NS	20 U	NS	NS	NS	NS
Sulfate	ug/l	NE	NE	NE	NE	**27700**	**27400**	NS	**15000**	NS	NS	NS	NS
Sulfide	ug/l	NE	NE	NE	NE	50 U	50 U	NS	50 U	NS	NS	NS	NS
Total Organic Carbon	ug/l	NE	NE	NE	NE	**1100**	**1000**	NS	**1000**	NS	NS	NS	NS
Dissolved Gases (ug/l)													
Acetylene	ug/l	NE	NE	NE	NE	0.13 U	0.13 U	NS	0.13 U	NS	NS	NS	NS
Ethane	ug/l	NE	NE	NE	NE	**0.32 J**	**0.34 J**	NS	0.17 U	NS	NS	NS	NS
Ethene	ug/l	NE	NE	NE	NE	0.24 U	0.24 U	NS	**1.2**	NS	NS	NS	NS
Hydrogen	ug/l	NE	NE	NE	NE	NS	NS	NS	**0.91 J**	NS	NS	NS	NS
Methane	ug/l	NE	NE	NE	NE	**12**	**8.7**	NS	**470**	NS	NS	NS	NS
Propane	ug/l	NE	NE	NE	NE	0.29 U	0.29 U	NS	0.29 U	NS	NS	NS	NS
EPH with PAHs (ug/l)													
2-Methylnaphthalene	ug/l	**10**	**2000**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthene	ug/l	**20**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Acenaphthylene	ug/l	**30**	**10000**	**40**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Anthracene	ug/l	**60**	NE	**30**	**600**	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Anthracene	ug/l	**1**	NE	**1000**	**10000**	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(a)Pyrene	ug/l	**0.2**	NE	**500**	**5000**	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(b)Fluoranthene	ug/l	**1**	NE	**400**	**4000**	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(g,h,i)Perylene	ug/l	**50**	NE	**20**	**500**	NS	NS	NS	NS	NS	NS	NS	NS
Benzo(k)Fluoranthene	ug/l	**1**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS
C11-C22 Aromatic Hydrocarbons	ug/l	**200**	**50000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
C19-C36 Aliphatic Hydrocarbons	ug/l	**14000**	NE	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
C9-C18 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Chrysene	ug/l	**2**	NE	**70**	**700**	NS	NS	NS	NS	NS	NS	NS	NS
Dibenzo(a,h)Anthracene	ug/l	**0.5**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS
Fluoranthene	ug/l	**90**	NE	**200**	**2000**	NS	NS	NS	NS	NS	NS	NS	NS
Fluorene	ug/l	**30**	NE	**40**	**400**	NS	NS	NS	NS	NS	NS	NS	NS
Indeno(1,2,3-cd)Pyrene	ug/l	**0.5**	NE	**100**	**1000**	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Phenanthrene	ug/l	**40**	NE	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Pyrene	ug/l	**60**	NE	**20**	**600**	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C11-C22 Aromatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS
VPH (ug/l)													
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
C5-C8 Aliphatic Hydrocarbons	ug/l	**300**	**3000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
C9-C10 Aromatic Hydrocarbons	ug/l	**200**	**4000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
C9-C12 Aliphatic Hydrocarbons	ug/l	**700**	**5000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	NS	NS	NS	NS	NS	NS	NS	NS
Total Xylenes_VPH	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C5-C8 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS
Unadjusted C9-C12 Aliphatic Hydrocarbons	ug/l	NE	NE	NE	NE	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Metals (ug/l)													
Arsenic	ug/l	**10**	NE	**900**	**9000**	4 U	4 U	NS	NS	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	**24**	**18**	NS	**113**	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE	**1470**	**1480**	NS	**195**	NS	NS	NS	NS
Total Metals (ug/l)													
Arsenic	ug/l	**10**	NE	**900**	**9000**	4 U	4 U	NS	NS	NS	NS	NS	NS
Iron	ug/l	NE	NE	NE	NE	**75 J**	**40 J**	NS	**120 J+**	NS	NS	NS	NS
Manganese	ug/l	NE	NE	NE	NE	**1450**	**1450**	NS	**209**	NS	NS	NS	NS
SVOCs (ug/l)													
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	NS	NS	NS	NS	0.20 U	NS	NS	NS
VOCs (ug/l)													
1,1,1,2-Tetrachloroethane	ug/l	**5**	**10**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	ug/l	**200**	**4000**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	ug/l	**2**	**9**	**50000**	**100000**	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane	ug/l	**5**	**900**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	ug/l	**70**	**2000**	**20000**	**100000**	1.0 U	1.0 U	**1.3**	**1.6**	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	ug/l	**7**	**80**	**30000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloropropene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichloropropane	ug/l	NE	NE	NE	NE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trichlorobenzene	ug/l	**70**	**200**	**50000**	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	NE	NE	NE	NE	0.50 UJ	0.50 UJ	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ
1,2-Dibromoethane	ug/l	**0.02**	**2**	**50000**	**100000**	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	ug/l	**600**	**8000**	**2000**	**80000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	ug/l	**5**	**5**	**20000**	**100000**	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
1,2-Dichloropropane	ug/l	**5**	**3**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	ug/l	**100**	**6000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	ug/l	**5**	**60**	**8000**	**80000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	ug/l	**0.3**	**6000**	**50000**	**100000**	40 U	40 U	50 U	40 U	40 U	40 U	50 U	40 U
2,2-Dichloropropane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
2-Butanone	ug/l	**4000**	**50000**	**50000**	**100000**	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
2-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	ug/l	NE	NE	NE	NE	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ
2-Phenylbutane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	ug/l	**350**	**50000**	**50000**	**100000**	5.0 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 UJ
Acetone	ug/l	**6300**	**50000**	**50000**	**100000**	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ	25 UJ
Benzene	ug/l	**5**	**1000**	**10000**	**100000**	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U
Bromobenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 4
September/October 2022 Groundwater Analytical Results Summary
Former GE Facility, Wilmington, MA

					Location Group	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B	Transect B
					Location ID	AE106M	AE106M	AE106R-1	AE106R-3	AE106R-5	AE111R-1	AE111R-2	AE111R-6
					Sample ID	22A-AE106M-092922-1	22A-AE106M-092922-2	22A-AE106R1-092922-1	22A-AE106R3-092922-1	22A-AE106R5-092922-1	22A-AE111R1-100622-1	22A-AE111R2-100622-1	22A-AE111R6-100622-1
					Sample Date	9/29/2022	9/29/2022	9/29/2022	9/29/2022	9/29/2022	10/6/2022	10/6/2022	10/6/2022
					Sample Type	N	FD	N	N	N	N	N	N
					Depth Interval	22.5 - 27.5 ft	22.5 - 27.5 ft	47 - 52 ft	84 - 88 ft	164 - 169 ft	44 - 54 ft	66 - 74 ft	168 - 173 ft
Analyte	REPORT_RESULT_UNIT	MCP Method 1 GW-1 Standard:	MCP Method 1 GW-2 Standard:	MCP Method 1 GW-3 Standard:	MCP Upper Concentration Limit (UCL):								
Bromochloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	ug/l	**3**	**6**	**50000**	**100000**	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform	ug/l	**4**	**700**	**50000**	**100000**	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 UJ
Bromomethane	ug/l	**10**	**7**	**800**	**8000**	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ
Carbon Disulfide	ug/l	NE	NE	NE	NE	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/l	**5**	**2**	**5000**	**50000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	ug/l	**100**	**200**	**1000**	**10000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.5**	**1.7**	1.0 U
Chloroethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Chloroform	ug/l	**70**	**50**	**20000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
chloromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	ug/l	**70**	**20**	**50000**	**100000**	**8.0**	**8.7**	**15**	**17**	**19**	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Cymene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	ug/l	**2**	**20**	**50000**	**100000**	0.50 UJ	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 U
Diethyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diisopropyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethyl Tertiary-Butyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/l	**700**	**20000**	**5000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Freon TF (Chlorinated fluorocarbon)	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloro-1,3-Butadiene	ug/l	**0.6**	**50**	**3000**	**30000**	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Isopropylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether	ug/l	**70**	**50000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	ug/l	**5**	**2000**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
mp-xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	ug/l	**140**	**700**	**20000**	**100000**	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Propylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	ug/l	**10000**	**3000**	**5000**	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	ug/l	**100**	**100**	**6000**	**60000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tert-Butylbenzene	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tertiary-Amyl Methyl Ether	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	ug/l	**5**	**50**	**30000**	**100000**	**27**	**28**	**2.1 J+**	**3.8**	1.0 U	1.0 U	1.0 UJ	1.0 U
Tetrahydrofuran	ug/l	NE	NE	NE	NE	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ
Toluene	ug/l	**1000**	**50000**	**40000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	ug/l	**100**	**80**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	ug/l	NE	NE	NE	NE	0.40 UJ	0.40 UJ	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Trichloroethene	ug/l	**5**	**5**	**5000**	**50000**	**33**	**33**	**5.9 J**	**14**	**30**	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	ug/l	NE	NE	NE	NE	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	ug/l	**2**	**2**	**50000**	**100000**	1.0 U	1.0 U	1.0 U	**1.0**	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes (Total)	ug/l	**10000**	**3000**	**5000**	NE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

1) **Bolded results represent detections**
2) Yellow highlighted results exceed GW standard(s)
3) U = Non-detect at laboratory detection limit
4) UJ = Non-detect at laboratory detection limit. Detection limit is estimated.
5) J = Estimated Value (J- biased low and J+ biased high)
6) NE = Not Established
7) Sample Type N = normal sample; FD = field duplicate
8) GW standards listed for mp-xylenes and o-xylenes are for Total Xylenes

ATTACHMENT C

Groundwater Laboratory Analytical Data Sheets

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:25
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51241

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE111R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51241

Client ID: 22A-AE111R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	1.5	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51241

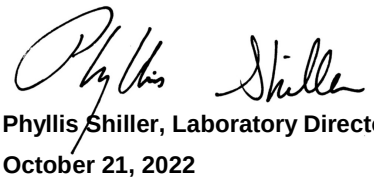
Client ID: 22A-AE111R1-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

October 21, 2022

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:30
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51242

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE111R2-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Client MS/MSD	Completed				10/16/22		
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/16/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51242
Client ID: 22A-AE111R2-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	10/16/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/16/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chlorobenzene	1.7	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/16/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/16/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/16/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/16/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/16/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/16/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/16/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/16/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/16/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/16/22	MH	SW8260C (OXY)

Ver 1

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51242
Client ID: 22A-AE111R2-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Diethyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/16/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 21, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		10/06/22	11:35
Location Code:	AECOM-WILMINGTN	Received by:	CP	10/06/22	16:07
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM51230
Phoenix ID: CM51243

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE111R6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/15/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/15/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51243
Client ID: 22A-AE111R6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/15/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/15/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/15/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/15/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/15/22	MH	SW8260C
Trichloroethene	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/15/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/15/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/15/22	MH	70 - 130 %
% Dibromofluoromethane	93		%	1	10/15/22	MH	70 - 130 %
% Toluene-d8	98		%	1	10/15/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/15/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

Ver 1

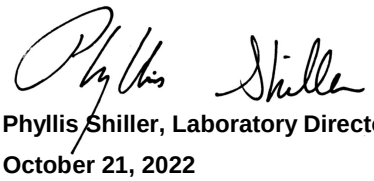
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM51243
Client ID: 22A-AE111R6-100622-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/15/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 21, 2022
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	10:50
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45652

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106M-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/06/22	TH	SW6010D
Iron (Dissolved)	0.024	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	1.47	0.001	mg/L	1	10/06/22	TH	SW6010D
Iron	0.075	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	1.45	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	616	50.0	mg/L	10	09/30/22	C/E/G	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	09/30/22 07:49	C/E/G	E300.0
Nitrate as Nitrogen	1.55	0.05	mg/L	1	09/30/22 03:27	C/E/G	E300.0
Sulfate	27.7	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.1	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45652

Client ID: 22A-AE106M-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	8.0	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	27	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45652
Client ID: 22A-AE106M-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	33	5.0	ug/L	5	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	93		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	91		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	100		%	5	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Toluene-d8 (5x)	95		%	5	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

November 07, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	10:55
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/29/22	18:16
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM45643
Phoenix ID: CM45654

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106M-092922-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	< 0.004	0.004	mg/L	1	10/08/22	TH	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	10/06/22	TH	SW6010D
Iron (Dissolved)	0.018	0.011	mg/L	1	10/06/22	TH	SW6010D
Manganese (Dissolved)	1.48	0.001	mg/L	1	10/06/22	TH	SW6010D
Iron	0.040	0.010	mg/L	1	10/08/22	TH	SW6010D
Manganese	1.45	0.001	mg/L	1	10/08/22	TH	SW6010D
Chloride	735	50.0	mg/L	10	10/01/22	CL/GD	E300.0
Nitrite as Nitrogen	< 0.10	0.10	mg/L	10	10/01/22 05:30	CL/GD	E300.0
Nitrate as Nitrogen	1.52	0.05	mg/L	1	09/30/22 03:42	C/E/G	E300.0
Sulfate	27.4	5.0	mg/L	1	09/30/22	C/E/G	E300.0
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11
Total Organic Carbon	1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14
Dissolved Metals Preparation	Completed				09/29/22	AG	SW3005A
Total Metals Digestion	Completed				10/04/22	AG	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45654

Client ID: 22A-AE106M-092922-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	8.7	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	28	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM45654
Client ID: 22A-AE106M-092922-2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	33	5.0	ug/L	5	10/12/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	94		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	97		%	1	10/11/22	MH	70 - 130 %
% 1,2-dichlorobenzene-d4 (5x)	101		%	5	10/12/22	MH	70 - 130 %
% Bromofluorobenzene (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Dibromofluoromethane (5x)	93		%	5	10/12/22	MH	70 - 130 %
% Toluene-d8 (5x)	96		%	5	10/12/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
November 07, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	13:00
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46662

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Iron (Dissolved)	0.113	0.011	mg/L	1	10/05/22	TH	SW6010D	
Manganese (Dissolved)	0.195	0.001	mg/L	1	10/05/22	TH	SW6010D	
Iron	0.120	0.010	mg/L	1	10/07/22	TH	SW6010D	B*
Manganese	0.209	0.001	mg/L	1	10/07/22	TH	SW6010D	
Chloride	146	25.0	mg/L	5	10/07/22	BS/EG	E300.0	
Nitrite as Nitrogen	< 0.02	0.02	mg/L	2	10/01/22 02:02	CL/GD	E300.0	
Nitrate as Nitrogen	0.21	0.05	mg/L	1	09/30/22 23:40	CL/GD	E300.0	
Sulfate	15.0	5.0	mg/L	1	09/30/22	CL/GD	E300.0	
Sulfide	< 0.05	0.05	mg/L	1	10/05/22	GD	SM4500S-D-11	
Total Organic Carbon	1.0	1.0	mg/L	1	10/03/22	EG	SM5310B-14	
Dissolved Metals Preparation	Completed				10/03/22	AG	SW3005A	
Total Metals Digestion	Completed				09/30/22	AG		
Volatiles								
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C	
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1-Dichloroethane	1.6	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C	
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C	

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46662

Client ID: 22A-AE106R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	17	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	3.8	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46662
Client ID: 22A-AE106R3-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	14	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	1.0	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

B* = Present in blank, a bias is possible.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Nitrite Analysis comment:
Due to interference from a large amount of chloride in the sample, a dilution was required causing the reporting level to be elevated.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 13, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	13:10
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46662
Phoenix ID: CM46663

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106R5-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethane	1.6	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/11/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/11/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46663

Client ID: 22A-AE106R5-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/11/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,2-Dichloroethene	19	1.0	ug/L	1	10/11/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/11/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/11/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrachloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/11/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/11/22	MH	SW8260C
Trichloroethene	30	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/11/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	10/11/22	MH	70 - 130 %
% Bromofluorobenzene	91		%	1	10/11/22	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	10/11/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/11/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	40	ug/L	1	10/11/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/11/22	MH	SW8260C (OXY)
1,4-dioxane							
1,4-dioxane	ND	0.20	ug/l	1	10/05/22	AW	SW8270DSIM
QA/QC Surrogates							
% 1,4-dioxane-d8	79		%	1	10/05/22	AW	70 - 130 %
Extraction for 1,4-Dioxane	Completed				10/04/22	G/G	

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 13, 2022
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 28, 2022

FOR: Attn: Mr Scott Olson
AECOM
250 Apollo Drive
Chelmsford, MA 01824

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		09/29/22	13:05
Location Code:	AECOM-WILMINGTN	Received by:	CP	09/30/22	16:31
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	148194				

Laboratory Data

SDG ID: GCM46673
Phoenix ID: CM46684

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2
Client ID: 22A-AE106R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1,1-Trichloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
1,1,2-Trichloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1-Dichloroethane	1.3	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1-Dichloroethene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,1-Dichloropropene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2,3-Trichloropropane	ND	0.25	ug/L	1	10/10/22	MH	SW8260C
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
1,2-Dibromoethane	ND	0.25	ug/L	1	10/10/22	MH	SW8260C
1,2-Dichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,2-Dichloroethane	ND	0.60	ug/L	1	10/10/22	MH	SW8260C
1,2-Dichloropropane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,3-Dichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,3-Dichloropropane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
1,4-Dichlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
2,2-Dichloropropane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
2-Chlorotoluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
2-Hexanone	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
4-Chlorotoluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
4-Methyl-2-pentanone	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
Acetone	ND	25	ug/L	1	10/10/22	MH	SW8260C

Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46684
Client ID: 22A-AE106R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzene	ND	0.70	ug/L	1	10/10/22	MH	SW8260C
Bromobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Bromochloromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Bromodichloromethane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
Bromoform	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Bromomethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Carbon Disulfide	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
Carbon tetrachloride	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chlorobenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chloroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chloroform	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Chloromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
cis-1,2-Dichloroethene	15	1.0	ug/L	1	10/10/22	MH	SW8260C
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	10/10/22	MH	SW8260C
Dibromochloromethane	ND	0.50	ug/L	1	10/10/22	MH	SW8260C
Dibromomethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Dichlorodifluoromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Ethylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Hexachlorobutadiene	ND	0.40	ug/L	1	10/10/22	MH	SW8260C
Isopropylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
m&p-Xylene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Methyl ethyl ketone	ND	5.0	ug/L	1	10/10/22	MH	SW8260C
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Methylene chloride	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Naphthalene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
n-Butylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
n-Propylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
o-Xylene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
p-Isopropyltoluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
sec-Butylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Styrene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
tert-Butylbenzene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Tetrachloroethene	2.1	1.0	ug/L	1	10/10/22	MH	SW8260C
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	10/10/22	MH	SW8260C
Toluene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	10/10/22	MH	SW8260C
Trichloroethene	5.9	1.0	ug/L	1	10/10/22	MH	SW8260C
Trichlorofluoromethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Trichlorotrifluoroethane	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
Vinyl chloride	ND	1.0	ug/L	1	10/10/22	MH	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	10/10/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	10/10/22	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	10/10/22	MH	70 - 130 %
% Toluene-d8	100		%	1	10/10/22	MH	70 - 130 %
Oxygenates& Dioxane							
1,4-dioxane	ND	50	ug/L	1	10/10/22	MH	SW8260C (OXY)
Diethyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)

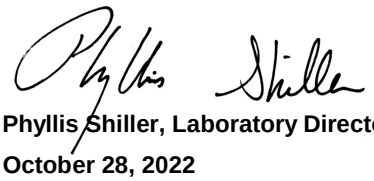
Project ID: LOCKHEED-WILMINGTON MA 60688023.02.2 Phoenix I.D.: CM46684
Client ID: 22A-AE106R1-092922-1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Di-isopropyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	10/10/22	MH	SW8260C (OXY)

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 28, 2022
Reviewed and Released by: Sarah Bell, Project Manager

Sample Results

22A-AE106R3-092922-1				
	Collect Date	09/29/2022 13:00	Lab ID	22210013801
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/05/22 12:30	751208	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	Ethane	0.17U	0.17	1.0	ug/L
74-85-1	**Ethene**	**1.2**	0.24	1.0	ug/L
74-82-8	**Methane**	**470**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

22A-AE106R3-092922-1				
	Collect Date	09/29/2022 15:25	Lab ID	22210013803
	Receive Date	09/30/2022 10:05	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/03/22 11:44	751013	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	**Hydrogen**	**0.91J**	0.49	1.9	nM

Sample Results

22A-AE106M-092922-1	**Collect Date**	09/29/2022 10:50	**Lab ID**	22210013812
	Receive Date	09/30/2022 10:05	**Matrix**	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 07:45	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.32J**	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**12**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

Sample Results

22A-AE106M-092922-2				
	Collect Date	09/29/2022 10:55	Lab ID	22210013816
	Receive Date	09/30/2022 10:05	Matrix	Water

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	10/06/22 08:22	751239	LMB	NA

CAS#	Parameter	Result	DL	LOQ	Units
74-86-2	Acetylene	0.13U	0.13	0.50	ug/L
74-84-0	**Ethane**	**0.34J**	0.17	1.0	ug/L
74-85-1	Ethene	0.24U	0.24	1.0	ug/L
74-82-8	**Methane**	**8.7**	2.0	5.0	ug/L
74-98-6	Propane	0.29U	0.29	1.0	ug/L

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CSIA

Client: **AECOM**
Project: LMC Wilmington

MI Project Number: **131TI**
Date Received: 09/30/2022

Sample Information

Client Sample ID:	**22A-AE106R3-092922-1**
Sample Date:	09/29/2022
Analyst/Reviewer:	SB/MW

Carbon	Units	
$^{13}C/^{12}C$ cis-DCE (‰)	$\delta^{13}C$, VPDB (‰)	**-19.3**
$^{13}C/^{12}C$ PCE (‰)	$\delta^{13}C$, VPDB (‰)	**-15.2**
$^{13}C/^{12}C$ TCE (‰)	$\delta^{13}C$, VPDB (‰)	**-17.1**
$^{13}C/^{12}C$ Vinyl Chloride (‰)	$\delta^{13}C$, VPDB (‰)	**NA**

Legend:
NA= Not Analyzed NS=Not Sampled J= Estimated concentration below PQL but above LQL ND= Not Detected

Results

Table 1: Summary of the QuantArray®-Chlor results obtained for samples 22A-AE106R3-092922-1, 22A-AE105R2-092922-1, 22A-AE102RR1-092822-1, 22A-AE103R5-092822-1, and 22A-TRC301R4-092922-1.

Sample Name	22A-AE106R3-092922-1
Sample Date	**09/29/2022**
Reductive Dechlorination	cells/mL
Dehalococcoides (DHC)	**9.21E+01**
tceA Reductase (TCE)	**4.00E-01 (J)**
BAV1 Vinyl Chloride Reductase (BVC)	**3.00E-01 (J)**
Vinyl Chloride Reductase (VCR)	**1.30E+01**
Dehalobacter spp. (DHBt)	**1.68E+03**
Dehalobacter DCM (DCM)	<5.00E+00
Dehalogenimonas spp. (DHG)	**5.21E+02**
cerA Reductase (CER)	<5.00E+00
trans-1,2-DCE Reductase (TDR)	<5.00E+00
Desulfitobacterium spp. (DSB)	**4.74E+03**
Dehalobium chlorocoercia (DECO)	**1.85E+01**
Desulfuromonas spp. (DSM)	**2.46E+02**
PCE Reductase (PCE-1)	<5.00E+00
PCE Reductase (PCE-2)	<5.00E+00
Chloroform Reductase (CFR)	**4.60E+00 (J)**
1,1 DCA Reductase (DCA)	<5.00E+00
1,2 DCA Reductase (DCAR)	<5.00E+00
Aerobic (Co)Metabolic	
Soluble Methane Monooxygenase (SMMO)	<5.00E+00
Toluene Dioxygenase (TOD)	<5.00E+00
Phenol Hydroxylase (PHE)	<5.00E+00
Trichlorobenzene Dioxygenase (TCBO)	<5.00E+00
Toluene Monooxygenase 2 (RDEG)	<5.00E+00
Toluene Monooxygenase (RMO)	<5.00E+00
Ethene Monooxygenase (EtnC)	<5.00E+00
Epoxyalkane Transferase (EtnE)	<5.00E+00
Dichloromethane Dehalogenase (DCMA)	<5.00E+00
Other	
Total Eubacteria (EBAC)	**3.43E+05**
Sulfate Reducing Bacteria (APS)	**2.42E+04**
Methanogens (MGN)	**1.49E+01**

Legend:
NA = Not Analyzed
I = Inhibited
NS = Not Sampled
< = Result Not Detected
J = Estimated Gene Copies Below PQL but Above LQL

10515 Research Drive
Knoxville, TN 37932
Phone: 865.573.8188
Fax: 865.573.8133
Web: www.microbe.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

January 11, 2023

Melissa and John Bubanas
3 Furbish Pond Lane
N. Reading, MA 01864

Subject: 2022 Irrigation Well Groundwater Elevation Results

Dear Mr. and Mrs. Bubanas,

On September 27, 2022, AECOM under contract to Lockheed Martin Corporation obtained groundwater elevation data, with your permission, from the irrigation well located on your property at 3 Furbish Pond Lane. This effort was performed as part of environmental monitoring that is being conducted associated with the former GE Facility at 50 Fordham Road, Wilmington, MA. This letter summarizes the information developed from that event.

Massachusetts environmental regulations require notification to a property owner when environmental data are collected at a property on behalf of someone other than the owner of the property. Therefore, we are providing you with the data that we collected, specifically the depth to groundwater measurements and the calculated groundwater elevations.

Data from irrigation well located at #3 Furbish Pond Lane

Depth to water (from reference elevation) September 27, 2022: 15.25 ft (did not measure total depth)
Groundwater elevation on September 27, 2022 = 103.21 (Ref Elev.) – 15.25 ft = 87.96 ft NAVD29.

The groundwater elevations at your property are higher than those in the nearby wetlands and in the vicinity of the former GE Facility at 50 Fordham Road indicating that it would not be likely that any groundwater impacts from that site would come to be located beneath your property.

Should you be interested in more information, additional public involvement opportunities for this site are available by reviewing documents in the project repository located at the North Reading Flint Memorial Library (147 Park Street), on the Lockheed Martin project-specific website located at http://www.lockheedmartin.com/us/who-we-are/eesh/remediation/wilmington/archive.html., or on the MassDEP's website. If you have any questions or comments regarding the results, please contact me at 978-846-5238 or scott.olson@aecom.com.

Yours sincerely,

Scott Olson
Project Manager

cc: Paul Calligan, Lockheed Martin Corporation