2018 GROUNDWATER MONITORING REPORT
LOCKHEED MARTIN CORPORATION
MIDDLE RIVER COMPLEX
2323 EASTERN BOULEVARD
MIDDLE RIVER, MARYLAND

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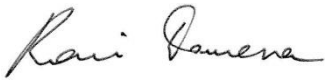

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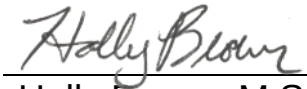

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TABLE OF CONTENTS

Section	Page
Table of Contents	**i**
List of Figures	**iv**
List of Tables	**iv**
Appendices	**iv**
Executive Summary	**1**
Section 1 Introduction and Overview	**1-1**
Section 2 Site Background	**2-1**
2.1 Middle River Complex Background	2-1
2.1.1 Middle River Complex History	2-1
2.1.2 Middle River Complex Characteristics	2-2
2.1.2.1 Current and Surrounding Land Use	2-2
2.1.2.2 Physiography	2-2
2.1.2.3 Hydrology	2-2
2.1.2.4 Soils	2-3
2.1.2.5 Regional Geology	2-3
2.1.2.6 Regional Hydrogeology	2-4
2.1.2.7 Middle River Complex Geology	2-4
2.1.2.8 Middle River Complex Surficial Aquifer Hydrogeology	2-5
2.2 Groundwater	2-5
2.2.1 Groundwater Studies and Remedy	2-6
2.2.2 Groundwater Monitoring Optimization Program	2-9
Section 3 Investigation Approach and Methodology	**3-1**
3.1 Synoptic Groundwater Level Measurements	3-1
3.2 Groundwater Sampling and Chemical Analysis	3-2
3.2.1 Well Purging	3-2
3.2.2 Sample Collection and Preservation	3-3
3.3 Laboratory Analyses	3-3
3.4 Documentation	3-4
3.5 Equipment Decontamination	3-4
3.6 Waste Management	3-4
3.7 Data Management	3-5

3.7.1 Data Tracking and Control 3-5
3.7.2 Data Export to EESH Geographic Information System 3-6
3.7.3 Mobile Data Collection 3-6
3.8 Data Validation 3-6
3.9 Sustainability Approach 3-7
Section 4 Groundwater Monitoring Results 4-1
4.1 Groundwater Elevation Data 4-1
4.2 Groundwater Analytical Results 4-2
4.2.1 Shallow Groundwater Analytical Results 4-2
4.2.1.1 Volatile Organic Compounds 4-2
4.2.1.2 1,4-Dioxane 4-4
4.2.1.3 Benzene, Toluene, Ethylbenzene and Xylene 4-5
4.2.1.4 Metals 4-6
4.2.1.5 Polychlorinated Biphenyls 4-7
4.2.2 Intermediate Groundwater Analytical Results 4-7
4.2.2.1 Volatile Organic Compounds 4-7
4.2.2.2 1,4-Dioxane 4-9
4.2.2.3 Benzene, Toluene, Ethylbenzene, Xylenes 4-10
4.2.2.4 Metals 4-10
4.2.3 Polychlorinated Biphenyls 4-11
4.2.4 Monitored Natural Attenuation Parameters 4-12
4.2.5 TCE Plume Areas 4-14
4.2.5.1 Block I, South of Building C Plume 4-14
4.2.5.2 Blocks E and F, Southeastern Plume 4-15
4.2.5.3 Block G Plume 4-16
4.2.5.4 Blocks I and H, West of Building A (Shallow and Intermediate [“Deeper”] Plume) 4-16
4.2.6 Volatile Organic Compound Trends 4-17
4.2.6.1 Blocks E and F, Southeastern Plume 4-17
4.2.6.2 Block I, South of Building C Plume 4-18
4.2.6.3 Block G Plume 4-18
4.2.6.4 Block I, West of Building A Plume 4-18
Section 5 Summary and Conclusions 5-1

5.1 Groundwater Elevations 5-1
5.2 Groundwater Quality Trends and Findings 5-1
5.3 Recommendations 5-2
Section 6 References 6-1

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

Figure 1 Middle River Complex Location Map
Figure 2 Site Layout and Tax Blocks Middle River Complex
Figure 3 Groundwater Well Sampling Network—April 2018
Figure 4 Potentiometric Surface Elevation, Shallow Monitoring Wells—April 2018
Figure 5 Potentiometric Surface Elevation, Intermediate Monitoring Wells—April 2018
Figure 6 1,4-Dioxane in Shallow Monitoring Wells—April 2018
Figure 7 Total BTEX in Shallow Monitoring Wells—April 2018
Figure 8 1,4-Dioxane in Intermediate Monitoring Wells—April 2018
Figure 9 Total BTEX in Intermediate Monitoring Wells—April 2018
Figure 10 TCE in Shallow Monitoring Wells—April 2018
Figure 11 TCE in Intermediate Monitoring Wells—April 2018
Figure 12 Total Chlorinated Ethenes in Shallow Monitoring Wells—April 2018
Figure 13 Total Chlorinated Ethenes in Intermediate Monitoring Wells—April 2018
Figure 14 Block E Section A-A'

LIST OF TABLES

Table 1 2018 Monitoring Well Network, Chemical Analyses and Methods Performed
Table 2 Monitoring Well Purge Completion Criteria
Table 3 Quality Assurance Sampling
Table 4 April 2018 Synoptic Groundwater Level Measurements
Table 5 April 2018 Groundwater Sampling Event Detections—All Analyses

APPENDICES

Appendix A—June 2018 Monitoring Well Repair Report
Appendix B—Daily Field Reports and Low-Flow Sampling Forms
Appendix C—Investigative Derived Waste Documentation
Appendix D—Data Validation Report
Appendix E—2018 Groundwater Analytical Results
Appendix F—Laboratory Analytical Reports
Appendix G—Chlorinated Ethene Time-Series Trend Charts

ACRONYMS AND ABBREVIATIONS

1,1-DCE	1,1-dichloroethene
1,2-DCA	1,2-dichloroethane
1,2-DCP	1,2-dichloropropane
1,2,4-TCB	1,2,4-trichlorobenzene
1,3-DCB	1,3-dichlorobenzene
1,4-DCB	1,4-dichlorobenzene
AECOM	AECOM Technical Services, Inc.
BTEX	benzene, toluene, ethylbenzene, xylenes
cis-1,2-DCE	*cis*-1,2-Dichloroethene
COC(s)	chain(s) of custody
DFR	daily field report
DO	dissolved oxygen
F001 Plume	hazardous F001 TCE groundwater plume
ft/d	feet per day
GIS	geographic information system
LFSP	low-flow sampling procedure
Lockheed Martin	Lockheed Martin Corporation
LMCPI	Lockheed Martin Corporation Properties, Inc.
LTM	laboratory task manager
MDE	Maryland Department of the Environment
MEE	methane, ethane, ethene
mg/L	milligrams per liter
MRC	Middle River Complex
msl	mean sea level
MTBE	methyl *tert*-butyl ether
MW	monitoring well
NAA	natural attenuation assessment

ORP	oxidation-reduction potential
PCB(s)	polychlorinated biphenyl(s)
PCE	tetrachloroethene
PID	Photoionization Detector
PPE	personal protective equipment
PVC	polyvinyl chloride
TCE	trichloroethene
Tetra Tech	Tetra Tech, Inc.
Tilley	Tilley Chemical Company
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
USDOT	United States Department of Transportation
UST	underground storage tank
VC	vinyl chloride
VISLs	vapor intrusion screening levels
VOC(s)	volatile organic compound
µg/L	microgram(s) per liter

EXECUTIVE SUMMARY

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared this groundwater monitoring report for the April 2018 groundwater sampling at the Middle River Complex in Middle River, Maryland. This report is part of the long-term groundwater and surface water monitoring program at the Middle River Complex, conducted in accordance with the approved *Groundwater and Surface Water Monitoring Work Plan* and its addenda (AECOM, 2017a, 2018a, 2018b). Groundwater was sampled from April 4–13, 2018, and June 25–26, 2018. MRC-MW77A and MRC-MW80B were inadvertently left out during the April 2018 sampling round and were sampled on December 6, 2018. The analytical results for MRC-MW77A and MRC-MW80B are presented in Revision 1 of this report.

The findings of the April ~~2018~~ and December 2018 groundwater sampling ~~and~~ analyses and groundwater level measurements for the Lockheed Martin Corporation Middle River Complex are summarized as follows:

- Groundwater measurements in the April 2018 and December 2018 groundwater sampling are consistent with previously observed groundwater elevations and observed radial groundwater-flow patterns to Dark Head Cove and Cow Pen Creek.
- The Blocks E and F Southeastern Plume, experiences some degradation of parent material into daughter products, but remains largely stable and migrating from the underground storage tank 2 source area in Block E, downgradient to Dark Head Cove.
- The Block I South of Building C Plume is stable to increasing over time, and possibly connects with the Blocks E and F, Southeastern Plume as it migrates east and south from the source area (MRC-MW60A and MRC-MW60B). Increasing trichloroethene trends observed in some monitoring wells directly downgradient of the Block I Building C Plume may be caused by the following:
    - a continued release from an unidentified source(s) beneath Building C;
    - release from source material that has sorbed onto finer-grained materials and is back-diffusing into groundwater and providing a continuing source of contamination in the area; and/or
    - injections that may have moved the contaminant mass within the subsurface.

- Increases in trichloroethene concentrations within the Block I Building C source area and increases in degradation products at wells immediately downgradient of the source area suggest the plume could be sourcing parent material at relatively the same rate as it is degrading. An increase in *cis*-1,2-dichloroethene concentrations in wells further downgradient of the Block I Building C source area indicates anaerobic reductive dechlorination is occurring. Overall, a 70 percent reduction in trichloroethene mass in active remediation areas continues to be achieved.

- Remedial injections in 2015 and 2016 in the Block G Plume near MRC-MW14B were effective in the immediate area of the injections.

- In the Block G Plume, the plume detected at upgradient well MRC-MW21B and other B-Zone wells upgradient near the Tilley building remains stable. A-Zone wells (MRC-MW21A, MRC-MW98A, and MRC-MW111A) designated to evaluate potential for vapor intrusion within the Tilley Building had detectable groundwater concentrations below vapor intrusion screening levels. In 14 rounds of vapor intrusion monitoring, the A-Zone groundwater contaminant concentrations have not resulted in vapor intrusion.

- The Block G 1,4-dioxane plume contains higher contaminant concentration levels at monitoring well (MRC-MW12A) along the shoreline and may indicate possible flow into surface water at Cow Pen Creek. Ongoing surface water monitoring of Cow Pen Creek has not detected 1,4-dioxane at concentrations above risk-based swimming screening levels; surface water results will be provided under a separate cover.

- The Block I West of Building A Plume, though stable to decreasing in most upgradient wells, is stable to increasing towards downgradient wells, particularly in the intermediate aquifer (MRC-MW120B). A deeper western groundwater investigation was performed in April and May 2018 to further delineate the plume and refine the conceptual site model. The findings of this investigation will be provided under a separate cover.

Recommendations for future remediation activities based on the results of the April and December 2018 groundwater sampling include:

- Continue annual groundwater monitoring in April 2019, including sampling of the sentinel wells as part of the three-year off-site sampling plan set up within the Middle River Complex surface water and groundwater monitoring program.

- Evaluate and optimize the sampling program within the existing well network and the possible addition of wells based on trends observed in chemical data, together with results of the plume stability analysis, to better define trichloroethene plume areas.

SECTION 1
INTRODUCTION AND OVERVIEW

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared this 2018 groundwater monitoring report summarizing the April and December 2018 groundwater sampling at the Middle River Complex in Middle River, Maryland. Figure 1 shows the location of the Middle River Complex. This report presents the current round of synoptic groundwater levels and analytical data for selected monitoring wells as part of the long-term groundwater and surface monitoring program at the Middle River Complex. This report summarizes the investigative activities and results of the April and December 2018 groundwater sampling, including:

- measuring synoptic groundwater levels
- monitoring well inspections and performing repairs as necessary
- managing investigation derived waste

The objectives of the monitoring program are to:

- provide a current round of groundwater level and chemical data for selected wells
- better understand the nature and extent of chemical contamination in groundwater
- evaluate trends of on-site groundwater chemical plumes
- provide supplementary site-wide groundwater analysis in support of the ongoing groundwater remedy in Blocks E, F, G, and I
- provide supplementary site-wide groundwater analysis in support of ongoing site characterization west of Building A
- provide A-level (shallow) well groundwater analysis near the Tilley Chemical Company, Inc. building to determine if chemical contamination could lead to vapor intrusion
- evaluate natural attenuation of the chemicals of concern in groundwater at the Middle River Complex

- inspect each accessible monitoring well, then conduct monitoring well repairs to preserve well integrity. This effort will be reported separately.

This report is organized into the following sections:

Section 1—Introduction: Presents the site objectives for the groundwater monitoring program.

Section 2—Site Background: Briefly describes site history, subsurface conditions, and previous investigations.

Section 3—Investigation Approach and Methodology: Presents the technical approaches to field activities and data management, and describes the field methodologies employed.

Section 4—Groundwater Monitoring Results: Presents investigation results, interpretation, and data-quality review.

Section 5—Summary and Conclusions: Summarizes the results of the current round of sampling and provides recommendations for future activities.

Section 6—References: Cites references used to compile this report.

Figures, tables, and appendices are provided as stand-alone sections following Section 6.

SECTION 2
SITE BACKGROUND

2.1 MIDDLE RIVER COMPLEX BACKGROUND

The Middle River Complex, is part of the Chesapeake Industrial Park, at 2323 Eastern Boulevard in Middle River, Maryland, approximately 11.5 miles northeast of downtown Baltimore. It consists of approximately 161 acres, including 12 main buildings, an active industrial area and yard, perimeter parking lots, an athletic field, a vacant concrete lot, a trailer and parts storage lot, and numerous grassy spaces along its perimeter. It is bounded by Eastern Boulevard (Route 150) to the north, Martin State Airport to the east, Dark Head Cove to the south, and Cow Pen Creek to the west. Figure 2 is a map showing the Middle River Complex layout.

LMC Properties, Inc., owns the Middle River Complex. LMC Properties, Inc.'s primary site activities include facility and building management and maintenance. The main tenant at the site, MRA Systems, Inc., designs, manufactures, fabricates, tests, overhauls, repairs, and maintains aeronautical structures, parts, and components for military and commercial applications. Lockheed Martin Rotary and Mission Systems, a division of Lockheed Martin Corporation, conducts engineering activities and fabricates, assembles, tests, and otherwise supports vertical-launch systems. Applied NanoStructured Solutions, LLC, a Cabot Corporation subsidiary engages in research and design of nanotechnology applications, also occupies a portion of the Middle River Complex.

2.1.1 Middle River Complex History

In 1929, the Glenn L. Martin Company (a predecessor entity of Lockheed Martin Corporation) acquired large parcels of undeveloped land in Middle River, Maryland, to manufacture aircraft for United States government and commercial clients. In the early 1960s, Glenn L. Martin Company merged with American-Marietta Company to form Martin Marietta Corporation. Around 1975, the adjacent eastern airport area (currently Martin State Airport), approximately 750 acres, was transferred to the State of Maryland. In the mid-1990s, Martin Marietta Corporation merged with Lockheed Corporation to form Lockheed Martin Corporation. Shortly

after the merger, General Electric Company entities acquired most of Lockheed Martin Corporation's aeronautical business in Middle River and MRA Systems, Inc., began operations.

2.1.2 Middle River Complex Characteristics

2.1.2.1 Current and Surrounding Land Use

The Middle River Complex is an industrial facility surrounded primarily by commercial, industrial, and residential establishments. Six facilities adjacent to the Middle River Complex make up the remaining portion of the Chesapeake Industrial Park. These include Tilley Chemical Company, Inc. (a food and pharmaceutical-chemical distributor), North American Electric, Inc. (an industrial and commercial electrical contractor), Johnson and Towers (a heavy-duty automotive and boat repair and maintenance company), Ashley Furniture (a furniture warehouse distributor), Exxon (a gasoline filling station and convenience store), and the Middle River Post Office. Residential developments are on the opposite shores of Cow Pen Creek, Dark Head Cove, Dark Head Creek, and north of Eastern Boulevard (Route 150).

2.1.2.2 Physiography

The Middle River Complex is in the Western Shore of the Coastal Plain physiographic province, which is generally characterized by low relief. The Middle River Complex's topography slopes gently, ranging from sea level to 32 feet above mean sea level (Cassell, 1977). The topography slopes from Eastern Boulevard to the southwest and south toward Cow Pen Creek and Dark Head Cove.

2.1.2.3 Hydrology

The Middle River Complex occupies the area between the junction of Cow Pen Creek and Dark Head Cove, which both discharge into Dark Head Creek, a tributary of Middle River, which is a tributary of Chesapeake Bay. The Middle River Complex is approximately 3.24 miles (17,100 feet) upstream of Chesapeake Bay.

The Middle River Complex has no surface water bodies on-site. Excluding areas immediately adjacent to Cow Pen Creek and Dark Head Cove, surface-water runoff discharges from the facility via storm drains. Lockheed Martin Corporation maintains a National Pollutant Discharge Elimination System permit (state discharge permit Number 00-DP-0298, National Pollutant Discharge Elimination System Number MD0002852), issued by the Maryland Department of the

Environment Industrial Discharge Permits Division, Water Management Administration. The permit covers storm-water discharge from the entire property, rather than from individual tenants.

2.1.2.4 Soils

Soils underlying Middle River Complex have been mapped by the United States Department of Agriculture Soil Conservation Service as Mattapex-Urban Land Complex and Sassafras-Urban Land Complex (United States Department of Agriculture, 1993). Mattapex-Urban Land soils consist of deep, well-drained, silty soils. Sassafras-Urban Land soils consist of deep, well-drained sandy soils. In both complexes, the original soil textures have been disturbed, graded over, or otherwise altered. Site characterization studies indicate that fine-grained (e.g., silt, clay), low-permeability soils with interbedded sand layers make up most soils at the Middle River Complex.

2.1.2.5 Regional Geology

Geologic mapping of Baltimore County shows that the Middle River Complex is underlain by the Potomac Group, a Cretaceous-age interbedded gravel, sand, silt, and clay unit ranging up to 800 feet thick. The Potomac Group is composed of three units: the Raritan and Patapsco Formations, the Arundel Clay, and the Patuxent Formation. The Raritan and Patapsco Formations range up to 400 feet thick and are composed of gray, brown, and red variegated silt and clay with lenses of sand and gravel. The Arundel Clay ranges from 25 to 200 feet thick and is composed of dark gray and maroon lignitic clays. The Patuxent Formation ranges up to 250 feet thick and is described as a white or light gray to orange brown, moderately sorted sand with quartz gravels, silts, and clays.

Lithologic soil logging beneath the Middle River Complex has identified a very heterogeneous stratigraphy. The underlying soils are composed of silty sands, fine-grained to medium-grained sands, silty clays, clayey silts, and plastic clay, with the primary lithology being clay to silty clay. Areas along the waterfronts have been backfilled to their present elevation over past decades. Soils obtained from fill areas are similar in appearance and composition to soils considered to be native to the Middle River Complex.

2.1.2.6 Regional Hydrogeology

Sand and gravel zones in the unconsolidated surficial deposits at the Middle River Complex, when present, may form an unconfined or water table aquifer system (Bennett and Meyer, 1952). The water table at the Middle River Complex generally conforms to the land surface, with the highest water levels in interior land areas and the lowest at approximately surface water elevations along the shoreline. The Patuxent Formation is the most important water-bearing formation in the Baltimore area. Industrial wells in the southeastern part of the area, specifically Curtis Bay and Sparrows Point, yield 500–900 gallons per minute. In these industrialized areas, the transmissivity and storage coefficient in confined portions of the aquifer average about 50,000 gallons per day per foot and 0.00026, respectively.

The Patapsco Formation is also an important water-bearing formation in industrialized Baltimore, where it is separated by clay into a lower and an upper aquifer. Industrial wells screened in the lower aquifer yield as much as 500–750 gallons per minute, with an estimated transmissivity of 25,000 gallons per day per foot (Bennett and Meyer, 1952). The upper aquifer yields quantities of water similar to industrial wells, but likely has a higher overall transmissivity because it is thicker than the lower aquifer.

2.1.2.7 Middle River Complex Geology

Overall, investigation results indicate complex arrangements of predominantly clay, silty clay, silt, and clayey silt, with smaller, more permeable zones of silty sand and sand. Thick sequences of low permeability clay, silty clay, clayey silt, and silt were observed in the northern portion of the site from MRC-MW03 to the area between MRC-MW60 and MRC-MW94D. Lithologic data indicate a thick clay zone up to 50 feet thick underlying the surficial aquifer. Below this clay zone is a series (up to 105 feet thick) of alternating thick sand and clay beds. Underlying these alternating beds is another thick clay layer ranging up to 73 feet thick that is consistent with the expected thickness and placement of the Arundel Formation (Chapelle and Kean 1985; Vroblesky and Fleck, 1991). Below this lower clay zone are layers of silty to clayey sand and thick clay, up to 14 and 15 feet thick, respectively.

In the southwestern portion of the Middle River Complex, surficial silty sands and sandy silts are encountered in the upper several feet of subsurface soil between wells MRC-MW12 to MRC-MW56 in the northeast. A lower sandy unit 50 feet below mean sea level at MRC-MW14

appears to be contiguous with sand encountered at MRC-MW12 and MRC-MW95D to the southwest. The upper silty sand unit and the lower sand unit are separated by approximately 30-35 feet of clay and/or silt. These underlying units range up to 80 feet in combined thickness. Underlying the sand-clay sequence is a thick clay unit ranging up to 76 feet thick that contains thick sand beds. The persistence of thick clay layers confining the sand units is observed in the lower portions of all deep wells.

2.1.2.8 Middle River Complex Surficial Aquifer Hydrogeology

Groundwater at the Middle River Complex is encountered at depths ranging from above ground surface (artesian) to nearly 25 feet below ground surface. Groundwater preferentially flows to the southeast, south, and southwest, within sandy strata that extend from the central portion of the Middle River Complex to thicker sandy beds near Dark Head Cove and Cow Pen Creek (Tetra Tech, Inc., 2014a).

The lower portion of the surficial aquifer in the southeast portion of the Middle River Complex is divided by silt and silty clay at 20–30 feet below mean sea level. To the southwest, shallow groundwater flows southwest through sandy and silty material towards Cow Pen Creek. This area has approximately 13–18 feet of saturated sandy material (Tetra Tech, Inc., 2014a).

In 2005, single-well permeability tests (slug tests) were performed to determine the variability of hydraulic conductivity across the Middle River Complex. Low average hydraulic conductivities (i.e., soil permeability) were observed within shallow and intermediate wells (arithmetic means of 0.22 and 0.48 feet per day, respectively), with the lowest values in the southern portion of the Middle River Complex. Permeability values observed in the shallow and intermediate wells are consistent with lower values published for fine clean sand or sand and silt mixtures. Hydraulic conductivity values for deep wells range from 0.35 to 9.16 feet per day. The average hydraulic conductivity of the deeper wells (3.82 feet per day) is approximately 10 times the average hydraulic conductivity for the shallow and intermediate zones (Tetra Tech, Inc., 2009a).

2.2 GROUNDWATER

Groundwater at Middle River Complex is encountered at depths ranging from ground surface (artesian) to nearly 25 feet below grade. Shallow groundwater follows site topography and flows radially from the hydraulically upgradient northern portion of the Middle River Complex at

Eastern Boulevard and immediately south of Buildings A, B, and C to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek.

2.2.1 Groundwater Studies and Remedy

A risk assessment (Tetra Tech, Inc., 2006) identified trichloroethene, tetrachloroethene, vinyl chloride, benzene, and certain metals (beryllium, cobalt, nickel, and zinc) as the most significant contaminants in Middle River Complex groundwater. Chlorinated volatile organic compounds, semivolatile organic compounds, and petroleum-related hydrocarbons, as well as their degradation products, are the largest groups of organic chemicals of concern at the Middle River Complex. Chlorinated volatile organic compounds are in surficial aquifer groundwater in several areas of the facility at concentrations above the Maryland Department of the Environment groundwater standards.

Petroleum-based fuels, such as gasoline, have numerous chemical constituents. Several volatile organic compounds associated with fuels are fairly soluble in groundwater and are therefore mobile in the subsurface. The most commonly detected petroleum-related volatile organic compounds in surficial aquifer groundwater are benzene, toluene, ethylbenzene, and xylenes, and methyl *tert*-butyl ether.

The contaminant 1,4-dioxane is also a groundwater chemical of concern that has been detected above its selected screening level, and is an emerging contaminant nationwide. The Maryland Department of the Environment has not established a groundwater standard for 1,4-dioxane, so for comparison purposes the Maryland Department of the Environment have suggested using the United States Environmental Protection Agency Regional Screening Level. Since 1,4-dioxane is carcinogenic and site groundwater is not used as a drinking resource, a target risk of 10^{-6} was applied at the suggestion of the Maryland Department of the Environment. This results as a screening level of 0.46 microgram per liter (United States Environmental Protection Agency, 2018). If groundwater concentrations exceed 0.46 microgram per liter and surface water concentrations exceed the risk-based swimming screening level (30 microgram per liter), a fate and transport assessment of the plume would be performed.

Off-site groundwater monitoring wells were installed in 2010 along the shorelines of Dark Head Cove and Cow Pen Creek. The major volatile organic compounds found in the Middle River

Complex groundwater plumes (trichloroethene, *cis*-1,2-dichloroethene, vinyl chloride, and benzene) and 1,4-dioxane have not been detected in previous off-site groundwater sampling events (Tetra Tech, Inc., 2010; 2013a; 2016a). Additionally, four deep wells were installed off-site beneath the surficial aquifer (but above the Arundel Formation clay) to assess groundwater quality in the deeper aquifers. These off-site monitoring wells are sampled every three years and are scheduled to be sampled in 2019, as the last sampling event was in 2016. Several volatile and semivolatile organic compounds detections in these deep wells are below Maryland Department of the Environment groundwater standards, as observed in the 2010, 2013, and 2016 sampling rounds (Tetra Tech, Inc., 2010; 2013a; 2016a).

The groundwater response action at the Middle River Complex is implemented in accordance with an administrative consent order between the Maryland Department of the Environment and Lockheed Martin Corporation. The groundwater response action uses enhanced anaerobic *in situ* bioremediation to treat three areas exhibiting high groundwater concentrations of trichloroethene and other chlorinated solvents. The response action addresses groundwater contamination in the southeastern trichloroethene area (Block E), the southwestern trichloroethene area (Block G), and the northern trichloroethene area (Block I) (Tetra Tech, Inc., 2012e).

Construction of the groundwater treatment remedies in Blocks E, G, and I began in early summer 2013. During remedial action activities in Block E, two underground storage tanks were discovered near the foundation of former Building D. Underground storage tank 1 was nearly empty when discovered, whereas underground storage tank 2 contained high concentrations of trichloroethene. Both underground storage tanks were removed during installation of the *in situ* bioremediation system.

Subsequent investigations indicated that the mass and concentration of trichloroethene near underground storage tank 2 would not be readily addressed by *in situ* bioremediation. With Maryland Department of the Environment approval, Lockheed Martin installed a multi-phase extraction system in Block E in 2014 that removed most of the mass of trichloroethene that was present in groundwater near underground storage tank 2. The multi-phase-extraction-system operation was completed in late 2015.

Sampling for residual groundwater contamination detected a narrow trichloroethene plume extending from underground storage tank 2 to Dark Head Cove. Sampling to determine the nature and extent of contamination was completed and remediation alternatives were defined in *Middle River Complex Groundwater Remedial Action Plan Addendum Number 4* (Tetra Tech, Inc., 2018). The *Remedial Action Plan Amendment 4* was reviewed and approved by Maryland Department of the Environment at the end of July 2018.

Semi-permanent injection wells were installed to inject biological amendments into the subsurface. A tracer study was performed in Blocks G and I (May–July 2014) before the full-scale injection to determine the main injection parameters.

Two injection rounds were completed at Block G in June 2015 and February 2016. The second round included bioaugmentation with Dehalococcoides bacterial culture and was completed in early 2016. Remedial action objectives determined for these actions have been met, and two years of post-injection monitoring have been completed. The Block G injection program completion report was submitted to the Maryland Department of the Environment in October 2018.

Three injection rounds were completed in Block I, with the latest completed in September 2017. Injections in September 2017 incorporated pumping to lower the groundwater table in the injection area to control groundwater mounding, to mitigate the potential for substrate escaping through storm drains to Dark Head Cove. This change was documented in the Maryland Department of the Environment-approved *Groundwater Remedial Action Plan Addendum 4* (Tetra Tech Inc, 2018). Remedial action objectives have been achieved, and a third injection-event completion report is being prepared. Two years of post-injection monitoring are in progress. Additional details regarding Middle River Complex background and history, including details of previous environmental investigations and discussions of contaminant source areas, are in the *Middle River Complex Groundwater Remedial Action Plan* and the annual groundwater monitoring reports (Tetra Tech Inc., 2009a–b, 2012a–d, 2013a, 2014a, 2015a, 2016a-b, 2017b). Groundwater monitoring results are currently evaluated annually, except in groundwater treatment areas, for which results are evaluated more frequently.

2.2.2 Groundwater Monitoring Optimization Program

A study was conducted to optimize groundwater monitoring at the Middle River Complex (Tetra Tech, Inc., 2015b). This study provided the rationale to begin a long-term groundwater monitoring program at the Middle River Complex to assess the effectiveness of the groundwater remedy, to determine if continuing or new releases to groundwater are occurring, and to monitor conditions in areas where elevated concentrations of other constituents will be reduced through monitored natural attenuation.

The existing Middle River Complex groundwater monitoring network was evaluated in 2015 to optimize the number of wells sampled, the chemical analyses performed, and monitoring frequency. The optimization study recommended other cost reduction measures to achieve long-term-monitoring data-quality objectives, reduce sampling costs, and minimize the production and disposal of investigation derived waste. Future evaluation methods were also developed to determine if a well has statistically attained the standards governing chemicals in groundwater, and if a well can be permanently removed from the long-term monitoring program. Since 2015, several volatile organic compounds concentrations and time-based trends have been evaluated annually as part of the groundwater monitoring optimization program.

The site's monitoring program, new well-installation locations, chemical data needs, sampling frequency, sampling methods, and analysis methods will all be optimized using site-specific decision-flow logic diagrams, years of site groundwater chemical data from multiple programs, and the results of the plume-stability analysis. Chemical groups evaluated for the study will include volatile organic compounds, semivolatile organic compounds, 1,4-dioxane, perchlorate, metals, and polychlorinated biphenyls. Data needs will be assessed for the following as part of the 2019 work plan addendum:

- wells that require additional sampling to meet the minimum data criterion for long-term monitoring program evaluation (four rounds of data for volatile organic compounds and two rounds of data for other analyses)
- well data needed to assess the effectiveness of the groundwater remedies
- well data needed to evaluate the monitored natural-attenuation of untreated areas (i.e., areas not part of the groundwater remedy that have constituent concentrations above groundwater standards)

- wells to monitor for potentially unrecognized chemical releases from legacy facility operations
- reactivated or extended sampling in areas where new regulatory thresholds have been established

SECTION 3
INVESTIGATION APPROACH AND METHODOLOGY

The objectives of annual groundwater monitoring at the site are to provide a current round of synoptic groundwater level measurements and groundwater analytical data for selected monitoring wells to better understand the nature and extent of contamination. Data are used to evaluate time series trends for on-site groundwater plumes to assess continuing or new constituent releases to the aquifer, potential groundwater plumes discharging to surface water bodies, and natural attenuation of chemicals of concern in groundwater at the Middle River Complex (MRC). The results of the April 2018 groundwater monitoring are discussed in Section 4.

3.1 SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS

AECOM Technical Services, Inc., (AECOM) personnel completed a synoptic round of groundwater-level measurements on April 2–4, 2018. The air- and water-tight compression caps on well casings were opened to allow venting before a depth-to-water measurement was taken, to allow air pressure and groundwater in the casings to reach equilibrium. Upon immediately opening the cap, a photoionization detector (PID) was used to measure headspace vapor in the well casing, for both health and safety reasons and to document vapor concentrations within the well casing.

Static water levels were measured using a graduated, electronic, sounding water-level meter. Artesian monitoring wells were gauged by securing a fernco coupling fitted to a polyvinyl chloride (PVC) standpipe to the inner PVC casing of the monitoring well. The water level was allowed to equilibrate in the standpipe for a period of five minutes before obtaining groundwater-level measurements.

Site personnel performed reconnaissance to identify wells that were inaccessible due to equipment storage or material obstruction, and resolved such problems using a hand-held Schonstedt metal detector and coordinating with MRC personnel. AECOM personnel also

inspected and documented the condition of monitoring wells, including the condition of the well casing, the well pad, manway, and well gasket, and the need for additional parts, such as compression caps, bolts, washers, and well locks, to be addressed in future well repairs. Results of the June 2018 monitoring-well repairs are presented in Appendix A.

The static water level was determined by lowering the meter's probe into the well until the liquid level indicator emitted an audible tone, indicating the air/water interface. The water level was read from the probe cable at the reference mark on the top of the well casing and recorded to the nearest 0.01 foot. If no reference mark was found, AECOM personnel used indelible ink and marked a line on the north side of the well casing. Water levels and the time of measurement were recorded on field forms via mobile data apps and compiled in daily field reports (DFRs). Copies of the DFRs for the event are in Appendix B. A few wells were not found or were found damaged. Those wells were located and damaged wells were repaired or abandoned.

3.2 GROUNDWATER SAMPLING AND CHEMICAL ANALYSIS

AECOM personnel sampled 128 on-site monitoring wells from April 4–13, 2018 and two wells (MRC-MW77A and MRC-MW80-B) on December 6, 2018. Wells that could not be located during the April sampling event were sampled on June 25–26, 2018. Figure 3 presents the locations of the monitoring wells sampled. Table 1 presents a complete listing of the 2018 monitoring well network, including those that could not be sampled due to inaccessibility or damage.

3.2.1 Well Purging

Monitoring wells were purged using low-flow sampling procedures (LFSP) before samples were collected. Purging was completed using peristaltic pumps fitted with dedicated, disposable Teflon®-lined tubing or submersible bladder pumps positioned in the center of each well's saturated screened interval, pumping at a flow rate of between 100 and 500 milliliters per minute. Flow rates were monitored using a graduated cylinder and stopwatch.

The purpose of LFSP is to collect groundwater samples from monitoring wells that represent ambient groundwater conditions in the aquifer. This is accomplished by setting the intake velocity of the sampling pump to a flow rate that limits drawdown inside the well. Purging is considered complete when the groundwater-purge parameters have stabilized, when three

saturated well-casing volumes have been removed, when the well has been purged dry, or after a 90-minute period, whichever occurs first. During purging, water level drawdown measurements and groundwater parameters (including pH, temperature, specific conductivity, dissolved oxygen [DO], oxidation-reduction potential [ORP], and turbidity) were collected every five minutes until one of the above criteria had been met. Purge completion parameters are defined in Table 2. These data were recorded on low-flow-purge data sheets via mobile data apps; data sheets and completed DFRs are in Appendix B.

Water-quality parameters were measured using a Horiba U-52 water-quality meter with flow cell. Upon arrival at each sampling location, and immediately after the well was opened, the headspace in monitoring wells was screened with a 3000 MiniRAE PID. All air- and water-quality monitoring equipment was calibrated and inspected daily to ensure precise and accurate measurements. All purged water was collected in United States Department of Transportation (USDOT)-approved 55-gallon steel drums. Purge water collected downgradient of underground storage tank (UST) 2 was separately drummed and managed as F001-listed hazardous waste.

3.2.2 Sample Collection and Preservation

Collected groundwater samples were immediately stored on ice in laboratory-supplied sample containers until they were picked-up by the laboratory courier. Table 3 describes quality assurance/quality control sampling requirements. Each sample container was sealed and submitted to the laboratory for analysis with a laboratory-provided chain of custody (COC) form.

3.3 LABORATORY ANALYSES

Samples from subject wells were analyzed for the following constituents (Table 1):

- volatile organic compounds (VOCs) (Method 8260C)
- 1,4-Dioxane (Method 8270D SIM)
- polychlorinated biphenyls (PCBs; Method 680), and chlorinated benzenes (Method 8260C)
- total metals (Method 6020A/7470)
- hexavalent chromium (Method 218.6)
- methane, ethane, and ethene (MEE; Microseeps® AM 20GAX)

- monitored natural attenuation parameters (Method SW846)

ALS Environmental of Middletown, Pennsylvania, performed all laboratory analyses. Ferrous iron was analyzed in the field using Hach® test kits.

3.4 DOCUMENTATION

All site activities and observations, including groundwater level measurements, well purge information, groundwater parameters, time of purging and sampling, and field observations were recorded on two of Esri's mobile applications, *Survey123* and *Collector for ArcGIS*. Completed COC forms and matrix-specific sampling log sheets were also maintained.

3.5 EQUIPMENT DECONTAMINATION

Reusable equipment (e.g., water level meter, submersible pump, water quality meter) was decontaminated before and after each use. Between each sampling location, decontamination of reusable equipment involved the following:

- Liquinox® and potable-water wash with distilled water
- distilled water rinse
- air drying

All decontamination fluids were collected for disposal in USDOT approved 55-gallon drums. Rinsate water from sampling downgradient of UST 2 in the hazardous trichloroethene (TCE) plume area was segregated from other decontamination fluids and disposed of as F001-listed hazardous waste. Disposable equipment used in groundwater sampling that did not require decontamination (e.g., bonded tubing, silicon tubing, poly sheeting, gloves) was disposed of as general refuse.

3.6 WASTE MANAGEMENT

Investigation derived waste generated by groundwater sampling consisted of purge water, rinse water, and used personal protective equipment (PPE). PPE, poly tubing, and poly sheeting were placed in industrial trash bags and disposed of as general refuse. The purge and rinse water were containerized in USDOT approved 55-gallon steel drums and temporarily staged on wooden pallets within a secondarily containerized central staging area established in Block E on the

MRC. This central staging area was used for chemical/physical characterization and to ensure proper disposal at the end of sampling. Purged groundwater and rinsate water downgradient from UST 2 within the hazardous TCE plume boundary was separately containerized in USDOT approved 55-gallon steel drums and temporality staged on-site in Block E, in a separate hazardous waste area with tertiary containment. The staging area was secured each day and was posted with appropriate signage.

Drums were labeled with relevant site information, including beginning accumulation date, description of contents, origin and generator name, and consultant contact information. These temporarily stored wastes were picked up for proper disposal on June 26, 2018. Waste characterization sampling and analysis were completed before disposal, as required by the treatment, storage, and disposal facility, Clean Harbors, Inc., in Baltimore, Maryland. These activities were approved by Lockheed Martin Corporation (Lockheed Martin). Investigative derived waste documentation are presented in Appendix C.

3.7 DATA MANAGEMENT

Laboratory data handling procedures meet the requirements set forth in the laboratory subcontract. All analytical and field data are maintained in project files, containing copies of the COC forms, sampling log forms, sampling location maps, and data quality assurance documentation.

3.7.1 Data Tracking and Control

A cradle-to-grave sample tracking system was used from the beginning to the end of sampling. The field operations leader coordinated sample tracking before field mobilization. Sample jar labels were both handwritten in the field and pre-supplied by the laboratory. Labels were reviewed to ensure their accuracy and adherence to work plan requirements. The AECOM laboratory task manager (LTM) coordinated with the analytical laboratory to ensure that they were aware of the number and type of samples and analyses to expect.

During field sampling, the field operations leader forwarded the COC forms to the LTM and the laboratory each day that samples were collected. The LTM confirmed that the COC forms provided the information required by the work plan. This allowed early detection of field errors so that adjustments could be made while the field team was mobilized. The laboratory submitted

an electronic deliverable for the sample delivery groups. When all electronic deliverables had been received from the laboratory, the LTM confirmed that the laboratory had performed all analyses requested.

3.7.2 Data Export to EESH Geographic Information System

AECOM coordinated with Lockheed Martin to load analytical data from this round into Lockheed Martin's EESH Geographic Information System enterprise database.

3.7.3 Mobile Data Collection

AECOM personnel used two of Esri's mobile applications, *Survey123* and *Collector for ArcGIS*, to optimize field personnel's ability to locate and record accurate and timely data. The applications were used to record depth to groundwater, groundwater quality, and groundwater stabilization during sampling. *Collector* also aided personnel with location services, base-map reference, and the ability to edit well information based on field observations. *Survey123* was used to create new data records and cross reference data tables to access and update well information, and to format data into a database compatible spreadsheet. Upon completion of sampling, the lead field technician synced with AECOM's *Portal for ArcGIS* for data access and processing.

3.8 DATA VALIDATION

Laboratory data were entered into the AECOM sample database and evaluated against cleanup goals. AECOM performed a manual data review of all samples. Data validation using the EarthSoft *EQuIS*™ database's *Automated Validation Assistant* tool, which performed a limited data review (evaluating data completeness, holding times, laboratory and field blank contamination, laboratory batch quality control, field duplicate precision, and detection limits), was completed concurrent with the data evaluation. This review is based on the United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2017a) *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA, 2017b) and the specifics of the analytical method used.

Data validation reports are in Appendix D. Validation of these data concluded that they are acceptable for their intended uses (i.e., risk screening and risk assessment). The data qualifiers (i.e., flags) applied to the chemical results during data validation are consistent with the *National Functional Guidelines for Organic and Inorganic Superfund-Methods Data Review* (USEPA, 2017a; 2017b).

3.9 SUSTAINABILITY APPROACH

AECOM incorporated green and sustainable remediation practices into the MRC groundwater and surface water monitoring program to advance Lockheed Martin's Corporate key objectives to protect, enhance, optimize, and simplify, and to highlight the added values that sustainable practices bring. AECOM implemented sustainable approaches in all aspects of work wherever practical, and with prior approval from Lockheed Martin and the Remediation Technical Operations contractor. For the MRC monitoring program, AECOM implemented paper free electronic data collection across all aspects of the groundwater sampling program. This data collection approach, as well as the use of dedicated reusable tubing and rechargeable batteries for field instruments, reduced total waste and provided resource efficiency. Using local field staff, carpooling, and using locally sourced materials wherever possible helped reduce overall carbon emissions.

SECTION 4
GROUNDWATER MONITORING RESULTS

Section 4 presents the results and interpretations of the 2018 groundwater sampling. Results of groundwater level measurements and analytical results are tabulated and presented in this section, alongside contour maps and maps of the concentrations and distributions of chemicals of concern. A tabulated summary of all analytical data is in Appendix E. The laboratory analytical reports with chain of custody (COC) forms are in Appendix F. Monitoring well nomenclature for all wells includes the "MRC-" prefix, so all references to specific wells in Section 4 will be abbreviated to exclude the prefix (e.g., "MRC-MW102B" to "MW102B" and "MRC-SEMW-8S" to "SEMW-8S"). Plots of concentration versus time (time-series graphs) for primary and secondary chemicals of potential concern in select wells are in Appendix G. Note that time series plots were not developed for wells with only one data point.

4.1 GROUNDWATER ELEVATION DATA

Groundwater elevations for all wells gauged in the April 2018 groundwater sampling range from above ground surface (artesian) to 24.71 feet below ground surface. Groundwater elevations are summarized in Table 4. These data were used to develop groundwater-elevation contour maps of the shallow and intermediate aquifer systems found at the Middle River Complex (MRC). Contour maps are shown in Figures 4 and 5, respectively.

Groundwater elevations in the surficial aquifer range from a minimum of 13.~~05~~ 21 feet ~~above~~ below mean sea level (msl) at ~~MW37A~~ SEMW-5I (in the southern portion of Block E near Dark Head Cove) to a maximum of 31.17 feet above msl at MW58A (in the southern portion of Block I, southeast of Building A). These measured groundwater elevations are consistent with previous observations of a groundwater high in the center of the site in the southern portion of Block I, with radial flow to the southwest, south, and southeast toward surface water discharge points at Cow Pen Creek and Dark Head Cove.

4.2 GROUNDWATER ANALYTICAL RESULTS

Parameters detected from chemical analyses of samples collected during the April and December 2018 groundwater sampling are tabulated in Table 5. Validated analytical results are summarized in Appendix E. Chemical analytical results were used to generate plume maps estimating the boundaries of contaminants and their distribution within the plume footprint (referenced in their respective sections below). Logarithmic contours were used to account for widely disparate detection values across the MRC.

Analytical results are compared against current MDE groundwater standards for volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and metals (MDE, 2008). Exceedances of MDE groundwater standards are highlighted in yellow. MDE has not yet established an advisory level or standard for 1,4-dioxane in drinking water or groundwater. In lieu of a MDE standard, MDE suggested using a screening level of 0.46 microgram per liter (µg/L), calculated based on a target risk of 10^{-6} from the USEPA RSLs (USEPA, 2018). This screening level is adopted as the evaluation criterion within this report. The 2018 analytical results are organized below according to shallow and intermediate aquifers and trichloroethene (TCE) source areas.

4.2.1 Shallow Groundwater Analytical Results

4.2.1.1 Volatile Organic Compounds

VOCs were detected in ~~46~~ 47 of the ~~61~~ 62 sampled shallow aquifer wells. Detected VOCs included tetrachloroethene (PCE), TCE, and their daughter products.

4.2.1.1.1 Tetrachloroethene

PCE was detected in 11 monitoring wells and exceeded its MDE groundwater standard (5.0 µg/L) in three of those wells, with a maximum concentration detected at MW60A (81.2 µg/L) in Block I, south of Building C, associated with a slight downgradient exceedance at MW48A (11.0 µg/L). An additional exceedance was detected at MW113A (57.6 µg/L) in the southwestern portion of Block E.

4.2.1.1.2 Trichloroethene

TCE was detected in ~~37~~ 38 monitoring wells and exceeded its MDE groundwater standard (5 µg/L) in 19 of them. Maximum TCE concentrations were detected at SEMW-9S (32,800 µg/L) and at nearby well SEMW-8S (24,500 µg/L) in the southeastern portion of

Block F. Additional detections in excess of 1,000 µg/L were observed in Block I at MW96A (2,150 µg/L), west of Building A; and at MW-60A (1,920 µg/L), south of Building C. These elevated detections are associated with clusters of three to four nearby or downgradient wells that exceed the MDE standard for TCE.

Slightly elevated TCE concentrations are also detected in shallow aquifer wells in an isolated area of the western portion of Block E. Wells MW113A (23.5 µg/L) and MW114A (5.2 µg/L) both exceed the MDE groundwater standard of 5 µg/L. Additional investigations are planned in the southern portion of Blocks E and Block F to delineate the nature and extent of contamination in this area. In 2015 and 2016, the Block G plume received two rounds of remedy injections, including a bioaugmented injection in the second round, near MW14B, south of the Tilley Chemical Company, Inc. (Tilley) building. TCE concentrations are very low in this area (less than 7 µg/L).

4.2.1.1.3 cis-1,2-Dichloroethene

~~Thirty-five~~36 monitoring wells contained *cis*-1,2-DCE, and five of them exceeded the MDE groundwater standard (70 µg/L). The maximum *cis*-1,2-DCE detection was at MW96A (22,500 µg/L) in Block I, west of Building A. Additional exceedances were observed south of Building C at MW60A (571 µg/L) and MW48A (354 µg/L), and in Block F at SEMW-8S (185 µg/L) and SEMW-9S (187 µg/L).

4.2.1.1.4 Vinyl Chloride

Vinyl chloride (VC) was detected in ~~21~~ 22 monitoring wells and exceeded its MDE groundwater standard (2 µg/L) in seven of them. The maximum VC detection was observed at MW60A (80.1 µg/L), which is south of Building C in Block I. Slight VC exceedances were observed west of Building A, in Block G, and in the southwestern portion of Block E. These constituents all occur in close association with elevated TCE concentrations in Blocks E and I. Very low concentrations of VC were detected in Block G wells SWMW-4I, SWMW-3I, and SWMW-2I.

4.2.1.1.5 Other Volatile Organic Compounds

Several additional VOC detections in shallow aquifer wells were observed clustered in central and southern Block E, and in eastern downgradient wells in Block F:

- *Chlorobenzene*—Chlorobenzene was detected in 14 wells and exceeded its MDE groundwater standard (100 µg/L) in three of them, with the maximum concentration

detection at MW123A (996 µg/L) in southwestern Block E. Two additional exceedances were detected at nearby wells MW114A (373 µg/L) and MW124A (542 µg/L).

- *1,2,4-Trichlorobenzene (1,2,4-TCB)*—1,2,4-TCB was detected in 15 wells and exceeded its MDE groundwater standard (70 µg/L) in nine of them. The maximum detection was at MW43A (3,960 µg/L) in southwestern Block E. Other exceedances are clustered around MW43A and southwestern Block E.

- *1,4-Dichlorobenzene (1,4-DCB)*—1,4-DCB was detected in 15 wells. It exceeded its MDE groundwater standard (75 µg/L) in three wells in southwestern Block E. The highest detections were at MW123A and MW124A (261 and 238 µg/L, respectively).

- *1,3-Dichlorobenzene (1,3-DCB)*—1,3-DCB was detected in 10 wells. It exceeded its MDE groundwater standard (1.8 µg/L) in nine wells clustered in south and central Block E. The highest detections were at MW123A and MW124A (424 and 263 µg/L, respectively) in the southwestern portion of Block E.

- *1,2-Dichloroethane (1,2-DCA)*—1,2-DCA was detected in seven wells. It slightly exceeded its MDE groundwater standard (5 µg/L) in four of them. The exceedances were in a cluster of four wells, with a maximum at MW114A (819 µg/L) in southwestern Block E.

- *Chloroethane*—Chloroethane was detected in one well (MW12A: 15.1 µg/L) in Block G, exceeding its MDE groundwater standard (3.6 µg/L).

- *1,2-Dichloropropane (1,2-DCP)*—1,2-DCP was detected in one well (MW114A: 6.2 µg/L) in southwestern Block E, slightly exceeding its MDE groundwater standard (5 µg/L).

- *Methylene chloride*—Methylene chloride was detected in one well (SEMW-8S: 5.3 µg/L) in southeastern Block F, slightly exceeding its MDE groundwater standard (5 µg/L).

4.2.1.2 1,4-Dioxane

1,4-Dioxane was detected in 81 of 88 sampled shallow-aquifer monitoring wells and exceeded the USEPA screening level (0.46 µg/L) in 48 of them. A shallow-aquifer contour map of 1,4-dioxane concentrations is shown in Figure 6. The maximum concentration of 1,4-dioxane was detected in Block G south of the Tilley building and adjacent to Cow Pen Creek, at MW12A (140 µg/L). Surface water samples collected in June 2018 had detections of 1,4-dioxane (0.021 to 0.042 µg/L) below risk-based swimming level of 30 µg/L. 1,4-dioxane was not detected in any surface water sampling locations in Cow Pen Creek during the April 2018 sampling. Findings from the annual surface water sampling events will be provided under a separate cover.

Another cluster of wells with slight USEPA screening level exceedances was detected west of Building A, with the highest concentration at MW69A (16.8 µg/L). Slight exceedances of the USEPA screening level for 1,4-dioxane concentrations were observed in MW113A (2.6 µg/L) in southwestern Block E and south of Building C at the boundary between Blocks E and I (MW101A: 1.8 µg/L; MW25A: 1.1 µg/L). Wells sampled in Block F, eastern Block E, and northern Block I had several detections, but all were below the USEPA screening level, indicating little to no migration of 1,4-dioxane toward Dark Head Cove.

4.2.1.3 Benzene, Toluene, Ethylbenzene and Xylene

Benzene, toluene, ethylbenzene and xylene (BTEX) compounds were detected in ~~18~~ 19 of the ~~61~~ 62 shallow aquifer wells. A contour map of total BTEX concentrations in the shallow aquifer is shown in Figure 7. Benzene exceeded its MDE groundwater standard (5 µg/L) in ~~six~~ seven monitoring wells. Total xylenes were detected in ~~two~~ three wells, with no MDE groundwater-standard exceedances (10,000 µg/L). Toluene was detected in ~~five~~ six wells, with no MDE groundwater-standard exceedances (1,000 µg/L). Ethylbenzene was detected in two~~one~~ wells, with no exceedances (700 µg/L).

The highest benzene concentrations were~~as~~ detected at well MW17A (180 µg/L, total BTEX 295.5 µg/L) in the western portion of Block I, west of Building A, near the former plating shop area of Building A and at MW77A (139 µg/L, total BTEX 146.2 µg/L) in the eastern portion of Block E, west of VLS Building (Figure 7). MW77A also had exceedances of naphthalene (1.9 µg/L) and MTBE (204 µg/L) which are common fuel constituents. Historically, MW77A had lower concentrations of BTEX (12.3 µg/L in 2016 and 11 µg/L in 2017). MW77A was sampled again in April 2019 as part of the annual groundwater sampling event.

Other benzene exceedances were detected at MW124A (17.1 µg/L, total BTEX 17.91 µg/L) and MW123A (15.9 µg/L, total BTEX 16.515 µg/L) in Block E (Figure 7). Additional wells, one in northern Block I, one in Block E, and one in Block G near Cow Pen Creek (MW12A), slightly exceed the MDE groundwater standard for benzene. However, benzene was not detected in any surface water sampling locations in Cow Pen Creek during the April 2018 sampling.

4.2.1.4 Metals

Twenty-one shallow monitoring wells were sampled for total metals and hexavalent chromium. All sampled wells had detectable levels of at least three metals. Eight of these wells exhibited MDE groundwater-standard exceedances for one or more metals. Hexavalent chromium was detected in three (MW07A, 118A, and 125A) of the 15 wells for which it was sampled, but at concentrations of one to four orders of magnitude (i.e., one to four powers of 10) lower than the MDE groundwater standard (0.1 milligrams per liter [mg/L]).

Iron exceeded its MDE groundwater standard (0.3 mg/L) by two to four orders of magnitude in all four wells for which it was sampled. The maximum iron concentration was detected at MW27A (116 mg/L) in the southern portion of Block C. MDE groundwater-standard exceedances for iron in excess of 10 mg/L also occurred at nearby well MW25A (25.5 mg/L) in Block I, southwest of Building C, and at MW12A (74.2 mg/L) in Block G, close to Cow Pen Creek. Iron is often elevated in conjunction with biological activity that might be occurring in Block G.

Manganese was detected in all four of the shallow aquifer wells for which it was sampled and exceeded its MDE groundwater standard (0.05 mg/L) by two to three orders of magnitude in three of the four wells for which it was sampled. The maximum manganese concentration was detected at MW27A (41.1 mg/L) in the southern portion of Block C. MDE groundwater-standard exceedances for manganese in excess of 1 mg/L also occurred at nearby well MW25A (4.7 mg/L) and at MW12A (3.9 mg/L) in Block G.

Beryllium was detected in nine shallow aquifer wells and slightly exceeded its MDE groundwater standard (0.004 mg/L) in two of the 15 wells for which it was sampled. The maximum detected value was at MW128A (0.010 mg/L) in southwestern Block E, with the other exceedance at nearby MW130A, also in Block E. Nickel was detected in 11 of the shallow aquifer wells for which it was sampled, and slightly exceeded its MDE groundwater standard (0.073 mg/L) in one of 15 wells for which it was sampled. The maximum nickel concentration detected at the MRC was at MW128A (0.074 mg/L) in the southwestern portion of Block E.

4.2.1.5 Polychlorinated Biphenyls

Groundwater samples for PCB analysis were collected in the southwestern portion of Block E where elevated PCBs had previously been detected in soil. By agreement with the United States Environmental Protection Agency (USEPA), Method 680 was used to determine the concentrations of PCB homologs and total PCB concentrations in groundwater and surface water. PCB homologs represent the 10 "families" of congeners that contain one to 10 chlorine atoms, regardless of position on the biphenyl molecule. The method is also an effective means to account for the presence of PCBs that might not be in the form of Aroclors, or of degraded Aroclors. The analysis provides results in total PCB concentrations, instead of the sum of Aroclor concentrations.

Polychlorinated biphenyls were detected in 15 shallow aquifer monitoring wells, with the only MDE groundwater-standard exceedance for total PCBs (0.5 µg/L) detected in well MW43A (1 µg/L) at the source area under the former Building D slab in the western portion of Block E. Monochlorobiphenyls, dichlorobiphenyls, trichlorobiphenyls, tetrachlorobiphenyls, pentachlorobiphenyls, hexachlorobiphenyls, and heptachlorobiphenyls are the homologs found in the samples.

Chlorobenzene isomers are believed to be associated with transformers that were formerly in Block E. These isomers are generally associated with PCB-impacted groundwater. Groundwater standards for chlorobenzene isomers range from 1.8–600 µg/L (MDE, 2008). Although 1,2-dichlorobenzene (DCB), 1,3-DCB, and 1,4-DCB do occur in the same groundwater gradient path, there are also instances (MW74A) where they do not occur in the same groundwater path. However, most data indicate that chlorobenzene isomers do occur in the same groundwater gradient path as PCBs. Several of the chlorobenzene isomers are more soluble than PCBs, and are thus helpful in characterizing the extent of the PCB plume when they co-occur with chlorobenzenes.

4.2.2 Intermediate Groundwater Analytical Results

4.2.2.1 Volatile Organic Compounds

VOCs were detected in ~~50~~ 51 of the ~~60~~ 61 sampled intermediate-aquifer wells. Tetrachloroethene was detected in 11 monitoring wells and slightly exceeded its MDE groundwater-standard

(5 µg/L) in three of them, with a maximum concentration detected at MW21B (8.7 µg/L) in southwestern Block I, north of the Tilley building. Trichloroethene was detected in ~~46~~ 47 monitoring wells and exceeded its MDE groundwater standard (5 µg/L) in ~~35~~ 36 of them. ~~Forty-seven~~47 monitoring wells contained *cis*-1,2-DCE, exceeding its MDE groundwater standard (70 µg/L) in 13 of them. Vinyl chloride was detected in 28 monitoring wells and exceeded its MDE groundwater standard (2 µg/L) in 10 of them.

The maximum TCE detections were at MW74B (34,300 µg/L) in the southeastern portion of Block E, and at nearby well SEMW-7I (29,900 µg/L) in eastern Block F. Additional detections in excess of 1,000 µg/L were observed at MW60B (6,120 µg/L) in Block I, south of Building C; MW72B (3,390 µg/L) and MW79B (1,670 µg/L) in Block E; MW120B (1,260 µg/L) in Block I; and at SEMW-8I (1,080 µg/L) in Block F. All of these elevated detections occurred within clusters of three to seven nearby or downgradient wells with detections greater than 10 µg/L.

The maximum *cis*-1,2-DCE detection was at MW79B (2,910 µg/L) at the boundary of Blocks E and I. An additional exceedance in excess of 1,000 µg/L was observed at SEMW-8I (1,830 µg/L) in Block F, coincident with the highest TCE detections. The maximum VC detection was observed at MW81B (110 µg/L), south of Building C. An additional VC exceedance was detected in nearby downgradient well MW79B (75.1 µg/L). These constituents are closely associated with elevated TCE concentrations in Blocks E, F, and I (Table 5).

Degradation product 1,1-DCE was detected in ~~29~~ 30 sampled wells and exceeded its MDE groundwater standard (7 µg/L) in ~~13~~ 14 of them (Table 5). The maximum concentration of 1,1-DCE was observed at MW111B (261 µg/L) in Block I near the Tilley building, occurring near other 1,1-DCE detections and exceedances in downgradient wells in Block G. Additional elevated 1,1-DCE detections occur near elevated TCE concentrations in northern and eastern portion of Block I. Exceedances of the 1,1-DCE MDE groundwater standard are found almost exclusively in the intermediate aquifer. One exception is MW11A. 1,1-DCE is present in the shallow aquifer at this location with a concentration of 10.4 µg/L.

Several additional VOC detections in intermediate aquifer wells occurred in the central and southern portion of Block E and west of Building A in areas closely associated with elevated TCE concentrations:

- *Chlorobenzene*—Chlorobenzene was detected in five wells in southwestern Block E. It slightly exceeded its MDE groundwater standard (100 µg/L) at well MW124B (124 µg/L).

- *Methyl tert-butyl ether (MTBE)*—MTBE was detected in 15 wells. It slightly exceeded its MDE groundwater standard (20 µg/L) in three wells clustered to the west of Building A, with a maximum concentration detected at MW96B (29.7 µg/L).

- *1,3-DCB*—1,3-DCB was detected in two wells. It exceeded its MDE groundwater standard (1.8 µg/L) in only well 124B (57.9 µg/L), in southwestern Block E.

- *1,2-DCA*—1,2-DCA was detected in nine wells. It slightly exceeded its MDE groundwater standard (5 µg/L) at well MW125B (11.3 µg/L), in southwestern Block E.

4.2.2.2 1,4-Dioxane

1,4-Dioxane was detected in ~~35~~ 36 of ~~40~~ 41 sampled intermediate-aquifer monitoring wells, and exceeded the USEPA screening level (0.46 µg/L) in ~~20~~ 21 of them. A contour map of 1,4-dioxane in the intermediate aquifer is shown in Figure 8. The maximum concentration of 1,4-dioxane was detected near the Tilley building, just north at MW98B (118 µg/L) and to the south in Block G at MW14B (113 µg/L).

Significant exceedances in downgradient wells MW12B and MW70B (61.9 and 25.6 µg/L, respectively) indicate that the plume is migrating toward Cow Pen Creek. Surface water samples collected in June 2018 had detections of 1,4-dioxane (0.021 to 0.042 µg/L) below risk-based swimming level of 30 µg/L. 1,4-dioxane was not detected in any surface water sampling locations in Cow Pen Creek during the April 2018 sampling. Findings from the annual surface water sampling events will be provided under a separate cover.

Another exceedance was observed west of Building A in Blocks I and H, with the highest concentration detected at MW120B (21.9 µg/L). Several downgradient wells indicate that the plume is migrating west and south from the area west of Building A.

Slight exceedances of the USEPA screening level (0.46 µg/L) for 1,4-dioxane were detected at several locations along the boundary between Blocks E and I, with the highest concentration at ~~MW79B~~ MW80B (~~5~~6.9 µg/L) which is associated with the Block G 1,4-dioxane plume that is migrating towards Cow Pen Creek. Wells sampled in Block F and south of the Block E and Block I boundary area had several detections, but all were below the USEPA screening level

(0.46 µg/L), suggesting little to no migration of 1,4-dioxane through Blocks E and F to Dark Head Cove.

4.2.2.3 Benzene, Toluene, Ethylbenzene, Xylenes

Benzene, toluene, ethylbenzene, and xylenes were detected in 23 of 60 sampled intermediate-aquifer monitoring wells. A contour map for total BTEX in the intermediate aquifer is shown in Figure 9. Benzene was detected in all 23 sampled wells, and exceeded its MDE groundwater standard (5 µg/L) in nine of them. Toluene was detected in eight wells, with no MDE groundwater-standard exceedances (1,000 µg/L). Ethylbenzene was detected in five wells, with no exceedances (700 µg/L). Total xylenes were detected in six wells, with no MDE groundwater-standard exceedances (10,000 µg/L).

The highest benzene concentration was detected at well MW96B (527 µg/L) in the northern portion of Block I, west of Building A, near the former plating shop area. Other benzene exceedances were detected at nearby wells MW53B (302 µg/L), MW119B (246 µg/L), MW110B (81.4 µg/L), and MW109B (46.6 µg/L). Other benzene exceedances are clustered around Block G and the Tilley building, including MW21B (28.8 µg/L) and MW14B (23.2 µg/L). No exceedances were observed in the intermediate aquifer in the southeastern portion of the MRC.

4.2.2.4 Metals

Twenty-two intermediate-aquifer monitoring wells were sampled for total metals and hexavalent chromium. All wells sampled for total metals had detectable levels of at least three metals. Six of these wells exhibited two MDE groundwater-standard exceedances. Hexavalent chromium was not detected in any of the 13 wells for which it was sampled.

Iron exceeded its MDE groundwater standard (0.3 mg/L) in all five intermediate-aquifer wells for which it was sampled, by up to three orders of magnitude. The maximum iron concentration was detected at MW12B (61.9 mg/L) in Block G. MDE groundwater-standard exceedances for iron in excess of 10 mg/L also occurred at well MW60B (13 mg/L) in Block I, south of Building C. Slight exceedances were also detected in nearby well MW27B (1.9 mg/L) in Block I, and at MW72B (0.55 mg/L) in southeastern Block E, and MW37B (0.30 mg/L) in Block F.

Manganese exceeded its MDE groundwater standard (0.05 mg/L) in all five intermediate-aquifer wells for which it was sampled, by up to two orders of magnitude. The maximum manganese concentration was detected at MW12B (3.4 mg/L) in Block G. MDE groundwater-standard exceedances for manganese in excess of 1 mg/L also occurred at nearby well MW60B (2.1 mg/L) in Block I, south of Building C. Slight exceedances were also detected in MW37B (0.14 mg/L) in Block F, MW27B (0.13 mg/L) in southern Block C, and MW72B (0.063 mg/L) in the southeastern portion of Block E.

Beryllium was detected in eight of the 15 intermediate-aquifer wells for which it was sampled and slightly exceeded its MDE groundwater standard (0.004 mg/L) by one order of magnitude, at MW127B (0.013 mg/L) in southwestern Block E. Nickel was detected in all 15 intermediate-aquifer wells for which it was sampled, and slightly exceeded its MDE groundwater standard (0.073 mg/L) in one of these wells, at MW127B (0.086 mg/L) in Block E.

4.2.3 Polychlorinated Biphenyls

PCBs were detected in 12 intermediate-aquifer monitoring wells, with no MDE groundwater-standard (0.5 µg/L) exceedance for total PCBs. The maximum PCB homolog present in the intermediate aquifer was pentachlorobiphenyl, at MW74C (0.1 µg/L) in the southeastern portion of Block E in the vicinity of the TCE source area.

Surface water samples collected in April 2018 from Dark Head Cove had detections of PCBs, as the dichlorobiphenyl homolog group, at all 14 of the Dark Head Cove surface water sampling locations, ranging from 0.0019 to 0.0066 µg/L. Since high turbidity was not measured in the 2018 sampling event, PCB analytical detections were not associated with high turbidity, and therefore represent surface water detections.

The April 2018 polychlorinated biphenyl concentrations are below site-specific swimming standards (10 µg/L) and below Maryland ambient water quality for organisms (0.014 µg/L); however they are above Maryland ambient water quality criteria for human health consumption-of-organisms (Code of Maryland Regulations 26.08.02.03). In comparison, the detection of polychlorinated biphenyls, as the tertachlorobiphenyl group, was identified at just one location in 2017 (Tetra Tech Inc., 2017b). A fish consumption advisory is currently in effect for Middle

River, recommending consumption of no more than six meals of blue crab per month, due to polychlorinated biphenyl contamination in the area.

To further evaluate the April 2018 surface water PCB detections and potential groundwater to surface water discharge, Lockheed Martin proposed to conduct an interim limited-scope surface water sampling event in Dark Head Cove. This plan was approved by MDE on December 24, 2018. Laboratory split samples were collected in February 2019 as a set of co-located field samples at eight of the Dark Head Cove locations, which were analyzed by the two different laboratories (TestAmerica and ALS Environmental), prior to the April 2019 surface water sampling event. The objective of the interim event was to determine if procedures used by the different laboratories caused the variability between the 2017 and 2018 results or if the detections possibly represent groundwater to surface water discharge of PCBs to Dark Head Cove. Laboratory split samples were collected at a rate of 100% for PCB homolog analysis. The results of this study will be submitted to Maryland Department of the Environment (MDE) once it is available

4.2.4 Monitored Natural Attenuation Parameters

In addition to laboratory chemical analyses for contaminants of concern, analyses were also performed for natural-attenuation assessment (NAA) on 13 monitoring wells at the MRC. The NAA analyses include total alkalinity (as calcium carbonate), ammonia (as nitrogen), chloride, nitrate, orthophosphate, sulfate, total dissolved solids, total iron, total organic carbon (TOC), and dissolved gasses methane, ethane, and ethene (MEE). These parameters are summarized in Table 5. Additional NAA parameters were measured in the field.

Field measurements include groundwater pH, oxidation-reduction potential (ORP), dissolved oxygen (DO), and temperature. Field measurements were taken contemporaneously with well purging at each well sampled in the 2018 groundwater sampling. All field parameters are summarized in Appendix B. Monitoring wells were selected in each of the shallow and intermediate aquifers to evaluate NAA parameter trends. Wells were selected in Blocks E/F (one shallow, three intermediate wells), Block G (one shallow, three intermediate wells), and Block I (three shallow, two intermediate wells).

In Block E, total alkalinity increases towards downgradient wells. The upgradient wells selected were MW34A and B, mid-gradient were MW72B and MW37A, and the most downgradient well was MW37B in Block F. Overall ammonia levels are high for groundwater (0.212–0.686 mg/L), but decreases from MW72B to downgradient wells. Orthophosphate levels are very low, though dissolved phosphorus is slightly elevated in downgradient well MW37B (0.13 mg/L). Chloride, nitrate, and sulfate generally decrease towards downgradient wells. Total organic carbon in all wells is greater than 1 mg/L. Methane, ethane, and ethene are very low or not detected in all wells, though methane tends to decrease downgradient. Field and analytical data are consistent with oxidizing conditions throughout eastern Block E and Block F.

In Block G, total alkalinity increases in downgradient wells. In Block G, MW21B was selected as the upgradient well, and MW71B, MW12A, and MW12B were selected as downgradient wells. Orthophosphate was not detected in Block G wells. Ammonia was detected at slightly elevated levels in downgradient wells (0.221–0.230 mg/L). Chloride, nitrate, and sulfate levels decreased in downgradient wells.

Dissolved phosphorus was detected at trace levels in three of the four Block G wells. Total organic carbon is greater than 1 mg/L in all wells except MW21B (0.55 mg/L). Methane, ethane, and ethene generally increased from upgradient to downgradient wells. Field and analytical data are consistent with weakly reducing conditions near MW14B and MW21B, with increasingly reducing conditions occurring downgradient that are conducive to biodegradation of TCE in the area where injections were performed in Block G.

In Block I, total alkalinity is generally very low in all sampled wells. Block I wells were selected south of Building C. The most upgradient well selected was MW60B. Downgradient wells selected were MW48A, MW27B, and MW25A. Orthophosphate is very low, but ammonia is elevated in downgradient well MW27A (2.25 mg/L). Chloride, nitrate, and sulfate generally increase towards downgradient wells.

Methane, ethane, and ethene also generally increase towards downgradient Block I wells. Total organic carbon is above 1 mg/L in downgradient wells, but is low at source area well MW60B (0.47 mg/L). Field and analytical data are consistent with generally oxidizing conditions

(increased DO and positive ORP) throughout the area south and southeast of Building C in Block I.

4.2.5 TCE Plume Areas

This section focuses on TCE plume areas and associated wells. Figures 10 and 11 show the nature and extent of TCE plumes at the MRC for the shallow and intermediate aquifers, respectively. Figures 12 and 13 show the nature of the chlorinated solvent plumes from source areas (PCE/TCE) through degradation products, ending with VC for both the shallow and intermediate aquifers, respectively. Four TCE plume areas have been identified: (1) the Block I South of Building C Plume, (2) the Blocks E and F Southeastern Plume, (3) the Block G Plume, and (4) the Block I West of Building A Plume. All of these source areas can be readily identified in both the shallow and intermediate aquifers.

4.2.5.1 Block I, South of Building C Plume

The Block I South of Building C Plume, originating south of Building C near MW60A/B, was first identified during the 2013 groundwater monitoring (Tetra Tech, 2013a). The source is possibly a release from a solvent waste tank on the south end of Building C that was removed during the 2013 groundwater-remedy pre-remediation activities. However, additional upgradient sources beneath Building C from former operations might also be contributing to TCE contamination present in this area of the MRC.

In both the shallow and intermediate aquifers, the highest TCE concentrations detected within the footprint of the Block I South of Building C Plume were at MW60A (1,920 µg/L) and MW60B (6,120 µg/L), possibly indicating potential downward migration of the plume from the shallow to the intermediate aquifer. Elevated TCE concentrations are also observed to a lesser extent in nearby wells MW48A and B, MW76A and B, and MW81B. Downgradient wells (MW-79B and MW-102B) from the source area also show increased concentrations of *cis*-1,2-DCE which suggest either the plume could be sourcing parent material at a relatively same rate as it is reducing and/or injections moved the contaminant mass within the subsurface. Downgradient well MW-48A exhibited a slight decrease in *cis*-1,2-DCE concentration in 2018. Overall, a 70-percent reduction in contaminant mass continues to be achieved, as continuing monitoring shows. Post injection monitoring continues to be performed to confirm the response action performance goal of reducing TCE mass by 70-percent in active remediation areas is maintained.

Trichloroethene detections in wells MW27A (141 µg/L) and MW29A (10.6 µg/L) indicate that the plume might be migrating within the shallow aquifer toward Block E. The distribution of TCE in the intermediate aquifer is consistent with plume migration towards Block E. High concentrations of *cis*-1,2-DCE in downgradient wells [i.e., MW79B (2,910 µg/L)] might indicate that the plume is degrading before it migrates far from the source area due to bioremediation efforts upgradient, just south of Building C. However, increased TCE concentrations at MW79B (1,670 µg/L), within the historical footprint of the plume, might indicate an additional TCE source within the footprint near the boundary between Blocks E and I.

A separate occurrence of slightly elevated TCE occurs at MW25A (179 µg/L) that indicates either an alternate flow path from the source area south of Building C or a smaller isolated plume. An alternate flow path could be inferred from the groundwater contour map for the shallow aquifer. Slightly elevated TCE is also observed in intermediate well MW87B (55.9 µg/L), with no clear relationship to the Block I South of Building C Plume.

4.2.5.2 Blocks E and F, Southeastern Plume

The F001 Plume was identified during the 2008 site-wide groundwater investigation (Tetra Tech, 2009a). Figure 14 depicts a cross-section through Block E to aid the discussion in this section (Tetra Tech, ~~2017b~~2017a). The plume originates from residual contamination from a former spent-solvent UST (UST 2) that was discovered and removed during the 2013 groundwater-remedy installation in Block E (Tetra Tech, 2016a). This association led to wastes generated from certain wells within this plume being designated "F001 listed" waste. The distribution of TCE downgradient from the former source area UST 2 indicates that the narrow plume is migrating from Block E and discharging into Dark Head Cove and/or possibly migrating beneath the surface water body.

In addition, elevated TCE concentrations upgradient of the former source area UST 2 source possibly represent downstream migration of the Block I south of Building C plume (discussed below). These elevated concentrations could also have resulted from an unknown TCE release in southern Block I/northern Block E near MW27B and MW79B. In the shallow aquifer, the highest concentrations of TCE within the plume were detected in SEMW-8S (24,500 µg/L) and SEMW-9S (32,800 µg/L) in Block F. The plume is also present in the intermediate aquifer at MW74B (34,300 µg/L) and SEMW-7I (29,900 µg/L), with concentrations greater than

1,000 µg/L also present in upgradient well MW72B (3,390 µg/L), mid-gradient well EW2 (2,420 µg/L), and downgradient well EMW-8I (1,080 µg/L). The presence of elevated *cis*-1,2-DCE concentrations in downgradient intermediate wells SEMW-8I (1,080 µg/L) and EW1 (5,320 µg/L) indicates that partial TCE degradation is occurring within the intermediate aquifer downgradient from the UST 2 source area.

4.2.5.3 Block G Plume

The Block G Plume originates north of and extends southwest (downgradient) of the Tilley building. The plume potentially originates from possible solvent releases from a former 2,000-gallon waste-oil UST, near MW21B, north of the Tilley building. A former sewage treatment plant also once stood southeast of MW14B. Historically, MW14B and MW21B have been identified as representing the southwest TCE source area (Tetra Tech, 2013a, 2014a). Currently, the southwestern TCE plume is not present in the shallow aquifer, except for one slight TCE exceedance at the southern edge of the Tilley Building from MW100A (6 µg/L), below the vapor intrusion screening levels (VISL) of 22 6 µg/L. A-Zone wells (MW21A, MW98A, and MW111A) designated to evaluate potential for vapor intrusion within the Tilley Building also had groundwater concentrations below VISLs.

In the intermediate aquifer, several wells immediately north and south of the Tilley building exhibit elevated TCE concentrations. However, all concentrations detected in this region of the MRC in 2018 are below 1,000 µg/L, much lower than historical observations, due to bioremediation efforts that have attenuated TCE concentrations. Downgradient well MW14B and nearby wells in southern Block-G exhibit no exceedances for TCE, indicating that a reductive environment is still present as a result of the injections performed in this area of Block G. Relatively low concentrations of TCE-degradation products were detected in wells near the Tilley Building, suggesting little to no degradation of the plume is occurring as it migrates downgradient.

4.2.5.4 Blocks I and H, West of Building A (Shallow and Intermediate ["Deeper"] Plume)

The Western TCE Plume was identified during the 2008 site-wide groundwater investigation (Tetra Tech, 2009a). Its possible sources include a former 4,000-gallon gasoline UST (explaining the presence of benzene in this plume), or perhaps abandoned underground wastewater lines

(Tetra Tech, 2013a). The plume is also in the area of the former Marform pit and the former plating shop in Building A, where solvents were used to clean metal.

In the shallow aquifer, the highest TCE concentration detected within the footprint of the Western TCE Plume is at MW96A (2,150 µg/L). In the intermediate aquifer, the highest TCE concentration detected is at MW120B (1,260 µg/L). Very high *cis*-1,2-DCE concentrations were detected in MW96A (22,500 µg/L), which might indicate that the original source material from the waste holding tank is already degrading. However, several intermediate wells close to both the shallow and intermediate-aquifer maximum concentrations indicate that some downward and lateral migration to the west and south has occurred.

A deeper western groundwater investigation was performed in April and May 2018 to further delineate the plume and will be provided under a separate cover.

4.2.6 Volatile Organic Compound Trends

VOC concentration trend graphs are presented for select wells in Appendix G. As applicable to each historically identified plume area, PCE, TCE, and their degradation products were plotted against time on a semi-logarithmic plot in both µg/L and micromoles per liter. Wells discussed in subsequent sections are organized by their position within or near the plume footprint areas.

4.2.6.1 Blocks E and F, Southeastern Plume

Historical data were evaluated in four shallow wells (MW34A, MW37A, MW74A, and SEMW-8S) and six intermediate wells (MW37B, MW72B, MW73B, MW74B, SEMW-7I, and SEMW-8I) in Blocks E and F to discuss trends observed in the Southeastern Plume. Wells SEMW-9S/I were not included because only one round of sampling data is available for these wells. Within the shallow aquifer, upgradient wells exhibit stable to decreasing concentrations of PCE, TCE, and their daughter products, whereas downstream wells exhibit increasing trends in TCE and *cis*-1,2-DCE. In the intermediate aquifer, upgradient wells exhibit decreasing trends in TCE concentrations co-occurring with increasing *cis*-1,2-DCE. Increasing *cis*-1,2-DCE, might indicate that biodegradation of the parent material is occurring, as injections have been performed in Block E. Vinyl chloride is stable to decreasing in all wells.

4.2.6.2 Block I, South of Building C Plume

Historical data were evaluated in five shallow wells (MW25A, MW27A, MW48A, MW60A, and MW87A) and eight intermediate wells (MW27B, MW60B, MW76B, MW78B, MW79B, MW81B, MW87B, and MW102B) in Blocks I and E to discuss trends observed in the Block I, South of Building C Plume. At the plume, the source area in both aquifers exhibits stable to increasing trends for PCE, TCE, and their daughter products. Upgradient wells in the shallow aquifer also exhibit increasing TCE trends, whereas downgradient wells exhibit stable to increasing daughter product concentrations (with the exception of MW-48 showing a slight decrease in *cis*-1,2-DCE concentration in 2018). In the intermediate aquifer, wells downgradient of the source area exhibit stable to decreasing concentrations, except at the farthest downgradient well MW79B, which exhibits stable to increasing daughter product concentrations.

4.2.6.3 Block G Plume

Historical data were evaluated for five shallow wells (MW12A, MW21A, MW63A, MW98A, and MW100A) and six intermediate wells (MW12B, MW21B, MW98B, MW100B, MW111B, and SWMW-4I) in Block G, southern Block I, and on Tilley property to discuss trends observed in the Southwestern TCE Plumes. In 2015 and 2016, the Block G Plume received two rounds of remedy injections, including a bioaugmented injection in the second round, near MW14B, south of the Tilley building. The shallow aquifer wells upgradient of these injections (MW21A, MW100A) have low concentrations of PCE, TCE, and daughter products, but the upgradient intermediate wells (MW21B, MW98B, and MW100B) exhibit stable to increasing (MW111B) concentrations of these contaminants. Downgradient wells exhibit decreasing parent material concentrations, with mostly stable to increasing daughter product concentrations. MW9B and MW21B show decreasing concentrations of VC.

4.2.6.4 Block I, West of Building A Plume

Historical data were evaluated for four shallow wells (MW50A, MW53A, MW96A, and MW110A) and eight intermediate wells (MW53B, MW90B, MW109B, MW110B, MW119B, MW120B, MW121B, and MW131B) in Blocks H and I to discuss trends observed in the Block I West of Building A plume. At the Block I West of Building A plume, all shallow aquifer wells exhibit stable to decreasing concentrations of parent materials. Only upgradient well MW96A has elevated daughter product concentrations. In the intermediate aquifer, upgradient wells

exhibit elevated concentrations of parent and daughter material that are stable to increasing over time. Downgradient wells in both aquifers exhibit mostly stable to decreasing parent and daughter concentrations.

SECTION 5
SUMMARY AND CONCLUSIONS

The findings of the April 2018 groundwater sampling and analyses and groundwater level measurements for the Lockheed Martin Corporation Middle River Complex are summarized below.

5.1 GROUNDWATER ELEVATIONS

Groundwater elevations at the Middle River Complex depend on short- and long-term weather patterns and are tidally influenced upgradient of Dark Head Cove. Measurements in the April 2018 groundwater sampling are consistent with previously observed groundwater elevations and observed radial groundwater-flow patterns to Dark Head Cove and Cow Pen Creek.

5.2 GROUNDWATER QUALITY TRENDS AND FINDINGS

Groundwater time-series trend graphs indicate:

- The Blocks E and F, Southeastern Plume undergoes some degradation of parent material into daughter products, but remains largely stable and migrating from the underground storage tank 2 source area in Block E downgradient to Dark Head Cove.
- The Block I South of Building C Plume is stable to increasing over time, and may connect with the Blocks E and F, Southeastern Plume as it migrates east and south from the source area (MW60A and MW60B). Increasing trichloroethene trends observed in some monitoring wells directly downgradient of the Block I Building C may be caused by the following:
    - a continued release from an unidentified source(s) beneath Building C;
    - releases from source material that has sorbed onto finer-grained materials and is back-diffusing into groundwater and providing a continuing source of contamination in the area; and/or
    - injections that may have moved the contaminant mass within the subsurface.
- Increases in trichloroethene concentrations within the Block I Building C source area and increases in degradation products at wells immediately downgradient of the source area

suggest the plume could be sourcing parent material at a relatively same rate as it is degrading. An increase in *cis*-1,2-Dichloroethene concentrations in wells further downgradient of the Block I Building C source area indicates anaerobic reductive dechlorination is occurring. Overall a 70-percent reduction in trichloroethene mass in active remediation areas continues to be achieved. Remedial injections in 2015 and 2016 in the Block G Plume near MW14B were effective in the immediate area of the injections.

- In the Block G Plume, detections at upgradient well MW21B and near the Tilley building remains stable. A-Zone wells (MW21A, MW98A, and MW111A) designated to evaluate potential for vapor intrusion within the Tilley Building observed groundwater concentrations below VISLs. In 14 rounds of vapor intrusion monitoring, the A-Zone groundwater contaminant concentrations have not resulted in vapor intrusion.

- Block G 1,4-dioxane plume contains higher contaminant concentration levels at the monitoring well (MW12A) along the shoreline and may indicate possible flow into surface water at Cow Pen Creek. Ongoing surface water monitoring of Cow Pen Creek has not detected 1,4-dioxane at concentrations above risk-based swimming screening levels; surface water results will be provided under a separate cover.

- The Block I West of Building A Plume, though stable to decreasing in most upgradient wells, is stable to increasing towards downgradient wells, particularly in the intermediate aquifer (MW120B). A deeper western groundwater investigation was performed in April and May 2018 to further delineate the plume and refine the conceptual site model. The findings of this investigation will be provided under a separate cover.

5.3 RECOMMENDATIONS

Future sampling and delineation of plume boundaries might benefit by expanding the groundwater monitoring-well sampling program to sample additional existing downgradient and cross-gradient confining wells. Review of on-going work to characterize the plumes West of Building A and in Blocks E/F will also be performed to identify recommendations to the groundwater monitoring program. Recommendations for future remediation activities based on the results of the April 2018 groundwater sampling include:

- Continue annual groundwater monitoring in April 2019, including sampling of the sentinel wells as part of the three-year off-site sampling plan set up within the Middle River Complex surface water and groundwater monitoring program.

- Evaluate and optimize the sampling program within the existing well network and the possible addition of wells based on trends observed in chemical data, together with results of the plume stability analysis, to better define trichloroethene plume areas.

SECTION 6
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FIGURES

Figure 1 Middle River Complex Location Map

Figure 2 Site Layout and Tax Blocks Middle River Complex

Figure 3 Groundwater Well Sampling Network—April 2018

Figure 4 Potentiometric Surface Elevation, Shallow Monitoring Wells—April 2018

Figure 5 Potentiometric Surface Elevation, Intermediate Monitoring Wells—April 2018´

Figure 6 1,4-Dioxane in Shallow Monitoring Wells—April 2018

Figure 7 Total BTEX in Shallow Monitoring Wells—April 2018

Figure 8 1,4-Dioxane in Intermediate Monitoring Wells—April 2018

Figure 9 Total BTEX in Intermediate Monitoring Wells—April 2018

Figure 10 TCE in Shallow Monitoring Wells—April 2018

Figure 11 TCE in Intermediate Monitoring Wells—April 2018

Figure 12 Total Chlorinated Ethenes in Shallow Monitoring Wells—April 2018

Figure 13 Total Chlorinated Ethenes in Intermediate Monitoring Wells—April 2018

Figure 14 Block E Section A-A'



Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2013 ESRI and its data suppliers).

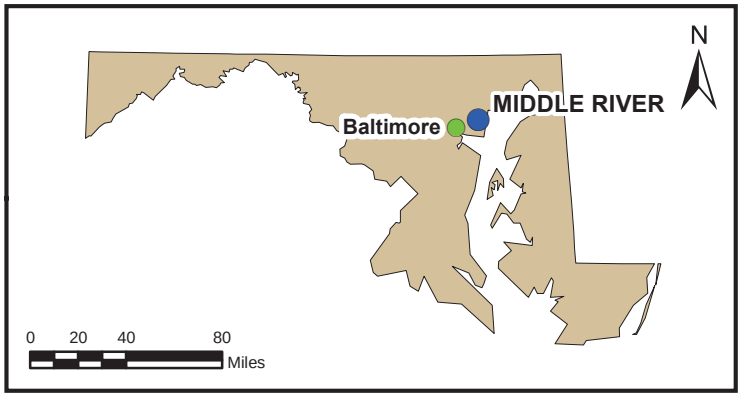

FIGURE 1

MIDDLE RIVER COMPLEX LOCATION MAP

Lockheed Martin Corporation
Middle River Complex, Middle River, Maryland

DATE MODIFIED:	CREATED BY:	SOURCE:
10/29/15	JEE	Tetra Tech 2016-2017 GW & SW Monitoring WP

AECOM

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_sitemap_may2015.mxd)
10/29/15 -- JEE

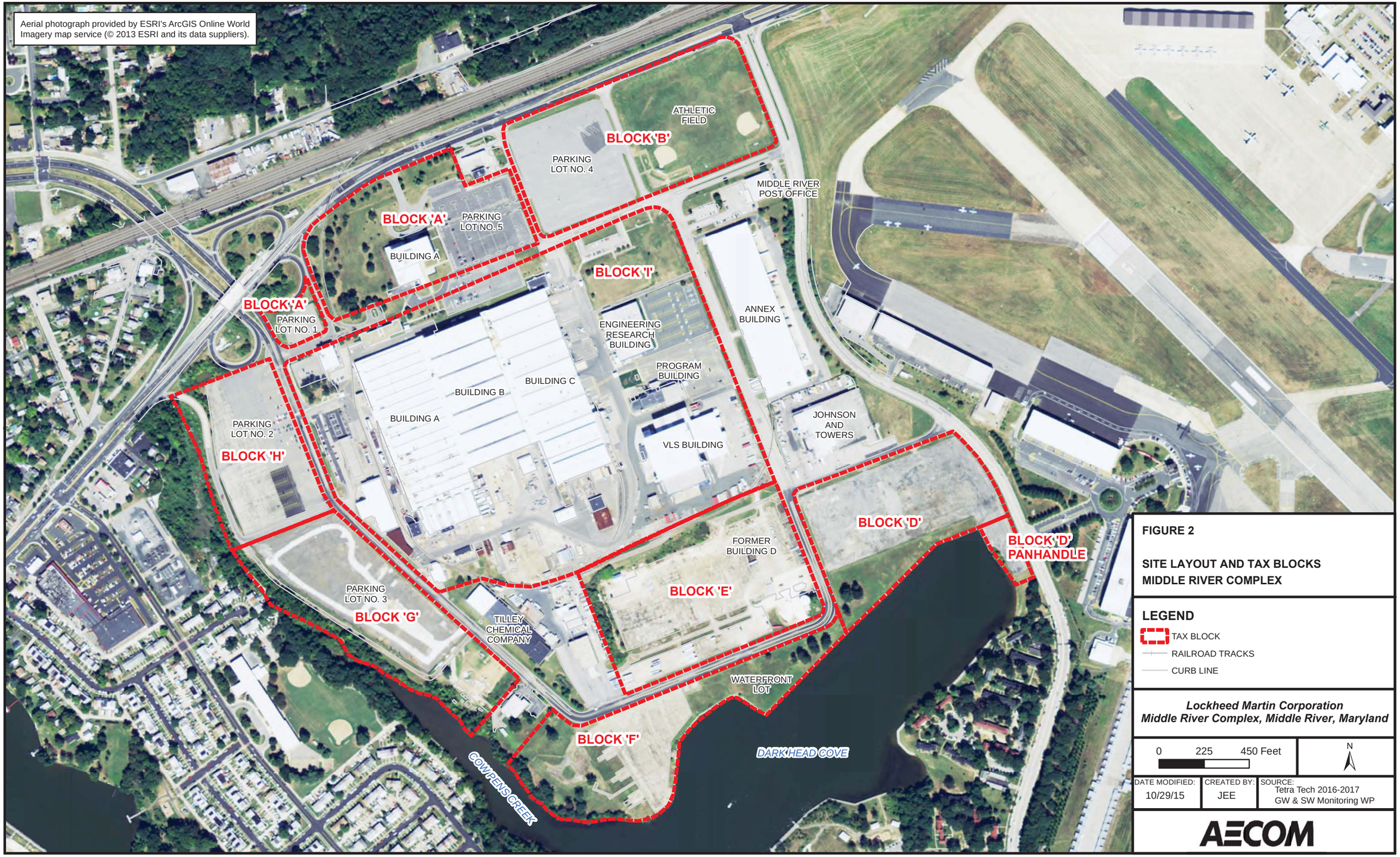

FIGURE 2

SITE LAYOUT AND TAX BLOCKS
MIDDLE RIVER COMPLEX

LEGEND

- TAX BLOCK
- RAILROAD TRACKS
- CURB LINE

Lockheed Martin Corporation
Middle River Complex, Middle River, Maryland

0 225 450 Feet

N

DATE MODIFIED:	CREATED BY:	SOURCE:
10/29/15	JEE	Tetra Tech 2016-2017 GW & SW Monitoring WP

AECOM

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_tax_blocks_jul2014_aerial.mxd)
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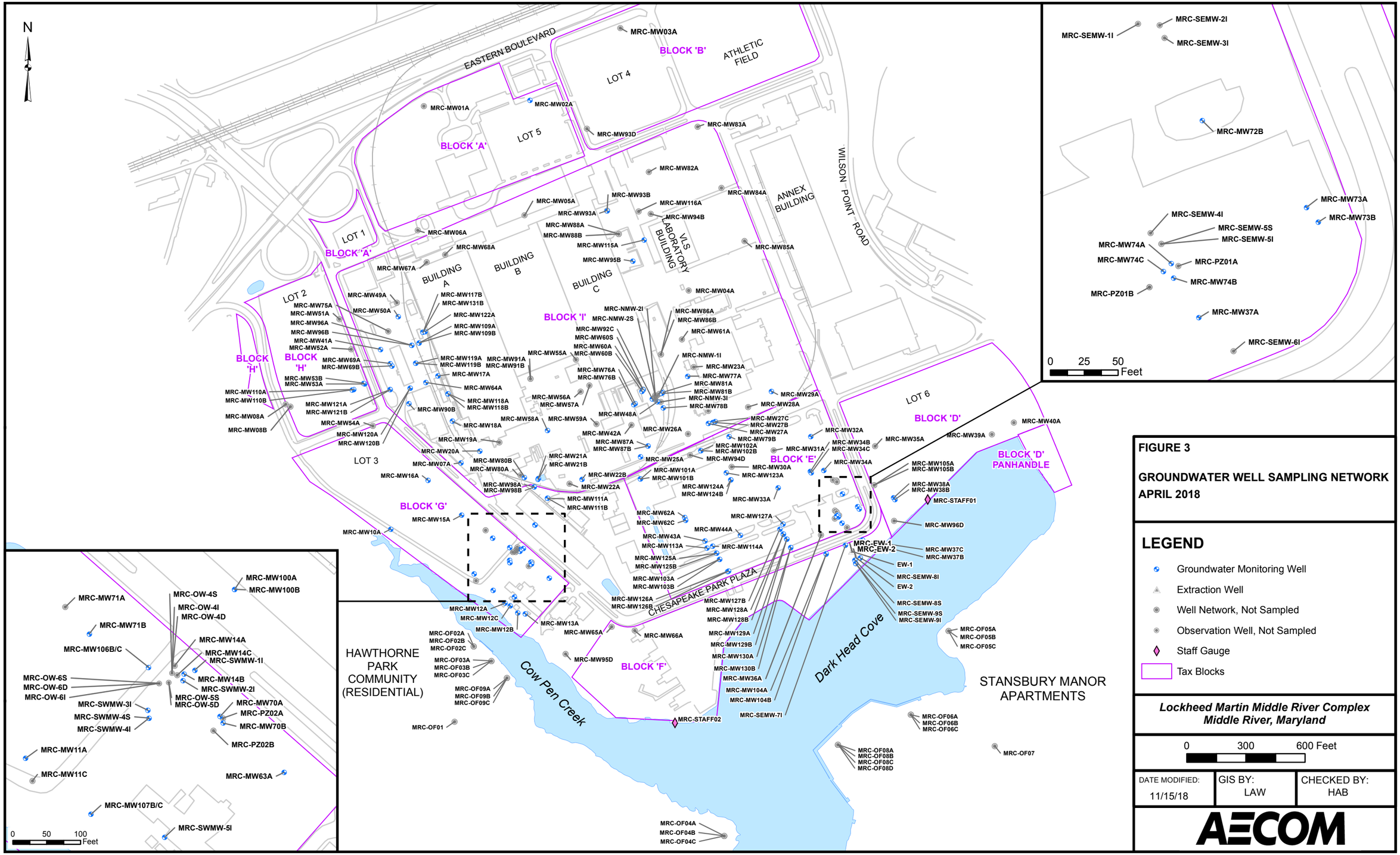

FIGURE 3

GROUNDWATER WELL SAMPLING NETWORK
APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Extraction Well
- Well Network, Not Sampled
- Observation Well, Not Sampled
- Staff Gauge
- Tax Blocks

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
11/15/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Documents\ArcGIS\Packages\GW_Sampling_Locs_NoTransparency_27F0EDBA-6B94-4CE0-A650-9DAA8C5444F2\v104\GW_Sampling_Locs_NoTransparency.mxd)
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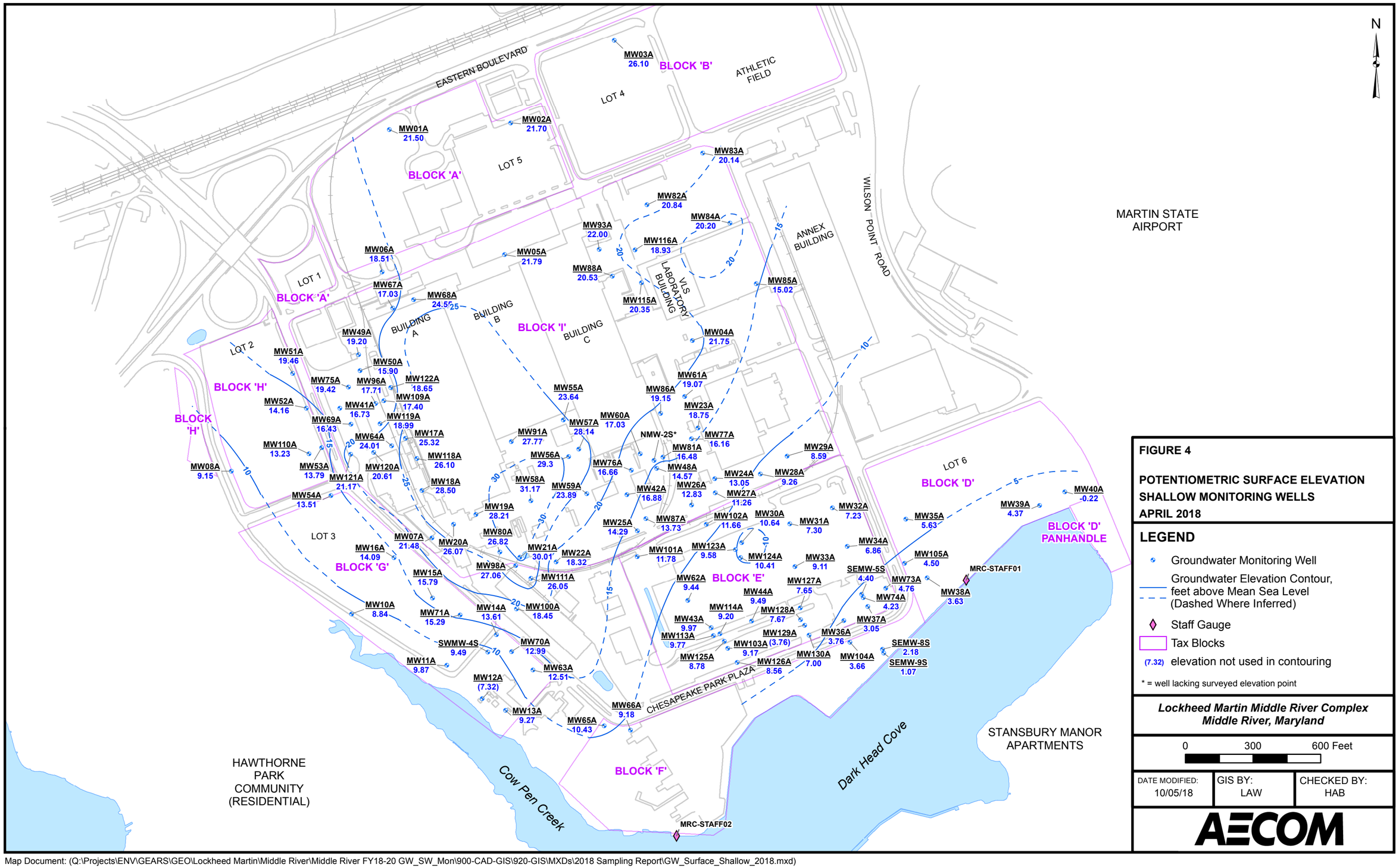

FIGURE 4

POTENTIOMETRIC SURFACE ELEVATION
SHALLOW MONITORING WELLS
APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Groundwater Elevation Contour, feet above Mean Sea Level (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks
- (7.32) elevation not used in contouring

* = well lacking surveyed elevation point

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
10/05/18	LAW	HAB

AECOM

Map Document: (Q:\Projects\ENV\GEARS\GEO\Lockheed Martin\Middle River\Middle River FY18-20 GW_SW_Mon\900-CAD-GIS\920-GIS\MXDs\2018 Sampling Report\GW_Surface_Shallow_2018.mxd)
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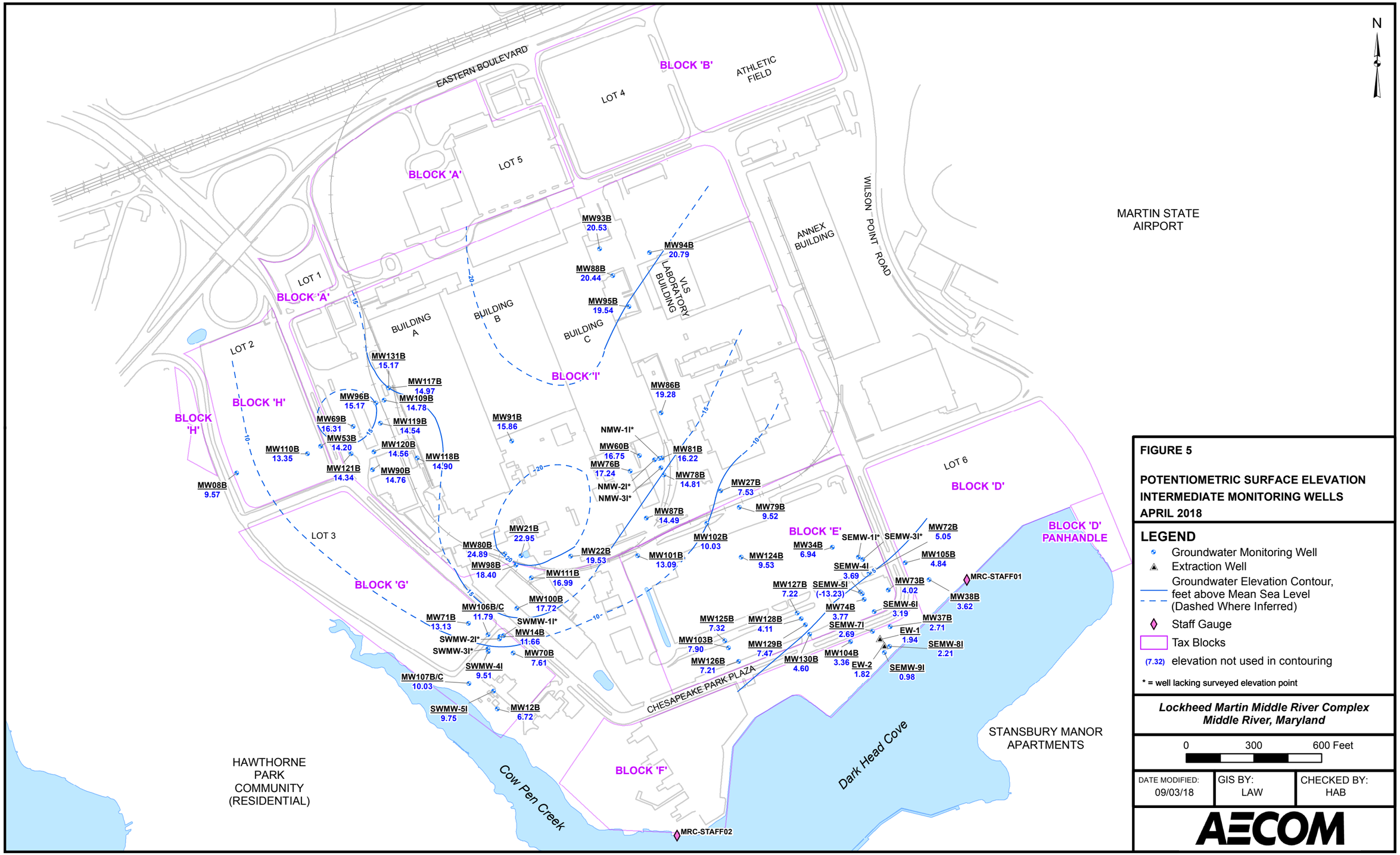


FIGURE 5

POTENTIOMETRIC SURFACE ELEVATION
INTERMEDIATE MONITORING WELLS
APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Extraction Well
- Groundwater Elevation Contour, feet above Mean Sea Level (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks
- (7.32) elevation not used in contouring

* = well lacking surveyed elevation point

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\GW_Surface_Intermediate_2018.mxd)
Credits Basemap, Tetra Tech, 2017

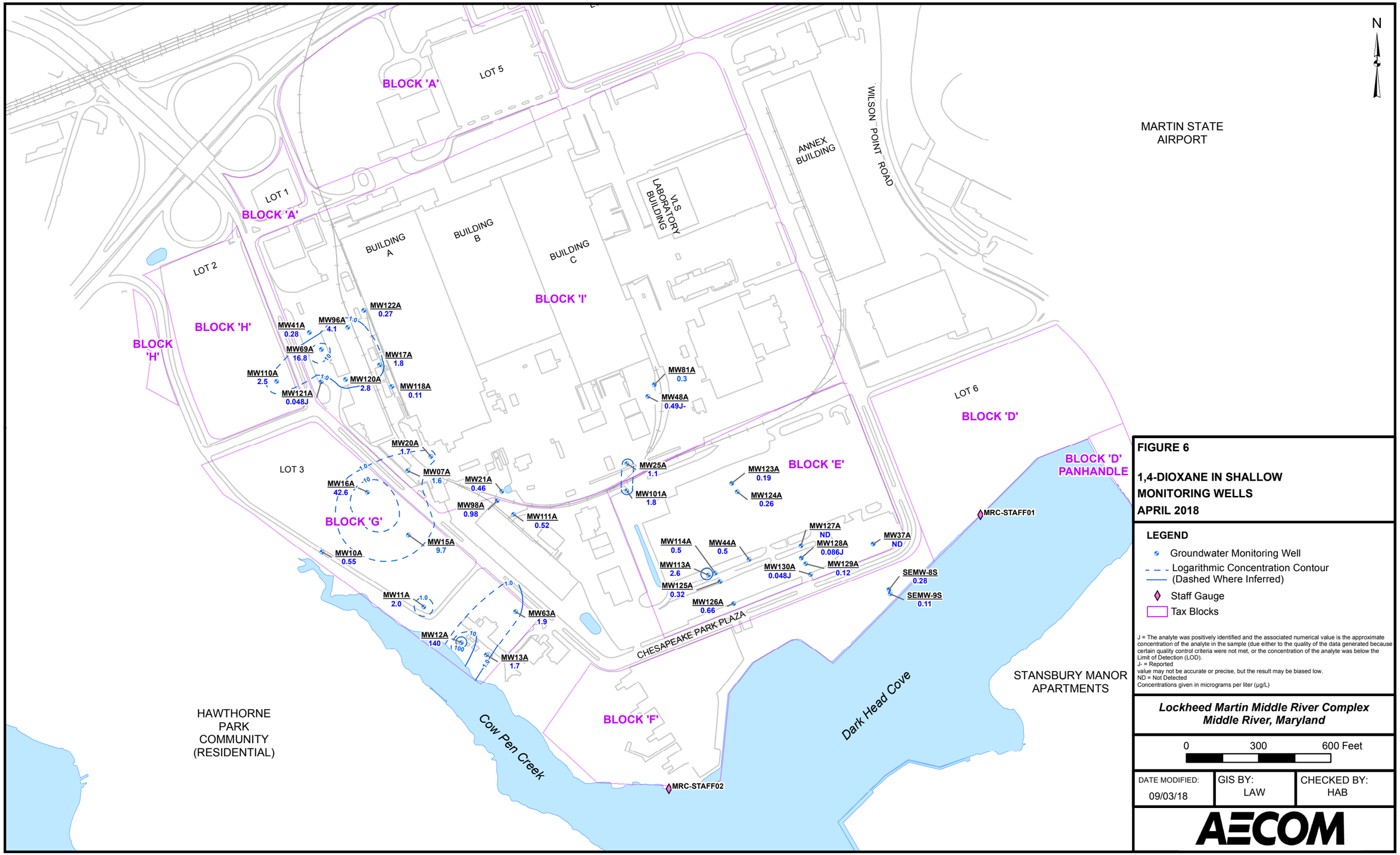


FIGURE 6

1,4-DIOXANE IN SHALLOW MONITORING WELLS APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Logarithmic Concentration Contour (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
J- = Reported value may not be accurate or precise, but the result may be biased low.
ND = Not Detected
Concentrations given in micrograms per liter (µg/L)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\1_4_Dioxane_Shallow_2018.mxd)
Credits: Basemap, Tetra Tech, 2017

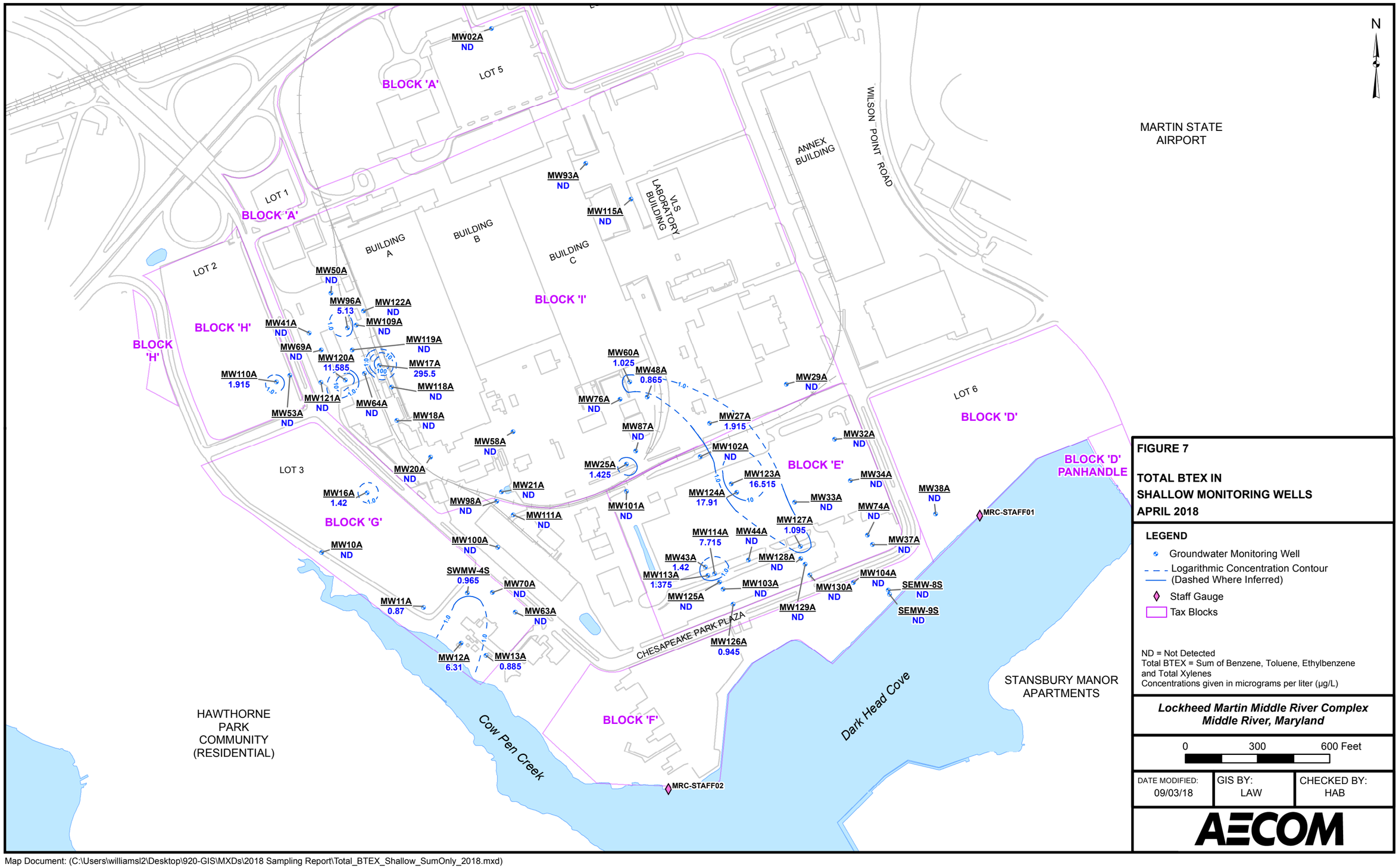


FIGURE 7

TOTAL BTEX IN SHALLOW MONITORING WELLS APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Logarithmic Concentration Contour (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks

ND = Not Detected
Total BTEX = Sum of Benzene, Toluene, Ethylbenzene and Total Xylenes
Concentrations given in micrograms per liter (µg/L)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\Total_BTEX_Shallow_SumOnly_2018.mxd)
Credits Basemap, Tetra Tech, 2017

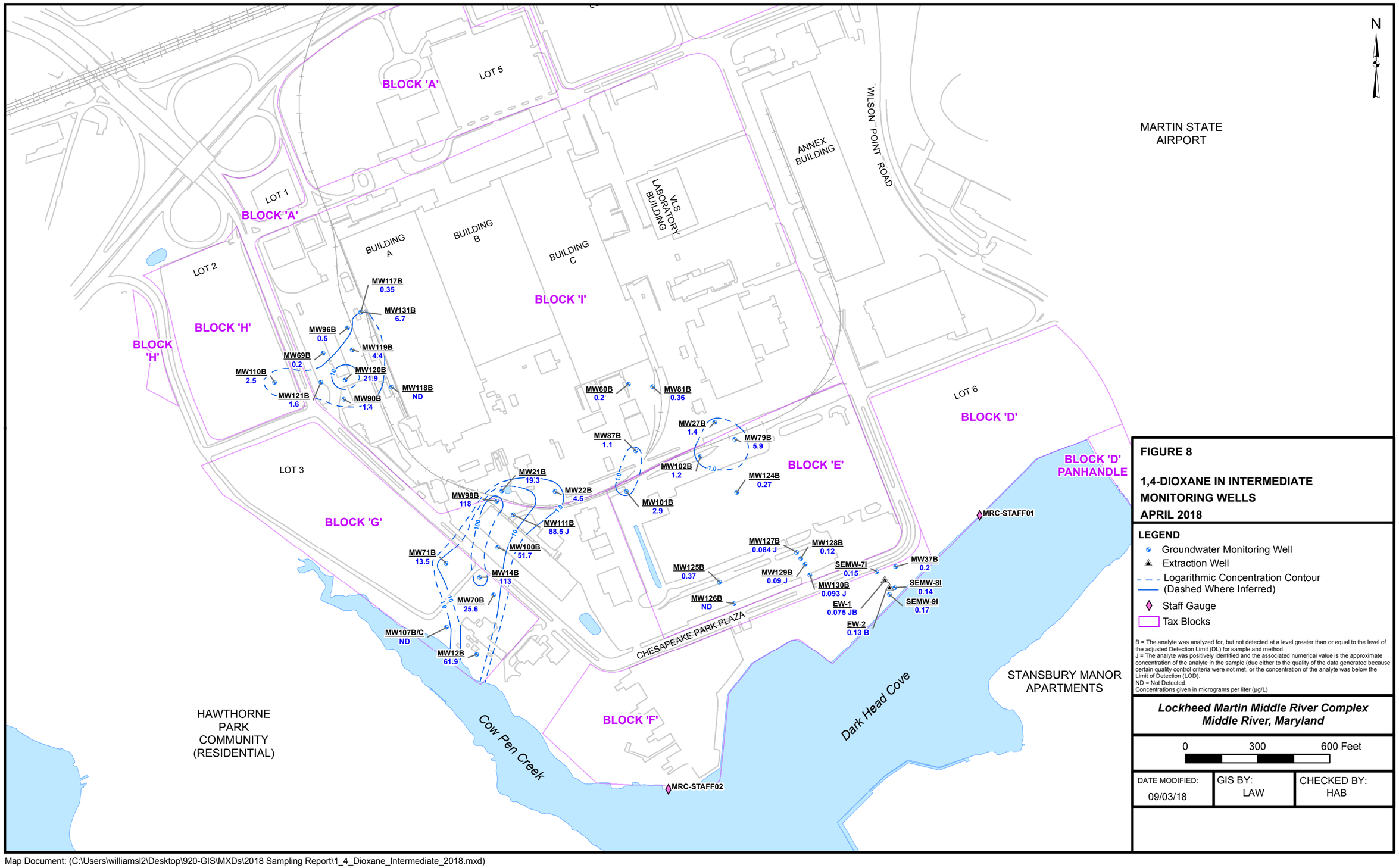


FIGURE 8

1,4-DIOXANE IN INTERMEDIATE MONITORING WELLS
APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Extraction Well
- Logarithmic Concentration Contour (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks

B = The analyte was analyzed for, but not detected at a level greater than or equal to the level of the adjusted Detection Limit (DL) for sample and method.
J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
ND = Not Detected
Concentrations given in micrograms per liter (µg/L)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\1_4_Dioxane_Intermediate_2018.mxd)
Credits: Basemap, Tetra Tech, 2017

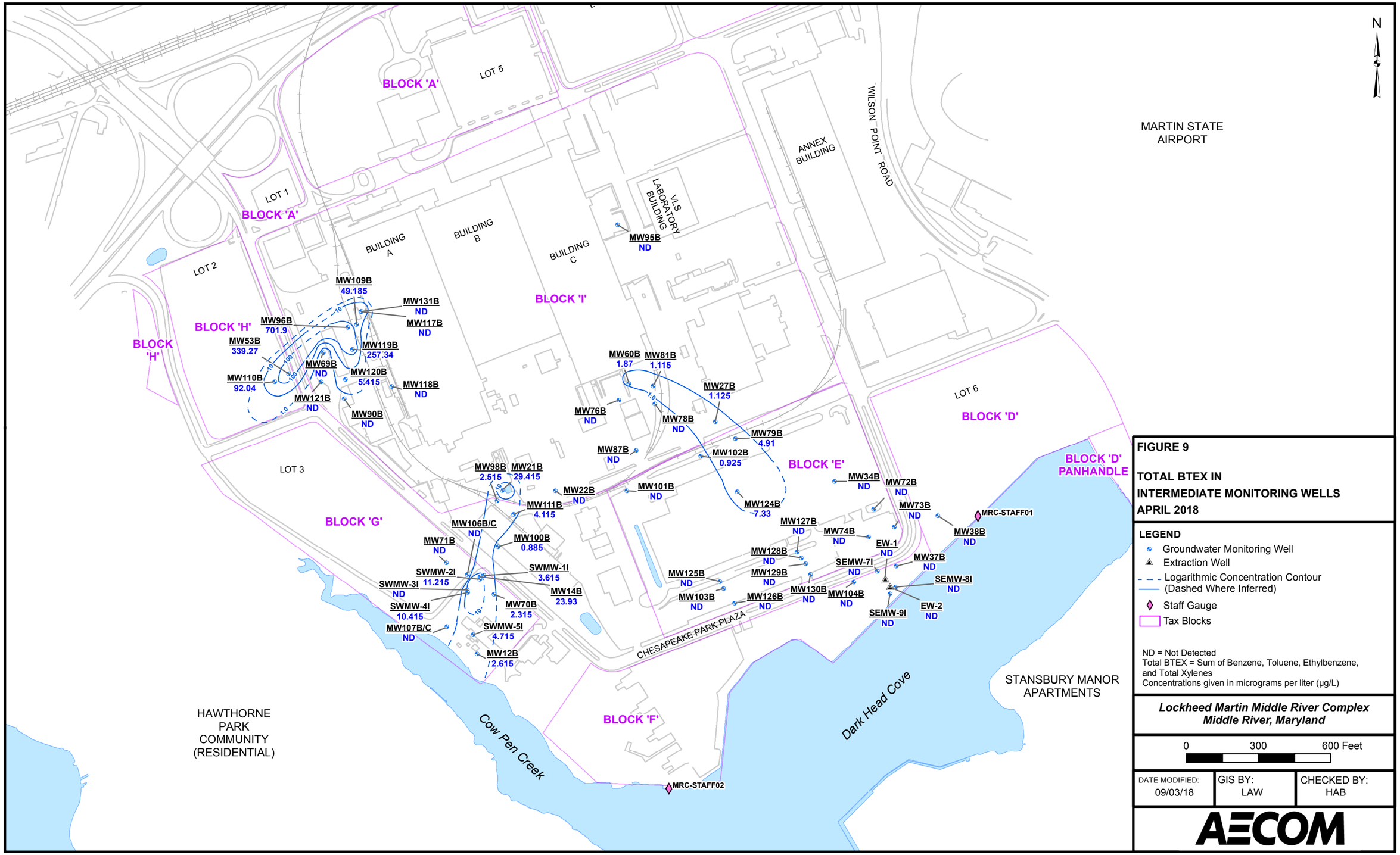


FIGURE 9

TOTAL BTEX IN INTERMEDIATE MONITORING WELLS APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Extraction Well
- Logarithmic Concentration Contour (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks

ND = Not Detected
Total BTEX = Sum of Benzene, Toluene, Ethylbenzene, and Total Xylenes
Concentrations given in micrograms per liter (µg/L)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\Total_BTEX_Intermediate_SumOnly_2018.mxd)
Credits Basemap, Tetra Tech, 2017

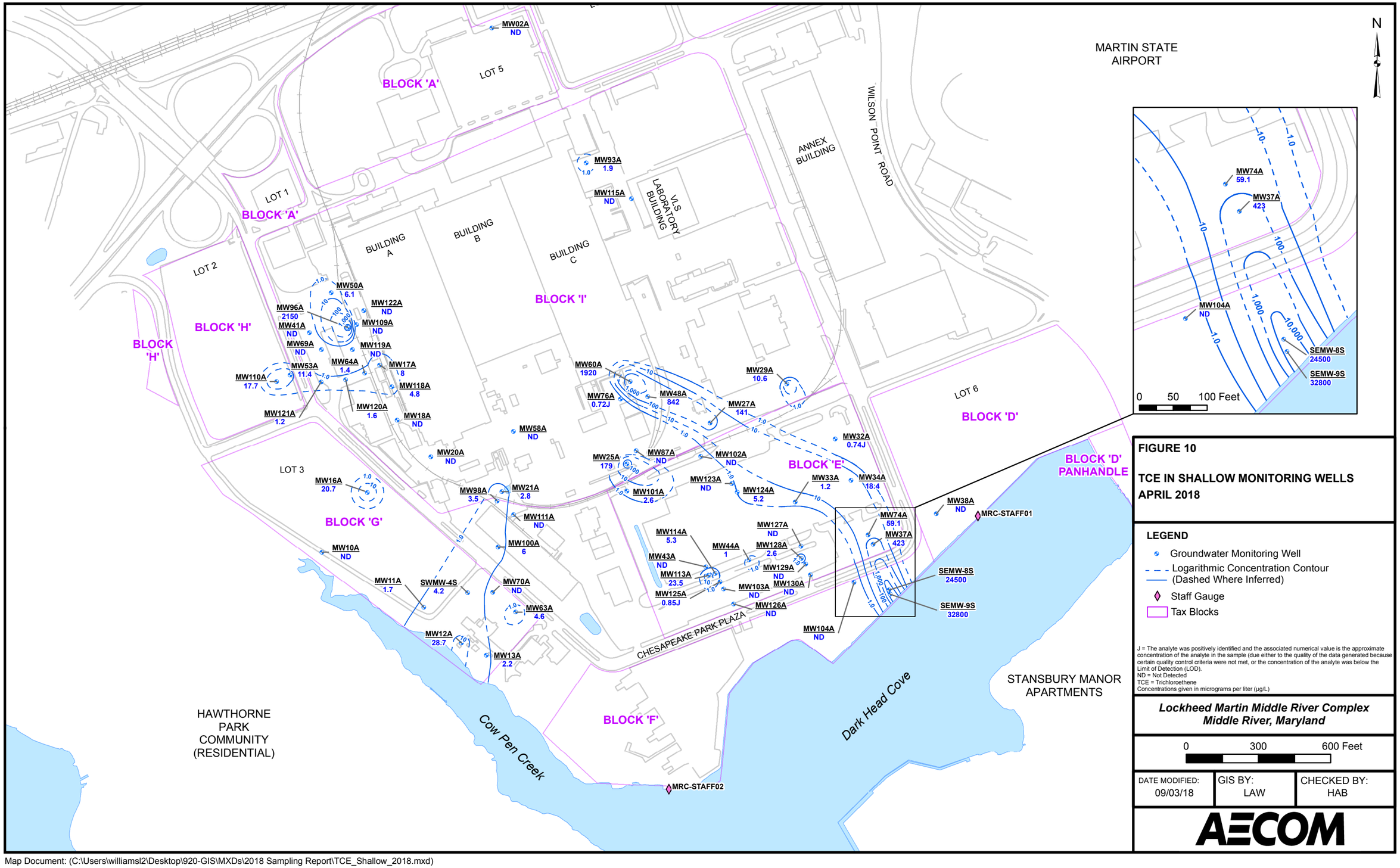


FIGURE 10

TCE IN SHALLOW MONITORING WELLS APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Logarithmic Concentration Contour (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
ND = Not Detected
TCE = Trichloroethene
Concentrations given in micrograms per liter (µg/L)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\TCE_Shallow_2018.mxd)
Credits: Basemap, Tetra Tech, 2017

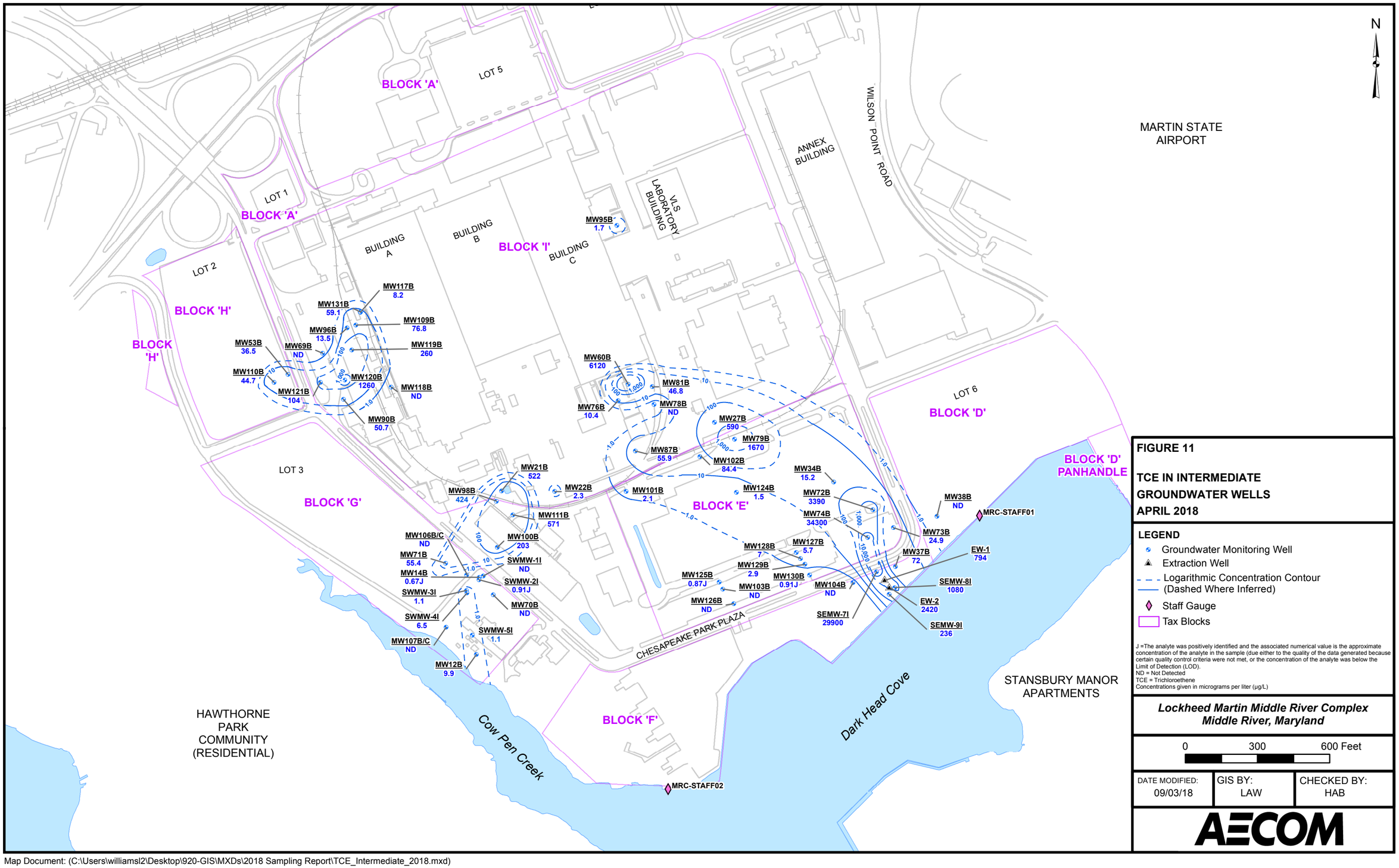


FIGURE 11

TCE IN INTERMEDIATE GROUNDWATER WELLS APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Extraction Well
- Logarithmic Concentration Contour (Dashed Where Inferred)
- Staff Gauge
- Tax Blocks

J =The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
ND = Not Detected
TCE = Trichloroethene
Concentrations given in micrograms per liter (µg/L)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\TCE_Intermediate_2018.mxd)
Credits Basemap, Tetra Tech, 2017

MRC-MW02A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW96A	
PCE	ND (<0.35)
TCE	2150
cis -1,2-DCE	22500
VC	18.2

MRC-MW50A	
PCE	ND (<0.35)
TCE	6.1
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW122A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW93A	
PCE	ND (<0.35)
TCE	1.9
cis -1,2-DCE	1.7
VC	ND (<0.30)

MRC-MW115A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW27A	
PCE	ND (<0.35)
TCE	141
cis -1,2-DCE	48.2
VC	15.3

MRC-MW102A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	1.6
VC	ND (<0.30)

MRC-MW29A	
PCE	ND (<0.35)
TCE	10.6
cis -1,2-DCE	4.3
VC	0.7 J

MRC-MW119A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW109A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	36
VC	24

MRC-MW41A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW48A	
PCE	11
TCE	842
cis -1,2-DCE	354
VC	33.6

MRC-MW64A	
PCE	3.5
TCE	1.4
cis -1,2-DCE	0.98 J
VC	ND (<0.30)

MRC-MW69A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW87A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW123A	
PCE	ND (<0.35)
TCE	ND (<6.6)
cis -1,2-DCE	27.8
VC	1.4

MRC-MW32A	
PCE	ND (<0.35)
TCE	0.74 J
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW124A	
PCE	ND (<0.35)
TCE	5.2
cis -1,2-DCE	26.3
VC	0.96 J

MRC-MW17A	
PCE	ND (<0.35)
TCE	8
cis -1,2-DCE	1.2
VC	ND (<0.30)

MRC-MW60A	
PCE	81.2
TCE	1920
cis -1,2-DCE	571
VC	80.1

MRC-MW53A	
PCE	ND (<0.35)
TCE	11.4
cis -1,2-DCE	0.5 J
VC	ND (<0.30)

MRC-MW120A	
PCE	ND (<0.35)
TCE	1.6
cis -1,2-DCE	4.1
VC	ND (<0.30)

MRC-MW118A	
PCE	ND (<0.35)
TCE	4.8
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW76A	
PCE	ND (<0.35)
TCE	0.72 J
cis -1,2-DCE	ND (<0.32)
VC	0.56 J

MRC-MW110A	
PCE	ND (<0.35)
TCE	17.7
cis -1,2-DCE	9.1
VC	0.5 J

MRC-MW18A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW58A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW34A	
PCE	ND (<0.35)
TCE	18.4
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW33A	
PCE	ND (<0.35)
TCE	1.2
cis -1,2-DCE	1.3
VC	ND (<0.30)

MRC-MW121A	
PCE	ND (<0.35)
TCE	1.2
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW16A	
PCE	6.3 J
TCE	20.7
cis -1,2-DCE	13.7
VC	10.9

MRC-MW20A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW38A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW21A	
PCE	0.43 J
TCE	2.8
cis -1,2-DCE	0.54 J
VC	0.39 J

MRC-MW25A	
PCE	0.44 J
TCE	179
cis -1,2-DCE	8.4
VC	ND (<0.30)

MRC-MW101A	
PCE	ND (<0.35)
TCE	2.6
cis -1,2-DCE	22.1
VC	1.9

MRC-MW74A	
PCE	ND (<0.35)
TCE	59.1
cis -1,2-DCE	2.3
VC	ND (<0.30)

MRC-MW98A	
PCE	ND (<0.35)
TCE	3.5
cis -1,2-DCE	0.54 J
VC	ND (<0.30)

MRC-MW43A	
PCE	0.43
TCE	ND (<0.32)
cis -1,2-DCE	ND (<0.30)
VC	ND (<33.0)

MRC-MW37A	
PCE	ND (<0.35)
TCE	423
cis -1,2-DCE	18
VC	0.73 J

MRC-MW10A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW111A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW113A	
PCE	57.6
TCE	23.5
cis -1,2-DCE	6.9
VC	ND (<0.30)

MRC-MW127A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW100A	
PCE	ND (<0.35)
TCE	6
cis -1,2-DCE	0.98 J
VC	ND (<0.30)

MRC-SEMW-8S	
PCE	ND (<0.35)
TCE	24500
cis -1,2-DCE	185
VC	1.4

MRC-MW11A	
PCE	ND (<0.35)
TCE	1.7
cis -1,2-DCE	2.7
VC	1.1

MRC-SWMW-4S	
PCE	ND (<0.35)
TCE	4.2
cis -1,2-DCE	5.4
VC	1.2

MRC-MW70A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	0.69 J
VC	ND (<0.30)

MRC-MW114A	
PCE	3.9
TCE	5.3
cis -1,2-DCE	0.95 J
VC	2.2

MRC-MW126A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW129A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	4
VC	ND (<0.30)

MRC-SEMW-9S	
PCE	0.43 J
TCE	32800
cis -1,2-DCE	187
VC	1.3

MRC-MW12A	
PCE	ND (<0.35)
TCE	28.7
cis -1,2-DCE	8.8
VC	5.1

MRC-MW13A	
PCE	ND (<0.35)
TCE	2.2
cis -1,2-DCE	2.5
VC	1.5

MRC-MW63A	
PCE	ND (<0.35)
TCE	4.6
cis -1,2-DCE	6.5
VC	1.1

MRC-MW125A	
PCE	1
TCE	0.85 J
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW103A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW44A	
PCE	ND (<0.35)
TCE	1
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-MW128A	
PCE	ND (<0.35)
TCE	1.6
cis -1,2-DCE	9
VC	0.53 J

MRC-MW130A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	3.3
VC	ND (<0.30)

MRC-MW104A	
PCE	ND (<0.35)
TCE	ND (<0.33)
cis -1,2-DCE	ND (<0.32)
VC	ND (<0.30)

MRC-STAFF01

MRC-STAFF02

LOT 5
BLOCK 'A'
LOT 1
BLOCK 'A'
LOT 2
BUILDING A
BUILDING B
BUILDING C
BLOCK 'I'
ANNEX BUILDING
VLS LABORATORY BUILDING
WILSON POINT ROAD
MARTIN STATE AIRPORT
LOT 6
BLOCK 'D'
BLOCK 'D' PANHANDLE
BLOCK 'H'
BLOCK 'H'
BLOCK 'G'
BLOCK 'E'
BLOCK 'F'
CHESAPEAKE PARK PLAZA
Dark Head Cove
Cow Pen Creek
HAWTHORNE PARK COMMUNITY (RESIDENTIAL)

N

FIGURE 12

TOTAL CHLORINATED ETHENES IN SHALLOW GROUNDWATER WELLS APRIL 2018

LEGEND

- Groundwater Monitoring Well
- Staff Gauge
- Tax Blocks

PCE = Tetrachloroethene
TCE = Trichloroethene
***cis*-1,2-DCE= *cis*-1,2-Dichloroethylene**
VC = vinyl chloride

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
MDL = method detection limit
ND = not detected (<MDL)
Concentrations given in micrograms per liter (µg/L)

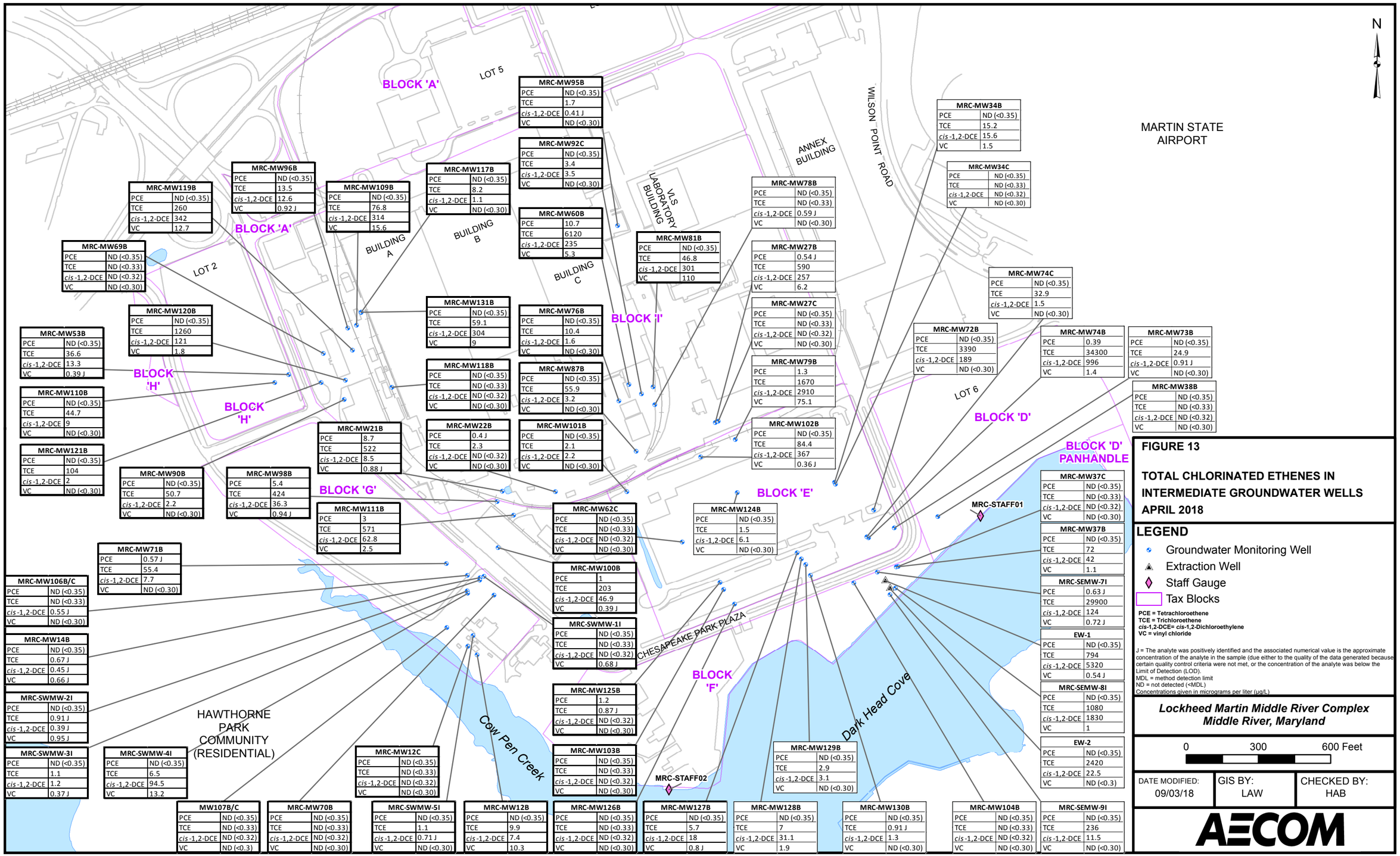
Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

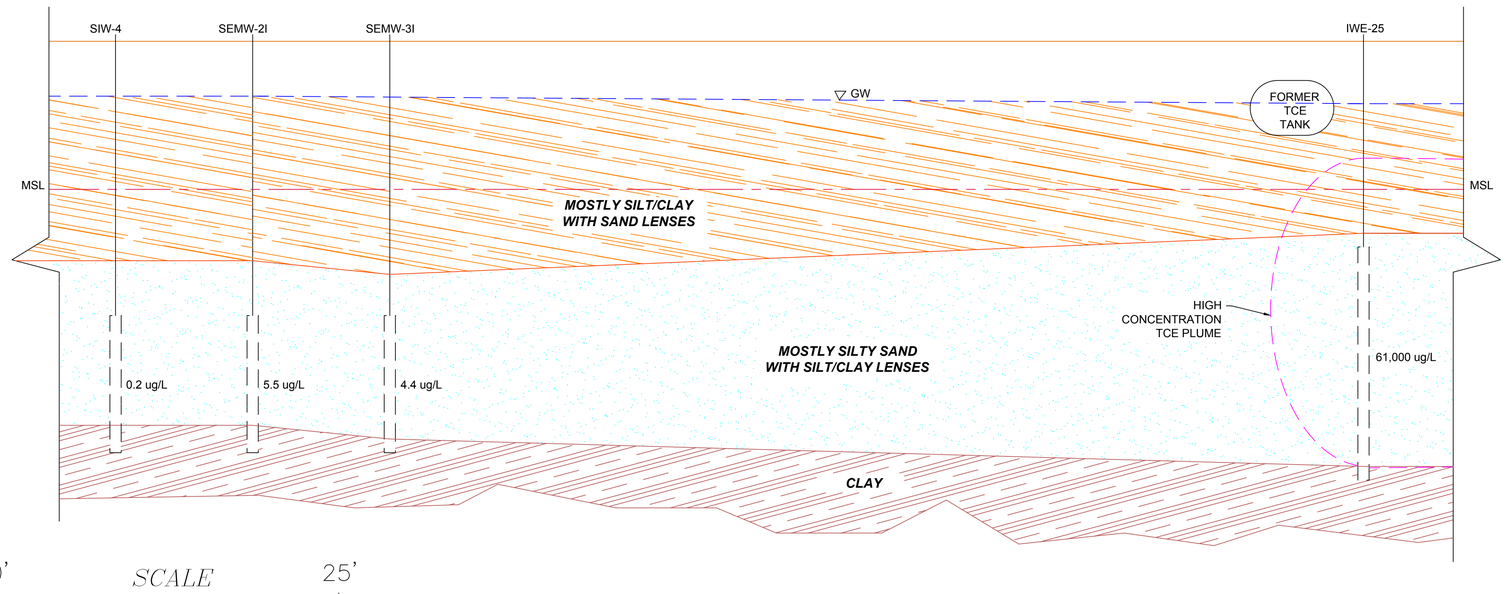
DATE MODIFIED:	GIS BY:	CHECKED BY:
09/03/18	LAW	HAB

AECOM

Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\Total_E_Shallow_2018.mxd)
Credits Basemap, Tetra Tech, 2017

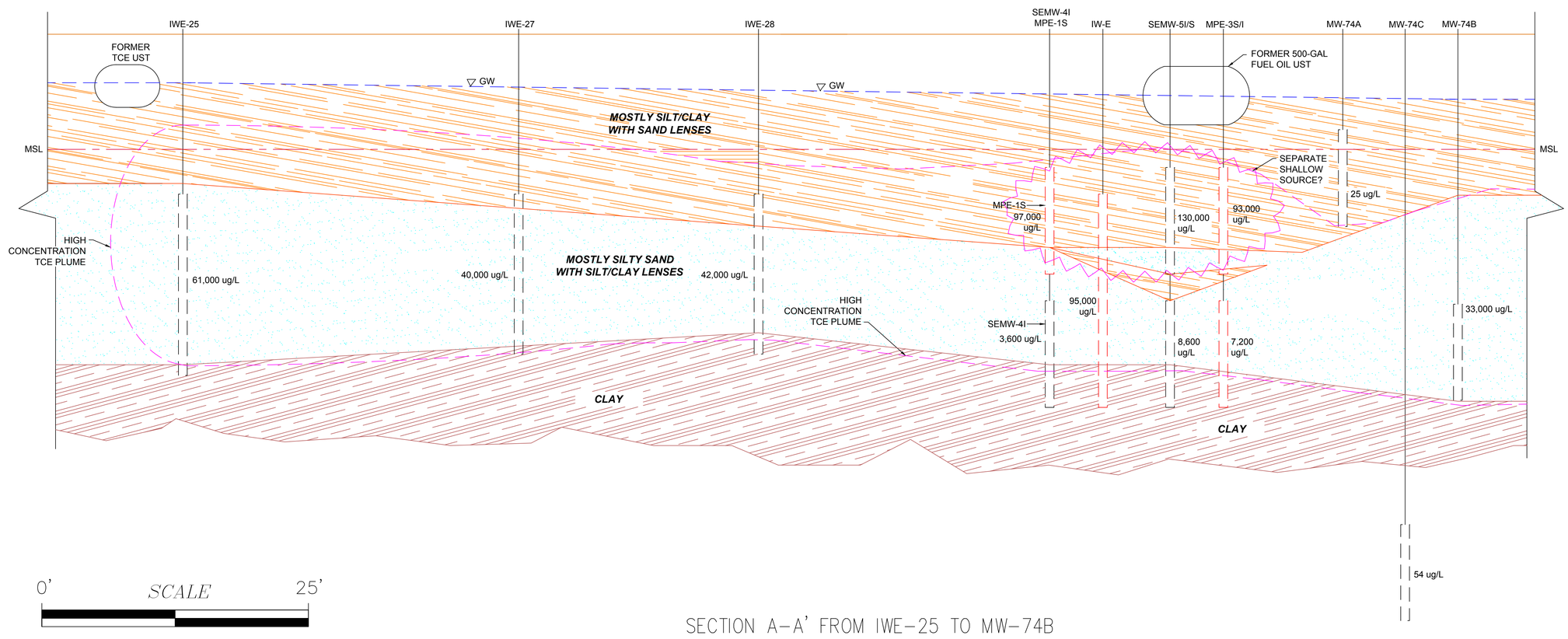


Map Document: (C:\Users\williamsl2\Desktop\920-GIS\MXDs\2018 Sampling Report\Total_E_Intermediate_2018.mxd)
Credits Basemap, Tetra Tech, 2017



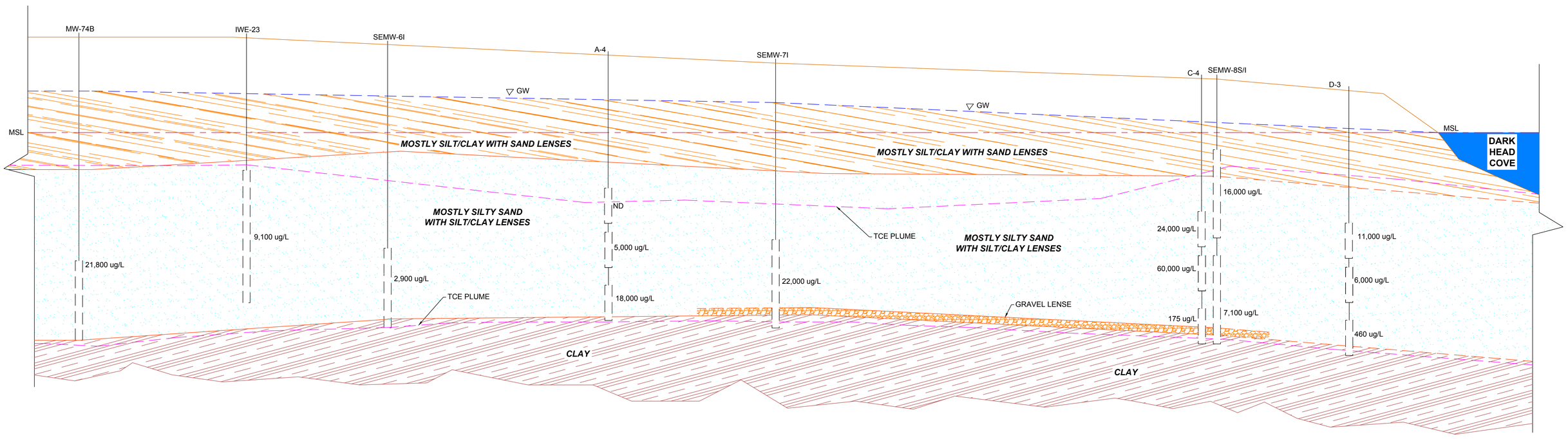
0' SCALE 25'

SECTION A–A' FROM SEMW–2I TO IWE–25



0' SCALE 25'

SECTION A–A' FROM IWE–25 TO MW–74B



0' HORIZONTAL SCALE 50' 0' VERTICAL SCALE 25'

SECTION A–A' FROM MW–74B TO DARK COVE

TETRA TECH

www.tetratech.com

MARK	DATE	DESCRIPTION	BY

BLOCK E SECTION A–A'

LOCKHEED MARTIN CORPORATION
MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

DATE:	1/3/17
PROJECT NO.:	112IC03835
DWG. SIZE:	ARCH A
DRAWN BY:	RJD
CHECKED BY:	RB

COPYRIGHT TETRA TECH INC.

FIGURE 14

C:\USERS\BORIS.DYNKIN\DOCUMENTS\LMC MRC\BLOCK E CONSTRUCTION\UPDATED CROSS SECTIONS.DWG DWM 1/3/17

TABLES

Table 1 2018 Monitoring Well Network, Chemical Analyses and Methods Performed

Table 2 Monitoring Well Purge Completion Criteria

Table 3 Quality Assurance Sampling

Table 4 April 2018 Synoptic Groundwater Level Measurements

Table 5 April 2018 Groundwater Sampling Event Detections—All Analyses

Table 1
2018 Monitoring Well Network, Chemical Analyses and Methods Performed
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Well ID	Volatile Organic Compounds (USEPA Method 8260C)	1,4-Dioxane (USEPA Method SW846 8270D SIM)	Total Metals[1] Target Analyte List and Methods	Hexavalent Chromium (USEPA Method 218.6)	PCB Homologs (USEPA Method 680)[2]	MEE and MNA Parameters
MRC-MW02A	x					
MRC-MW07A		x		x		
MRC-MW10A	x	x				
MRC-MW11A	x	x	x			
MRC-MW12A	x	x	x			x
MRC-MW12B	x	x	x			x
MRC-MW12C	x	x	x			
MRC-MW13A	x	x				
MRC-MW14B	x	x				
MRC-MW15A		x				
MRC-MW16A	x	x				
MRC-MW17A	x	x				
MRC-MW18A	x					
MRC-MW20A	x	x				
MRC-MW21A	x	x				
MRC-MW21B	x	x				x
MRC-MW22B	x	x				
MRC-MW25A	x	x				x
MRC-MW27A	x					x
MRC-MW27B	x	x				x
MRC-MW27C	x					
MRC-MW29A	x					
MRC-MW32A	x					
MRC-MW33A	x					
MRC-MW34A	x					
MRC-MW34B	x					x
MRC-MW34C	x					
MRC-MW37A	x	x	x		x	x
MRC-MW37B	x	x			x	x
MRC-MW37C	x	x			x	
MRC-MW38A	x					
MRC-MW38B	x					
MRC-MW41A	x	x				
MRC-MW43A	x				x	
MRC-MW44A	x	x			x	
MRC-MW48A	x	x				x
MRC-MW50A	x					
MRC-MW53A	x					
MRC-MW53B	x					
MRC-MW58A	x					
MRC-MW60A	x		x			
MRC-MW60B	x	x	x			x
MRC-MW62A	x				x	
MRC-MW62C	x				x	
MRC-MW63A	x	x				
MRC-MW64A	x					
MRC-MW69A	x	x				
MRC-MW69B	x	x				
MRC-MW70A	x					
MRC-MW70B	x	x				
MRC-MW71B	x	x				x
MRC-MW72B	x		x			x
MRC-MW73A			x			
MRC-MW73B	x		x			
MRC-MW74A	x		x		x	
MRC-MW74B	x		x		x	
MRC-MW74C	x				x	
MRC-MW76A	x					
MRC-MW76B	x					
MRC-MW77A	x					
MRC-MW78B	x					
MRC-MW79B	x	x				
MRC-MW80B	x	x				
MRC-MW81A		x	x			
MRC-MW81B	x	x	x			x
MRC-MW87A	x					
MRC-MW87B	x	x				

Notes:

1 Metals analyzed for Target Analyte List (TAL) metals via Method 6020A & 7470

A/S - upper surficial aquifer well

B/I - intermediate surficial aquifer well

C - lower surficial aquifer well

PCBs - polychlorinated biphenyl(s)

MEE- methane, ethane, and ethene via AM 20GAX or equivalent

MNA - monitored natural attenuation

Table 1
2018 Monitoring Well Network, Chemical Analyses and Methods Performed
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Well ID	Volatile Organic Compounds (USEPA Method 8260C)	1,4-Dioxane (USEPA Method SW846 8270D SIM)	Total Metals[1] Target Analyte List and Methods	Hexavalent Chromium (USEPA Method 218.6)	PCB Homologs (USEPA Method 680)[2]	MEE and MNA Parameters
MRC-MW90B	x	x				
MRC-MW92C	x		x			
MRC-MW93A	x					
MRC-MW95B	x					
MRC-MW96A	x	x				
MRC-MW96B	x	x				
MRC-MW98A	x	x				
MRC-MW98B	x	x				
MRC-MW100A	x					
MRC-MW100B	x	x				
MRC-MW101A	x	x				
MRC-MW101B	x	x				
MRC-MW102A	x					
MRC-MW102B	x	x				
MRC-MW103A	x				x	
MRC-MW103B	x				x	
MRC-MW104A	x					
MRC-MW104B	x					
MRC-MW106B/C	x					
MRC-MW107B/C	x	x				
MRC-MW109A	x					
MRC-MW109B	x					
MRC-MW110A	x	x				
MRC-MW110B	x	x				
MRC-MW111A	x	x				
MRC-MW111B	x	x				
MRC-MW113A	x	x			x	
MRC-MW114A	x	x			x	
MRC-MW115A	x	x				
MRC-MW117B	x	x		x		
MRC-MW118A	x	x		x		
MRC-MW118B	x	x		x		
MRC-MW119A	x	x		x		
MRC-MW119B	x	x		x		
MRC-MW120A	x	x		x		
MRC-MW120B	x	x		x		
MRC-MW121A	x	x		x		
MRC-MW121B	x	x		x		
MRC-MW122A	x	x		x		
MRC-MW123A	x	x	x	x	x	
MRC-MW124A	x	x	x	x	x	
MRC-MW124B	x	x	x	x	x	
MRC-MW125A	x	x	x	x	x	
MRC-MW125B	x	x	x	x	x	
MRC-MW126A	x	x	x	x	x	
MRC-MW126B	x	x	x	x	x	
MRC-MW127A	x	x	x	x	x	
MRC-MW127B	x	x	x	x	x	
MRC-MW128A	x	x	x	x	x	
MRC-MW128B	x	x	x	x	x	
MRC-MW129A	x	x	x	x	x	
MRC-MW129B	x	x	x	x	x	
MRC-MW130A	x	x	x	x	x	
MRC-MW130B	x	x	x	x	x	
MRC-MW131B	x	x		x		
MRC-SWMW-1I	x					
MRC-SWMW-2I	x					
MRC-SWMW-3I	x					
MRC-SEMW-7I	x	x			x	
MRC-SEMW-8S	x	x			x	
MRC-SEMW-8I	x	x			x	
MRC-SEMW-9S	x	x			x	
MRC-EW-1	x	x			x	
MRC-EW-2	x	x			x	
MRC-SEMW-9I	x	x			x	
MRC-SWMW-4S	x					
MRC-SWMW-4I	x					
MRC-SWMW-5I	x					

Notes:

1 Metals analyzed for Target Analyte List (TAL) metals via Method 6020A & 7470

A/S - upper surficial aquifer well

B/I - intermediate surficial aquifer well

C - lower surficial aquifer well

PCBs - polychlorinated biphenyl(s)

MEE- methane, ethane, and ethene via AM 20GAX or equivalent

MNA - monitored natural attenuation

Table 2
Monitoring Well Purge Completion Criteria
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Parameter	Completion Parameter
pH	±0.1 standard units
Temperature	± 3 percent (°C)
Specific Conductivity	± 3 percent (mS/cm)
Dissolved Oxygen (DO)	± 10 percent (mg/L)
Oxidation-Reduction Potential (ORP)	± 10 percent (mV)
Turbidity	< 10 NTU
Time	90 minutes of continuous purging
Volume	Three saturated well casing volumes, OR Well purged dry; allowed to recover 80% of initial static water level

Notes:
DO - Dissolved oxygen
ORP - oxidation-reduction potential
°C - degrees Celsius
mS/cm - milliSiemens per centimeter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity unit

Table 3
Quality Assurance Sampling
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

QA/QC Sample	Frequency	Method
Trip Blank	1 per cooler for VOC and chlorinated benzene analyses	Prepared by the laboratory, remains inside coolers with the same VOC samples at all times
Field Duplicate	1:20 samples for all analyses	Collected at time of sampling
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	1:20 samples for all analyses	Collected at time of sampling
Equipment Blank	1 blank for all analyses	Collected by rinsing the utilized equipment in laboratory-provided ASTM Type II deionized water and collecting the rinsate

Notes:
ASTM - American Society for Testing and Materials
MS/MSD - matrix spike/matrix spike duplicate
VOC - volatile organic compound

Table 4
April 2018 Synoptic Groundwater Level Measurements
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Well ID	Easting	Northing	TOC Elevation	Depth To Water (from TOC)	Groundwater Elevation
MRC-EW1	1474274.136	605121.555	7.05	5.11	1.94
MRC-EW2	1474293.752	605090.272	6.01	4.19	1.82
MRC-MW01A	1472100.849	607381.686	33.63	12.13	21.50
MRC-MW02A	1472639.485	607412.069	28.41	6.71	21.70
MRC-MW03A	1473097.977	607778.321	28.17	2.07	26.10
MRC-MW04A	1473444.71	606446.692	24.43	2.68	21.75
MRC-MW05A	1472612.187	606827.234	35.15	13.36	21.79
MRC-MW06A	1472069.592	606750.559	31.82	13.31	18.51
MRC-MW07A	1472290.156	605572	33.39	11.91	21.48
MRC-MW08A	1471400.13	605867.84	9.7	0.55	9.15
MRC-MW08B[a]	1471423.49	605857.4	9.57	0.00	9.57
MRC-MW11A	1472355.926	605006.565	11.9	2.03	9.87
MRC-MW16A	1472122.299	605483.7283	17.2	3.11	14.09
MRC-MW100A	1472664.712	605256.339	27.82	9.37	18.45
MRC-MW100B	1472664.707	605256.264	27.8	10.08	17.72
MRC-MW101A	1473200.37	605489.15	27.29	15.51	11.78
MRC-MW101B	1473199.833	605489.296	27.25	14.16	13.09
MRC-MW102A	1473506.99	605633.137	21.63	9.97	11.66
MRC-MW102B	1473507.001	605633.58	21.58	11.55	10.03
MRC-MW103A	1473601.591	605082.812	12.93	3.76	9.17
MRC-MW103B	1473601.821	605082.793	12.99	5.09	7.90
MRC-MW104A	1474143.363	605108.877	8.19	4.53	3.66
MRC-MW104B	1474143.256	605108.961	8.23	4.87	3.36
MRC-MW105A	1474386.074	605458.705	9.66	5.16	4.50
MRC-MW105B	1474385.785	605458.631	9.64	4.80	4.84
MRC-MW106B/C	1472537.618	605140.997	16.2	4.41	11.79
MW107B/C	1472452.501	604923.894	10.33	0.30	10.03
MRC-MW109A	1472077.07	606180.5	31.22	13.82	17.40
MRC-MW109B	1472077.07	606180.5	31.24	16.46	14.78
MRC-MW10A	1471933.286	605235.102	9.52	0.68	8.84
MRC-MW110A	1471744.82	605944.28	16.21	2.98	13.23
MRC-MW110B	1471737.43	605942.23	16.09	2.74	13.35
MRC-MW111A	1472728.99	605391.72	31.41	5.36	26.05
MRC-MW111B	1472728.99	605391.72	31.42	14.43	16.99
MRC-MW113A	1473538.344	605138.3424	11.89	2.12	9.77
MRC-MW114A	1473566.696	605147.696	11.79	2.59	9.20
MRC-MW115A	1473218.96	606703.08	26.83	6.48	20.35
MRC-MW116A	1473190.81	606848.5699	25.86	6.93	18.93
MRC-MW117B	1472096.23	606233.711	32.688	17.72	14.97
MRC-MW118A	1472223.592	605922.763	32.868	6.77	26.10
MRC-MW118B	1472223.409	605922.873	32.887	17.99	14.90
MRC-MW119A	1472060.344	606077.345	30.386	11.40	18.99
MRC-MW119B	1472060.237	606077.157	30.376	15.84	14.54
MRC-MW11C	1472366.103	604973.3	11.45	1.11	10.34
MRC-MW120A	1472031.452	605951.598	28.863	8.25	20.61
MRC-MW120B	1472031.268	605951.606	28.851	14.29	14.56

-' - TOC elevation information missing

a - Artesian

TOC - top of casing

Table 4
April 2018 Synoptic Groundwater Level Measurements
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Well ID	Easting	Northing	TOC Elevation	Depth To Water (from TOC)	Groundwater Elevation
MRC-MW121A	1471929.718	605942.778	24.651	3.48	21.17
MRC-MW121B	1471929.883	605942.913	24.64	10.30	14.34
MRC-MW122A	1472107.437	606238.191	32.703	14.05	18.65
MRC-MW123A	1473635.433	605520.474	10.17	0.59	9.58
MRC-MW124A	1473658.811	605484.875	10.71	0.30	10.41
MRC-MW124B	1473658.573	605484.982	10.74	1.21	9.53
MRC-MW125A	1473586.768	605112.426	11.908	3.13	8.78
MRC-MW125B	1473586.971	605112.165	11.97	4.65	7.32
MRC-MW126A	1473643.241	605020.55	12.8	4.24	8.56
MRC-MW126B	1473647.643	605022.408	12.76	5.55	7.21
MRC-MW127A	1473923.856	605261.145	11.45	3.80	-
MRC-MW127B	1473907.463	605235.455	11.34	4.12	7.22
MRC-MW128A	1473925.013	605209.705	10.919	3.25	7.67
MRC-MW128B	1473925.06	605210.007	10.9	6.79	4.11
MRC-MW129A	1473943.021	605185.13	10.463	6.70	3.76
MRC-MW129B	1473943.195	605185.038	10.5	3.03	7.47
MRC-MW12A	1472512.697	604858.647	9.29	1.97	7.32
MRC-MW12B	1472577.976	604810.756	9.56	2.84	6.72
MRC-MW12C[a]	1472539.241	604846.568	9.83	-0.25	10.08
MRC-MW130A	1473962.389	605141.207	10.08	3.08	7.00
MRC-MW130B	1473962.334	605141.481	10.08	5.48	4.60
MRC-MW131B	1472096.475	606233.816	32.666	17.50	15.17
MRC-MW13A	1472615.872	604806.343	10.31	1.04	9.27
MRC-MW14A	1472576.174	605143.252	16.67	3.06	13.61
MRC-MW14B	1472590.087	605131.382	15.88	4.22	11.66
MRC-MW14C	1472579.874	605129.347	15.88	6.91	8.97
MRC-MW15A	1472292.64	605305.957	16.8	1.01	15.79
MRC-MW17A	1472172.744	606013.139	32.59	7.27	25.32
MRC-MW18A	1472245.778	605782.687	32.46	3.96	28.50
MRC-MW19A	1472484.785	605675.737	36.36	8.15	28.21
MRC-MW20A	1472385.328	605631.901	36.18	10.11	26.07
MRC-MW21A	1472682.591	605490.963	32.7	2.69	30.01
MRC-MW21B	1472680.321	605486.488	32.91	9.96	22.95
MRC-MW22A	1472840.741	605466.208	31.58	13.26	18.32
MRC-MW22B	1472903.686	605487.609	31.04	11.51	19.53
MRC-MW23A	1473470.118	606058.0201	25.37	6.62	18.75
MRC-MW24A	1473544.114	605834.6259	20.77	7.72	13.05
MRC-MW25A	1473200.497	605602.133	26.71	12.42	14.29
MRC-MW26A	1473441.38	605717.91	22.9	10.07	12.83
MRC-MW27A	1473545.82	605771.68	20.76	9.50	11.26
MRC-MW27B	1473567.6	605776.729	20.9	13.37	7.53
MRC-MW27C	1473579.89	605781.76	21.35	13.15	8.20
MRC-MW28A	1473746.205	605854.879	17.45	8.19	9.26
MRC-MW29A	1473864.798	605934.82	13.97	5.38	8.59
MRC-MW30A	1473663.575	605551.844	11.14	0.50	10.64
MRC-MW31A	1473876.501	605634.114	11	3.70	7.30
MRC-MW32A	1474065.342	605705.126	11.01	3.78	7.23
MRC-MW33A	1473899.215	605444.467	11.08	1.97	9.11

-' - TOC elevation information missing

a - Artesian

TOC - top of casing

Table 4
April 2018 Synoptic Groundwater Level Measurements
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Well ID	Easting	Northing	TOC Elevation	Depth To Water (from TOC)	Groundwater Elevation
MRC-MW34A	1474131.143	605533.404	10.88	4.02	6.86
MRC-MW34B	1474062.907	605527.587	10.84	3.90	6.94
MRC-MW34C	1474067.026	605519.899	10.8	3.53	7.27
MRC-MW35A	1474391.191	605655.646	8.39	2.76	5.63
MRC-MW36A	1474116.347	605204.225	9.72	5.96	3.76
MRC-MW37A	1474222.876	605266.991	10.5	7.45	3.05
MRC-MW37B	1474319.262	605175.916	7.36	4.65	2.71
MRC-MW37C	1474327.078	605178.671	7.45	5.22	2.23
MRC-MW38A	1474485.51	605394.017	8.07	4.44	3.63
MRC-MW38B	1474491.781	605385.142	8.18	4.56	3.62
MRC-MW39A	1474983.852	605715.981	4.78	0.41	4.37
MRC-MW40A	1475095.905	605776.479	4.5	4.72	-0.22
MRC-MW41A	1471881.419	606147.293	27.52	10.79	16.73
MRC-MW42A	1473154.463	605764.049	28.21	11.33	16.88
MRC-MW43A	1473528.292	605174.296	11.01	1.04	9.97
MRC-MW44A	1473707.559	605203.697	10.64	1.15	9.49
MRC-MW48A	1473286.462	605880.783	24.76	10.19	14.57
MRC-MW49A	1471964.584	606383.421	31.47	12.27	19.20
MRC-MW50A	1471971.446	606313.404	30.15	14.25	15.90
MRC-MW51A	1471672.905	606300.933	21.88	2.42	19.46
MRC-MW52A	1471732.662	606147.4	20.32	6.16	14.16
MRC-MW53A	1471800.825	605971.746	18.54	4.75	13.79
MRC-MW53B	1471795.644	605975.227	18.41	4.21	14.20
MRC-MW54A	1471842.233	605758.031	17.05	3.54	13.51
MRC-MW55A	1472872.9	606094.42	36.56	12.92	23.64
MRC-MW56A	1472896.269	605933.191	35.94	6.64	29.30
MRC-MW57A	1472941.585	605964.873	36.46	8.32	28.14
MRC-MW58A	1472728.795	605736.028	35.03	3.86	31.17
MRC-MW59A	1472977.106	605767.718	34.11	10.22	23.89
MRC-MW60A	1473213.39	605943.72	31.26	14.23	17.03
MRC-MW60B	1473208.338	605934.58	30.21	13.46	16.75
MRC-MW61A	1473410.711	606198.912	24.16	5.09	19.07
MRC-MW62A	1473425.087	605294.244	10.62	1.18	9.44
MRC-MW62C	1473429.634	605279.69	10.89	2.92	7.97
MRC-MW63A	1472737.784	604985.765	16.2	3.69	12.51
MRC-MW64A	1472111.387	605979.506	30.88	6.87	24.01
MRC-MW65A	1473054.409	604738.829	14.76	4.33	10.43
MRC-MW66A	1473171.001	604719.608	14.99	5.81	9.18
MRC-MW67A	1472115.893	606590.647	36.67	19.64	17.03
MRC-MW68A	1472208.845	606628.642	36.51	11.96	24.55
MRC-MW69A	1471930.906	606075.749	27.63	11.20	16.43
MRC-MW69B	1471939.199	606063.131	27.85	11.54	16.31
MRC-MW70A	1472643.2	605068.244	14.69	1.70	12.99
MRC-MW70B	1472647.785	605058.755	14.44	6.83	7.61
MRC-MW71A	1472414.518	605230.001	16.9	1.61	15.29
MRC-MW71B	1472450.169	605190.212	16.94	3.81	13.13
MRC-MW72B	1474225.419	605412.56	10.79	5.74	5.05
MRC-MW73A	1474302.29	605348.533	10.46	5.70	4.76

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a - Artesian

TOC - top of casing

Table 4
April 2018 Synoptic Groundwater Level Measurements
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Well ID	Easting	Northing	TOC Elevation	Depth To Water (from TOC)	Groundwater Elevation
MRC-MW73B	1474311.024	605337.69	10.28	6.26	4.02
MRC-MW74A	1474202.457	605307.163	11.18	6.95	4.23
MRC-MW74B	1474204.189	605296.497	10.88	7.11	3.77
MRC-MW74C	1474196.577	605301.412	11.05	8.17	2.88
MRC-MW75A	1471920.364	606239.855	29	9.58	19.42
MRC-MW76A	1473173.803	605871.162	28.42	11.76	16.66
MRC-MW76B	1473166.717	605866.171	28.24	11.00	17.24
MRC-MW77A	1473440.469	606011.029	23.06	6.90	16.16
MRC-MW78B	1473316.301	605849.753	24.3	9.49	14.81
MRC-MW79B	1473650.409	605705.927	19.18	9.66	9.52
MRC-MW80A	1472591.607	605508.336	32.82	6.00	26.82
MRC-MW80B	1472611.379	605498.312	32.66	7.77	24.89
MRC-MW81A	1473314.191	605929.96	27.34	10.86	16.48
MRC-MW81B	1473308.412	605923.602	25.96	9.74	16.22
MRC-MW82A	1473243.361	607048.205	23.88	3.04	20.84
MRC-MW83A[a]	1473490.53	607277.689	20.14	0.00	20.14
MRC-MW84A[a]	1473611.375	606967.535	20.2	0.00	20.20
MRC-MW85A	1473728.403	606698.066	18.66	3.64	15.02
MRC-MW86A	1473304.304	606123.065	23.62	4.47	19.15
MRC-MW86B	1473304.134	606122.733	23.72	4.44	19.28
MRC-MW87A	1473238.641	605656.422	26.57	12.84	13.73
MRC-MW87B	1473238.603	605656.749	26.54	12.05	14.49
MRC-MW88A	1473090.29	606733.037	24.47	3.94	20.53
MRC-MW88B	1473090.287	606733.184	24.4	3.96	20.44
MRC-MW90B	1472025.307	605870.732	21.67	6.91	14.76
MRC-MW91A	1472642.085	605998.952	36.85	9.08	27.77
MRC-MW91B	1472642.008	605998.809	36.54	20.68	15.86
MRC-MW92C	1473260.444	605895.12	25.31	11.62	13.69
MRC-MW93A	1473031.196	606851.435	32.05	10.05	22.00
MRC-MW93B	1473031.364	606851.394	31.97	11.44	20.53
MRC-MW93D	1472928.462	607266.215	25.06	8.55	16.51
MRC-MW94B	1473252.329	606834.999	25.28	4.49	20.79
MRC-MW94D	1473452.376	605611.119	23.01	10.46	12.55
MRC-MW95B	1473161.721	606594.2	24.04	4.50	19.54
MRC-MW96A	1472040.273	606168.256	30.87	13.16	17.71
MRC-MW96B	1472040.22	606168.025	30.85	15.68	15.17
MRC-MW98A	1472661.142	605448.396	31.88	4.82	27.06
MRC-MW98B	1472661.04	605448.6	31.93	13.53	18.40
MRC-NMW-1I	1473296.06	605922.396	-	11.71	-
MRC-NMW-2I	1473274.85	605915.522	-	16.49	-
MRC-NMW-2S	1473274.85	605915.522	-	15.21	-
MRC-NMW-3I	1473303.59	605880.797	-	8.01	-
MRC-SEMW-1I	1474177.95	605483.958	-	4.46	-
MRC-SEMW-3I	1474197.49	605473.707	-	4.77	-
MRC-SEMW-4I	1474187.18	605329.509	11.39	7.70	3.69
MRC-SEMW-5I	1474195.18	605321.547	11.51	24.72	-13.21
MRC-SEMW-5S	1474195.18	605321.547	11.51	7.11	4.40
MRC-SEMW-6I	1474248.36	605242.368	8.15	4.96	3.19

-' - TOC elevation information missing

a - Artesian

TOC - top of casing

Table 4
April 2018 Synoptic Groundwater Level Measurements
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Well ID	Easting	Northing	TOC Elevation	Depth To Water (from TOC)	Groundwater Elevation
MRC-SEMW-7I	1474240.51	605154.49	7.58	4.89	2.69
MRC-SEMW-8I	1474316.2	605088.83	5.73	3.52	2.21
MRC-SEMW-8S	1474288.44	605078.01	6.06	3.88	2.18
MRC-SEMW-9I	1474293.226	605060.258	5.72	4.74	0.98
MRC-SEMW-9S	1474293.391	605060.0349	5.77	4.70	1.07
MRC-SWMW-1I	1472605.98	605136.802	-	5.00	-
MRC-SWMW-2I	1472588.39	605121.527	-	4.04	-
MRC-SWMW-3I	1472536.69	605077.42	-	1.32	-
MRC-SWMW-4I	1472538.32	605066.043	11.39	1.88	9.51
MRC-SWMW-4S	1472538.32	605066.043	11.4	1.91	9.49
MRC-SWMW-5I	1472561.35	604890.065	13.31	3.56	9.75

Notes:

-' - TOC elevation information missing

a - Artesian

TOC - top of casing

Table 5
2018 Groundwater Sampling Event Detections - All Analyses
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

	Sample ID		MRC-EW1	MRC-EW2	MRC-MW02A	MRC-MW07A	MRC-MW100A	MRC-MW100B	MRC-MW101A	MRC-MW101B	MRC-MW102A	MRC-MW102B	MRC-MW103A	MRC-MW103B	MRC-MW104A	MRC-MW104B	MRC-MW106B/C	MRC-MW107B/C	MRC-MW109A	MRC-MW109B	MRC-MW10A	MRC-MW110A	MRC-MW110B	MRC-MW11A	MRC-MW111A
	Date Sampled		6/26/2018	6/26/2018	4/12/2018	4/12/2018	4/11/2018	4/11/2018	4/13/2018	4/9/2018	4/9/2018	4/9/2018	4/5/2018	4/5/2018	4/12/2018	4/12/2018	4/6/2018	6/26/2018	4/10/2018	4/10/2018	4/10/2018	4/5/2018	4/5/2018	6/25/2018	4/12/2018
Analyte	**MDE GW Standard[a]**	**Units**																							
Volatile Organic Compounds (VOCs) & Semi-Volatile Organic Compounds (SVOCs)																									
1,1,1-Trichloroethane	200	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	µg/L	-	-	-	-	-	0.50 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	90	µg/L	-	-	-	-	1.7	34.0	0.43 J	6.2	-	-	-	-	-	-	0.36 J	-	-	-	-	0.39 J	-	2.8	-
1,1-Dichloroethylene	7	µg/L	12.1	-	-	-	1.5	89.0	0.60 J	2.3	-	1.5	-	-	-	-	-	-	0.44 J	1.6	-	0.79 J	0.70 J	10.4	-
1,2,3-Trichlorobenzene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.7	-	-	-	-	-
1,2,4-Trichlorobenzene	70	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.4	-	-	-	-	-
1,2,4-Trimethylbenzene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33 J	-	-
1,2-Dichlorobenzene	600	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	µg/L	-	-	-	-	-	-	-	-	-	-	19.7	0.44 J	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethylene (total)	5.5	µg/L	5320	23	-	-	0.98 J	46.9	23.2	2.2	1.6 J	371	-	-	-	-	0.55 J	-	37.1	338	-	9.6	9.3	2.7	-
1,2-Dichloropropane	5	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	1.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	700	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Phenylbutane	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40 J	-	-	-	-	-
Acetone	550	µg/L	7.3 J	6.7 J	6.2 J	-	5.8 J	6.9 J	12.8 J	6.3 J	5.4 J	7.6 J	5.1 J	6.4 J	4.5 J	10.2	-	6.8 J	9.2 J	5.7 J	5.7 J	12.4	6.8 J	11.3 J	10.5
Benzene	5	µg/L	-	-	-	-	-	0.27 J	-	-	-	0.31 J	-	-	-	-	-	-	-	46.6	-	1.3	81.4	0.25 J	-
Bromoform	80	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	100	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25 J	-	-	-	-	-	0.24 J	0.30 J
Carbon Tetrachloride	5	µg/L	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	µg/L	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	3.6	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	µg/L	1.7	0.91 J	-	-	-	-	-	-	-	-	0.94 J	-	-	-	-	-	-	-	-	-	0.90 J	1.4	-
Chloromethane	19	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis -1,2-Dichloroethene	70	µg/L	5320	22.5	-	-	0.98 J	46.9	22.1	2.2	1.6	367	-	-	-	-	0.55 J	-	36.0	314	-	9.1	9.0	2.7	-
Cyclohexane	NE	µg/L	-	-	-	-	-	-	-	-	0.90 J	-	-	-	-	-	-	-	-	0.90 J	-	-	1.3	-	-
Dichlorodifluoromethane (CFC-12)	NE	µg/L	-	-	0.54 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisopropyl Ether	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Tertiary-Butyl Ether	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	-	-
Freon TF (Chlorinated fluorocarbon)	NE	µg/L	-	7.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	66	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	0.40 J	-	-
Methyl acetate	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl *Tert* -Butyl Ether	20	µg/L	0.65 J	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	-	7.0	-	-
Methylcyclohexane	NE	µg/L	-	-	-	-	-	-	-	-	0.37 J	0.99 J	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	5	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mp-xylene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-
Naphthalene	0.65	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	0.39 J	-	-
N-Butylbenzene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-Xylene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	4.3	-	-
Tert -Butyl Alcohol	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2 J	-	-	-	-	-
Tetrachloroethene	5	µg/L	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1000	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24 J	-	-
Trans -1,2-Dichloroethene	100	µg/L	8.9	0.48 J	-	-	-	-	1.1	-	-	3	-	-	-	-	-	-	1.2	23.5	-	0.48 J	0.33 J	-	-
Trichloroethene	5	µg/L	794	2420	-	-	6.0	203	2.6	2.1	-	84.4	-	-	-	-	-	-	-	76.8	-	17.7	44.7	1.7	-
Trichlorofluoromethane	NE	µg/L	-	-	1.9	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	µg/L	0.54 J	-	-	-	-	0.39 J	1.9	-	-	0.36 J	-	-	-	-	-	-	24.0	15.6	-	0.50 J	-	1.1	-
Xylenes (Total)	10000	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3 J	-	-	7.7	-	-
1,4-Dioxane																									
1,4-Dioxane	0.46[b]	µg/L	0.075 J	0.13	-	1.6	-	51.7	1.8	2.9	-	1.2	-	-	-	-	-	-	-	-	0.55	2.5	2.5	2.0	0.52
Polychlorinated biphenyls (PCBs)																									
Dichlorobiphenyls, Total	NE	µg/L	0.0035 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monochlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobiphenyls, Total	NE	µg/L	0.0056 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Polychlorinated biphenyls (PCBs)	0.5	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																									
Antimony	0.006	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	0.01	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0071	-
Beryllium	0.004	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (total)	0.1	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (hexavalent)	0.1	mg/L	-	-	-	-	0.00056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0011 J	-
Calcium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.028	-
Copper	1.3	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0022 J	-
Iron	0.3	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.015	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	0.05	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	0.073	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0039 J	-
Potassium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	0.05	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	5	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.011	-
Monitored Natural Attenuation (MNA)																									
Alkalinity, Total (As CACO3)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orthophosphate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Ammonia (As N)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethane	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- = Not Sampled or Not Detected
µg/L = Micrograms per liter
mg/L = Milligrams per liter
[a] = Maryland Department of the Environment (MDE) Cleanup Standards for Soil and Groundwater;
http://www.phaseonline.com/assets/Site_18/files/MDE%20June%202008%20VCP%20Cleanup%20Standards.pdf
[b] = United States Environmental Protection Agency Tapwater Regional Screening Level;
http://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
D = Duplicate
J = Indicates an estimated value
U = Indicates that a compound was analyzed for but not detected
B = Not detected substantially above the level reported in the laboratory or field blanks
NE = Not Established
Exceeds MDE Groundwater Standard

Table 5
2018 Groundwater Sampling Event Detections - All Analyses
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Analyte	MDE GW Standard[a]	Units	Sample ID	MRC-MW111B	MRC-MW111B-DUP	MRC-MW113A	MRC-MW114A	MRC-MW115A	MRC-MW117B	MRC-MW118A	MRC-MW118B	MRC-MW119A	MRC-MW119B	MRC-MW120A	MRC-MW120B	MRC-MW121A	MRC-MW121B	MRC-MW122A	MRC-MW123A	MRC-MW124A	MRC-MW124B	MRC-MW124B-D	MRC-MW125A	MRC-MW125B	MRC-MW126A	MRC-MW126B
			Date Sampled	4/11/2018	4/11/2018	4/6/2018	4/9/2018	4/10/2018	4/9/2018	4/10/2018	4/10/2018	4/12/2018	4/6/2018	4/6/2018	4/6/2018	4/4/2018	4/4/2018	4/13/2018	4/4/2018	4/12/2018	4/12/2018	4/12/2018	4/6/2018	4/6/2018	4/6/2018	4/6/2018
Volatile Organic Compounds (VOCs) & Semi-Volatile Organic Compounds (SVOC																										
1,1,1-Trichloroethane	200	µg/L		-	-	-	-	-	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	µg/L		1.0	1.2	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	90	µg/L		63.5	65.2	1.6	0.29 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	7	µg/L		261	253	-	-	-	-	-	-	-	8.1	0.59 J	210	-	2.5	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	NE	µg/L		-	-	38.6	116	-	-	-	-	-	-	-	-	-	-	-	98.7 J	214	14.7	14.5	-	-	-	-	-
1,2,4-Trichlorobenzene	70	µg/L		0.96 J	-	188	447	-	-	-	-	-	0.89 J	-	-	-	-	-	399	885	66.0	65.3	1.9 J	-	-	8.7	-
1,2,4-Trimethylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	µg/L		-	-	10.5	44.4	-	-	-	-	-	-	-	-	-	-	-	53.9	75.4	7.7	7.5	-	-	0.96 J	-
1,2-Dichloroethane	5	µg/L		-	-	1.0	819	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	11.3	-	0.43 J
1,2-Dichloroethylene (total)	5.5	µg/L		61.8	62.8	7.2	0.95 J	-	1.1 J	-	-	-	376	4.1	121	-	2.0 J	-	29.3	27.7	6.1	5.8	-	-	-	-
1,2-Dichloropropane	5	µg/L		-	-	-	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.5	-	-	-	-
1,3-Dichlorobenzene	1.8	µg/L		-	-	27.0	12.4	-	-	-	-	-	-	-	-	-	-	-	424	263	57.9	56.0	-	-	6.1	-
1,4-Dichlorobenzene	75	µg/L		-	-	40.9	71.8	-	-	-	-	-	-	-	-	-	-	-	261	238	38.2	37.2	0.54 J	-	6.3	-
2-Butanone	700	µg/L		-	-	-	-	-	-	-	-	3.4 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Phenylbutane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	550	µg/L		8.6 J	3.7 J	7.2 J	7.7 J	6.3 J	16.3	11.1	7.9 J	82.4	5.6 J	15.7	9.3 J	24.5	10.0	6.2 J	4.2 J	7.8 J	10.8	6.8 J	8.5 J	11.5	-	5.4 J
Benzene	5	µg/L		3.5	3.9	0.76 J	7.1	-	-	-	-	-	246	8.7	4.8	-	-	-	15.9	17.1	2.5	2.4	-	-	0.33 J	-
Bromoform	80	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	100	µg/L		-	-	-	0.34 J	-	-	-	0.25 J	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56 J
Carbon Tetrachloride	5	µg/L		-	-	1.5	-	-	-	-	-	-	-	-	0.33 J	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	µg/L		-	-	48.0	373	-	-	-	-	-	-	-	-	-	-	-	996	542	124	122	0.39 J	-	39.7	0.20 J
Chloroethane	3.6	µg/L		2.0	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	µg/L		-	-	1.3	-	-	-	1.2	-	0.75 J	-	-	-	-	0.49 J	0.47 J	0.24 J	-	0.75 J	0.70 J	-	0.22 J	-	-
Chloromethane	19	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis -1,2-Dichloroethene	70	µg/L		61.8	62.8	6.9	0.95 J	-	1.1	-	-	-	342	4.1	121	-	2.0	-	27.8	26.3	6.1	5.8	-	-	-	-
Cyclohexane	NE	µg/L		-	-	-	-	-	-	-	-	-	1.7	10.0	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisopropyl Ether	NE	µg/L		-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Tertiary-Butyl Ether	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	µg/L		-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-	1.1	1.0	-	-	-	-
Freon TF (Chlorinated fluorocarbon)	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	66	µg/L		0.28 J	0.27 J	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl acetate	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	0.36 J	-	-	-	-	-	-	-	-	-	-
Methyl *Tert* -Butyl Ether	20	µg/L		-	-	-	-	-	-	-	-	-	17.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	4.4	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	5	µg/L		-	-	-	-	-	-	-	-	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mp-xylene	NE	µg/L		-	-	-	-	-	-	-	-	-	1.3 J	2.6	-	-	-	-	-	-	2.4	2.3	-	-	-	-
Naphthalene	0.65	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-Xylene	NE	µg/L		-	-	-	-	-	-	-	-	-	8.6	-	-	-	-	-	-	-	1.0	1.0	-	-	-	-
Tert -Butyl Alcohol	NE	µg/L		-	-	-	-	-	5.5 J	-	4.5 J	4.2 J	-	5.0 J	-	4.5 J	-	-	-	-	6.7 J	-	-	-	-	-
Tetrachloroethene	5	µg/L		2.7	3.0	57.6	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.2	-	-
Toluene	1000	µg/L		-	-	-	-	-	-	-	-	-	0.44 J	-	-	-	-	-	-	0.31 J	0.32 J	0.33 J	-	-	-	-
Trans -1,2-Dichloroethene	100	µg/L		-	-	0.37 J	-	-	-	-	-	-	33.4	-	-	-	-	-	1.5	1.3	-	-	-	-	-	-
Trichloroethene	5	µg/L		571	541	23.5	5.3	-	8.2	4.8	-	-	260	1.6	1260	1.2	104	-	-	5.2	1.5	1.4	0.85 J	0.87 J	-	-
Trichlorofluoromethane	NE	µg/L		-	-	1400	180	-	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-	46.4	63.1	0.96 J	-
Vinyl Chloride	2	µg/L		2.3	2.5	-	2.2	-	-	-	-	-	12.7	-	1.8	-	-	-	1.4	0.96 J	-	-	-	-	-	-
Xylenes (Total)	10000	µg/L		-	-	-	-	-	-	-	-	-	9.9	2.6 J	-	-	-	-	-	-	3.4	3.3	-	-	-	-
1,4-Dioxane																										
1,4-Dioxane	0.46[b]	µg/L		88.5 J	37.9 J	2.6	0.50	-	0.35	0.11	-	-	4.4	2.8	21.9	0.048 J	1.6	0.27	0.19	0.26	0.27	0.20	0.32	0.37	0.66	-
Polychlorinated biphenyls (PCBs)																										
Dichlorobiphenyls, Total	NE	µg/L		-	-	0.0094	0.0070 B	-	-	-	-	-	-	-	-	-	-	-	0.012	0.026 B	0.0020 B	0.0050 B	0.0024 J	-	0.0019 J	-
Heptachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.012 J	0.019	-	-
Hexachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0047 J	-	-	-	0.023	0.036	-	-
Monochlorobiphenyls, Total	NE	µg/L		-	-	-	0.019 B	-	-	-	-	-	-	-	-	-	-	-	0.025	0.049	-	0.0040 B	-	-	-	-
Pentachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0066 J	0.0061 J	-	-
Tetrachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Polychlorinated biphenyls (PCBs)	0.5	µg/L		-	-	-	0.026 J	-	-	-	-	-	-	-	-	-	-	-	0.042	0.074	-	-	0.044	0.062	-	-
Metals																										
Antimony	0.006	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0016 J	-	-	-	-
Arsenic	0.01	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0014 J	0.0023 J	0.0023 J	0.0020 J	-	-	0.0011 J	0.0015 J
Beryllium	0.004	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0013 B	0.0029	0.00045 J	0.00042 J	0.0015	0.0024	-	-
Chromium (total)	0.1	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0014 B	-	-	0.00084 B	0.0014 J	0.0012 J	0.0013 J	0.0021 J
Chromium (hexavalent)	0.1	mg/L		-	-	-	-	-	-	0.0549	-	-	-	-	-	-	-	-	-	-	-	-	0.00009 J	-	-	-
Calcium	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.043	0.031	0.0093	0.0093	0.017	0.027	0.0051 J	0.022
Copper	1.3	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0025 J	-	-	-	-	0.0019 J	0.0044 J	0.0027 J
Iron	0.3	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.015	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	0.05	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	0.073	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.038	0.052	0.012	0.013	0.038	0.048	-	0.020
Potassium	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	0.05	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	5	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.040	0.059	0.038	0.038	0.034	0.061	0.015 B	0.028
Monitored Natural Attenuation (MNA)																										
Alkalinity, Total (As CACO3)	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orthophosphate	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Ammonia (As N)	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- = Not Sampled or Not Detected
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[a] = Maryland Department of the Environment (MDE) Cleanup Standards for Soil and Groundwater;
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Exceeds MDE Groundwater Standard

Table 5
2018 Groundwater Sampling Event Detections - All Analyses
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 3 of 6

Analyte	MDE GW Standard[a]	Units	MRC-MW127A	MRC-MW127B	MRC-MW128A	MRC-MW128B	MRC-MW129A	MRC-MW129B	MRC-MW12A	MRC-MW12B	MRC-MW12C	MRC-MW130A	MRC-MW130A-D	MRC-MW130B	MRC-MW131B	MRC-MW131B-D	MRC-MW13A	MRC-MW14B	MRC-MW15A	MRC-MW16A	MRC-MW16A-Dup	MRC-MW17A	MRC-MW18A	MRC-MW20A	MRC-MW21A	MRC-MW21B
Sample ID																										
Date Sampled			4/10/2018	4/10/2018	4/10/2018	4/11/2018	4/11/2018	4/11/2018	4/9/2018	4/9/2018	4/10/2018	4/11/2018	4/11/2018	4/11/2018	4/11/2018	4/11/2018	4/10/2018	4/4/2018	4/9/2018	6/25/2018	6/25/2018	4/10/2018	4/11/2018	4/6/2018	4/6/2018	4/6/2018
Volatile Organic Compounds (VOCs) & Semi-Volatile Organic Compounds (SVOC																										
1,1,1-Trichloroethane	200	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
1,1,2-Trichloroethane	5	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
1,1-Dichloroethane	90	µg/L	-	0.41 J	0.49 J	0.72 J	-	-	3.4	9.2		-	-	-	-	-	1.2	7.5	-	28.2	30.6	0.30 J	0.52 J	-	2.7	20.0
1,1-Dichloroethylene	7	µg/L	-	0.35 J	-	0.36 J	-	-	6.8	2.1		-	-	-	6.4	5.8	0.49 J	-	-	72.7	79	-	2.6	-	3.1	205
1,2,3-Trichlorobenzene	NE	µg/L	153	5.1	76.3	13.6	3.4	1.4 J	-	-		14.6	13.9	3.7	-	-	-	-	-	-		-	-	-	-	-
1,2,4-Trichlorobenzene	70	µg/L	269	19.9	226	53.8	36.8	7.0	-	-		80.5	80.7	11.3	-	-	-	-	-	-		1.3 J	-	-	-	-
1,2,4-Trimethylbenzene	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		2.4	-	-	-	-
1,2-Dichlorobenzene	600	µg/L	7.6	0.40 J	2.3	2.2	-	-	-	-		1.0	1.0	2.1	-	-	-	-	-	-		-	-	-	-	-
1,2-Dichloroethane	5	µg/L	-	-	-	-	-	-	2.1	0.51 J		-	-	-	-	-	-	1.2	-	0.33 J	0.34 J	0.99 J	-	-	-	-
1,2-Dichloroethylene (total)	5.5	µg/L	-	19.3	9.8	33.1	4.0	3.1	9.5	7.7		3.3	3.7	1.3 J	317	276	3.1	1.2 J	-	12.3	13.7	1.2 J	-	-	0.54 J	8.5
1,2-Dichloropropane	5	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
1,3-Dichlorobenzene	1.8	µg/L	13.2	-	2.6	-	18.7	-	-	-		10.6	10.6	1.5	-	-	-	-	-	-		-	-	-	-	-
1,4-Dichlorobenzene	75	µg/L	17.2	0.50 J	3.8	2.9	1.9	0.78 J	-	-		2.4	2.5	10.6	-	-	-	-	-	-		-	-	-	-	-
2-Butanone	700	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
2-Phenylbutane	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		0.60 J	-	-	-	-
Acetone	550	µg/L	9.5 J	9.0 J	6.0 J	70.6	7.4 J	5.3 J	4.4 J	3.4 J		10.8	3.6 J	9.4 J	4.9 J	-	7.0 J	7.2 J	-	17.6 J	8.8 J	-	10.1	-	5.8 J	-
Benzene	5	µg/L	0.48 J	-	-	-	-	-	5.5	2.0		-	-	-	-	-	0.27 J	23.2	-	0.70 J	0.80 J	180	-	-	-	28.8
Bromoform	80	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Carbon Disulfide	100	µg/L	-	-	-	0.34 J	-	0.27 J	-	-		-	-	2.8	-	-	-	-	-	-		-	-	-	-	-
Carbon Tetrachloride	5	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Chlorobenzene	100	µg/L	13.4	-	0.25 J	-	0.23 J	-	-	-		-	-	1.2	-	-	-	-	-	-		-	-	-	-	-
Chloroethane	3.6	µg/L	-	-	-	-	-	-	15.1	-		-	-	-	-	-	-	23.3	-	-		-	-	-	-	-
Chloroform	80	µg/L	-	-	-	-	-	0.30 J	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Chloromethane	19	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Cis -1,2-Dichloroethene	70	µg/L	-	18.0	9.0	31.1	4.0	3.1	8.8	7.4		3.3	3.3	1.3	304	264	2.5	0.45 J	-	12.3 J+	13.7	1.2	-	-	0.54 J	8.5
Cyclohexane	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	0.35 J	0.37 J	35.9	-	-	-	1.3
Dichlorodifluoromethane (CFC-12)	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Diisopropyl Ether	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		8.4	-	-	-	-
Ethyl Tertiary-Butyl Ether	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Ethylbenzene	700	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		60.1	-	-	-	-
Freon TF (Chlorinated fluorocarbon)	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	0.98 J
Isopropylbenzene	66	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	0.65 J	-	-		4.1	-	-	-	15.0
Methyl acetate	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Methyl *Tert* -Butyl Ether	20	µg/L	-	5.7	8.1	16.0	2.4	-	-	-		3.2	3.1	0.96 J	0.47 J	0.46 J	-	-	-	-		-	-	-	-	-
Methylcyclohexane	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
Methylene Chloride	5	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
mp-xylene	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		24.6	-	-	-	-
Naphthalene	0.65	µg/L	0.89 J	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		6.1	-	-	-	-
N-Butylbenzene	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-
N-Propylbenzene	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		7.4	-	-	-	-
O-Xylene	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		2.0	-	-	-	-
Tert -Butyl Alcohol	NE	µg/L	-	4.0 J	2.4 J	18.3	-	-	-	-		-	-	-	-	-	-	-	-	-		4.1 J	-	-	-	-
Tetrachloroethene	5	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	6.1	6.3	-	-	-	0.43 J	8.7
Toluene	1000	µg/L	-	-	-	-	-	-	0.31 J	-		-	-	-	-	-	-	0.23 J	-	-		28.8	-	-	-	-
Trans -1,2-Dichloroethene	100	µg/L	-	1.3	0.84 J	2.0	-	-	0.66 J	0.28 J		-	0.37 J	-	14.3	13.7	0.58 J	0.79 J	-	-		-	-	-	-	-
Trichloroethene	5	µg/L	-	5.7	2.6	7.0	-	2.9	28.7	9.9		-	-	0.91 J	59.1	52.1	2.2	0.67 J	-	20.4	20.7	8.0	-	-	2.8	522
Trichlorofluoromethane	NE	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		0.35 J	-	-	-	-
Vinyl Chloride	2	µg/L	-	0.80 J	0.53 J	1.9	-	-	5.1	10.3		-	-	-	9.0	8.2	1.5	0.66 J	-	8.1	10.9	-	-	-	0.39 J	0.88 J
Xylenes (Total)	10000	µg/L	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		26.6	-	-	-	-
1,4-Dioxane																										
1,4-Dioxane	0.46[b]	µg/L	-	0.084 J	0.086 J	0.12	0.12	0.090 J	140	61.9	-	0.048 J	0.056 J	0.093 J	6.7	6.7	1.7	113	9.7	42.6	38.1	1.8		1.7	0.46	19.3
Polychlorinated biphenyls (PCBs)																										
Dichlorobiphenyls, Total	NE	µg/L	0.016 B	0.0050 B	0.031 B	0.010 J	0.0065 J	-	-	-	-	0.0040 B	0.0080 B	-	-	-	-	-	-	-		-	-	-	-	-
Heptachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Hexachlorobiphenyls, Total	NE	µg/L	-	-	0.012	-	-	-	-	-	-	-	-	0.0050 J	-	-	-	-	-	-		-	-	-	-	-
Monochlorobiphenyls, Total	NE	µg/L	0.017 B	0.0035 B	0.033	0.0085 J	0.0050 J	0.0020 J	-	-	-	0.010 B	0.011 B	0.011 B	-	-	-	-	-	-		-	-	-	-	-
Pentachlorobiphenyls, Total	NE	µg/L	0.012	-	0.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Tetrachlorobiphenyls, Total	NE	µg/L	-	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Trichlorobiphenyls, Total	NE	µg/L	-	-	0.019 B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Total Polychlorinated biphenyls (PCBs)	0.5	µg/L	0.044	-	0.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Metals																										
Antimony	0.006	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Arsenic	0.01	mg/L	-	-	-	-	-	-	0.0029 J	0.0023 J	0.0016 J	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Beryllium	0.004	mg/L	0.0015	0.013	0.010	0.00057 J	-	0.0016	0.00043 J	-	0.00072 J	0.0054	0.0054	-	-	-	-	-	-	-		-	-	-	-	-
Chromium (total)	0.1	mg/L	0.00082 B	0.00086 B	0.0010 B	0.0073 B	0.0013 J	0.0018 J	0.0030 B	0.0019 B	0.014	0.0015 J	0.0012 J	0.0019 J	-	-	-	-	-	-		-	-	-	-	-
Chromium (hexavalent)	0.1	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Calcium	NE	mg/L	-	-	-	-	-	-	11.8	10.0	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Cobalt	NE	mg/L	0.024	0.062	0.035	0.0049 J	-	0.0067	0.0069	0.031	0.0090	0.025	0.025	0.0068	-	-	-	-	-	-		-	-	-	-	-
Copper	1.3	mg/L	0.0025 B	-	0.0038 B	0.0026 J	-	-	0.0031 B	-	0.015 B	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Iron	0.3	mg/L	-	-	-	-	-	-	74.2	61.9	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Lead	0.015	mg/L	-	-	-	0.00078 J	-	-	0.0011 J	-	0.0064	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Magnesium	NE	mg/L	-	-	-	-	-	-	12.1	9.5	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Manganese	0.05	mg/L	-	-	-	-	-	-	3.9	3.4	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Nickel	0.073	mg/L	0.015	0.086	0.074	0.011	0.0025 J	0.012	0.0038 B	0.035	0.015	0.036	0.037	0.0022 J	-	-	-	-	-	-		-	-	-	-	-
Potassium	NE	mg/L	-	-	-	-	-	-	2.8	3.0	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Selenium	0.05	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Silica	NE	mg/L	-	-	-	-	-	-	14.7	10.8	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Sodium	NE	mg/L	-	-	-	-	-	-	29.2	19.3	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Zinc	5	mg/L	0.026 B	0.13	0.13	0.011 B	0.011	0.021	0.0078 B	0.030 B	0.10	0.066	0.065	0.014	-	-	-	-	-	-		-	-	-	-	-
Monitored Natural Attenuation (MNA)																										
Alkalinity, Total (As CACO3)	NE	mg/L	-	-	-	-	-	-	116	110	-	-	-	-	-	-	-	-	-	-		-	-	-	-	35
Orthophosphate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Nitrogen, Ammonia (As N)	NE	mg/L	-	-	-	-	-	-	0.230 B	0.237 B	-	-	-	-	-	-	-	-	-	-		-	-	-	-	0.221
Chloride	NE	mg/L	-	-	-	-	-	-	64.3	25.1	-	-	-	-	-	-	-	-	-	-		-	-	-	-	83.2
Nitrate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Sulfate	NE	mg/L	-	-	-	-	-	-	1.4 J	2.1	-	-	-	-	-	-	-	-	-	-		-	-	-	-	2.0
Phosphorus	NE	mg/L	-	-	-	-	-	-	0.056 B	0.032 B	-	-	-	-	-	-	-	-	-	-		-	-	-	-	0.070 J
Ethane	NE	µg/L	-	-	-	-	-	-	38.9	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Ethene	NE	µg/L	-	-	-	-	-	-	6.3	46.6	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Methane	NE	µg/L	-	-	-	-	-	-	8110	588	-	-	-	-	-	-	-	-	-	-		-	-	-	-	15.6
Total Dissolved Solids (TDS)	NE	mg/L	-	-	-	-	-	-	172	121	-	-	-	-	-	-	-	-	-	-		-	-	-	-	296 J
Total Organic Carbon (TOC)	NE	mg/L	-	-	-	-	-	-	2.7	1.6	-	-	-	-	-	-	-	-	-	-		-	-	-	-	0.55

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Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 4 of 6

Analyte	MDE GW Standard[a]	Units	Sample ID	MRC-MW22B	MRC-MW25A	MRC-MW27A	MRC-MW27B	MRC-MW27C	MRC-MW29A	MRC-MW32A	MRC-MW33A	MRC-MW34A	MRC-MW34B	MRC-MW34C	MRC-MW37A	MRC-MW37B	MRC-MW37C	MRC-MW38A	MRC-MW38B	MRC-MW41A	MRC-MW43A	MRC-MW44A	MRC-MW48A	MRC-MW50A	MRC-MW53A	MRC-MW53B	MRC-MW58A
			Date Sampled	4/9/2018	4/9/2018	4/10/2018	4/10/2018	4/10/2018	4/11/2018	4/10/2018	4/10/2018	4/12/2018	4/11/2018	4/11/2018	4/13/2018	4/13/2018	4/13/2018	4/11/2018	4/12/2018	4/9/2018	4/4/2018	4/5/2018	4/4/2018	4/10/2018	4/5/2018	4/5/2018	4/11/2018
Volatile Organic Compounds (VOCs) & Semi-Volatile Organic Compounds (SVOC																											
1,1,1-Trichloroethane	200	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	90	µg/L		1.7	0.37 J	2.1	5.2	-	4.4	-	-	-	0.92 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	7	µg/L		5.3	1.0 J	2.2	8.9	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	-	0.74 J	0.83 J	-
1,2,3-Trichlorobenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	901	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3960	-	-	-	-	-	-
1,2,4-Trimethylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	-
1,2-Dichlorobenzene	600	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	367	-	-	-	-	-	-
1,2-Dichloroethane	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	-	-	-	-	-	-
1,2-Dichloroethylene (total)	5.5	µg/L		-	8.4	51.5	265	-	4.3	-	1.3 J	-	16.6	-	18.3	42.9	-	-	-	-	-	-	354	-	0.50 J	14.2	-
1,2-Dichloropropane	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	1.8	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	412	-	-	-	-	-	-
2-Butanone	700	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Phenylbutane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37 J	-	-	-	-
Acetone	550	µg/L		-	5.5 J	-	4.5 J	3.6 J	8.0 J	4.2 J	4.9 J	-	-	3.4 J	-	9.4 J	7.9 J	-	3.5 J	6.9 J	4.6 J	-	-	-	-	-	-
Benzene	5	µg/L		-	0.81 J	1.3	0.51 J	-	-	-	-	-	-	-	-	-	-	-	-	-	0.69 J	-	0.25 J	-	-	302	-
Bromoform	80	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70 J
Carbon Disulfide	100	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39 J	-
Carbon Tetrachloride	5	µg/L		-	-	-	-	-	-	-	-	-	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	-	-	-	-	-	-
Chloroethane	3.6	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	µg/L		-	-	-	-	-	-	-	-	-	1.3	-	-	-	9.6	-	-	-	-	-	-	-	-	-	-
Chloromethane	19	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis -1,2-Dichloroethene	70	µg/L		-	8.4	48.2	257	-	4.3	-	1.3	-	15.6	-	18.0	42.0	-	-	-	-	-	-	354	-	0.50 J	13.3	-
Cyclohexane	NE	µg/L		-	-	0.97 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.35 J	-	-	2.8	-
Dichlorodifluoromethane (CFC-12)	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisopropyl Ether	NE	µg/L		-	-	0.29 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Tertiary-Butyl Ether	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	-
Freon TF (Chlorinated fluorocarbon)	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	66	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58 J	-	-	1.4	-
Methyl acetate	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl *Tert* -Butyl Ether	20	µg/L		-	-	19.4	2.9	-	3.9	-	1.9	-	24.1	-	-	-	-	-	-	-	-	-	-	-	-	22.1	-
Methylcyclohexane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-
Methylene Chloride	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mp-xylene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.7	-
Naphthalene	0.65	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	-	-	-	-	1.0 J	-
N-Butylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.89 J	-
O-Xylene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.0	-
Tert -Butyl Alcohol	NE	µg/L		-	-	27.7	-	-	5.4 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	µg/L		0.40 J	0.44 J	-	0.54 J	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43 J	-	11.0	-	-	-	-
Toluene	1000	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23 J	-	-	-	-	0.57 J	-
Trans -1,2-Dichloroethene	100	µg/L		-	-	3.3	3.3	-	-	-	-	-	1.0	-	0.27 J	0.86 J	-	-	-	-	-	-	3.5	-	-	0.89 J	-
Trichloroethene	5	µg/L		2.3	179	141	590	-	10.6	0.74 J	1.2	18.4	15.2	-	423	72.0	-	-	-	-	-	1.0	842	6.1	11.4	36.5	-
Trichlorofluoromethane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48 J	-	-	-	-	-	-
Vinyl Chloride	2	µg/L		-	-	15.3	6.2	-	0.70 J	-	-	-	1.5	-	0.73 J	1.1	-	-	-	-	-	-	33.6	-	-	0.39 J	-
Xylenes (Total)	10000	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31.7	-
1,4-Dioxane																											
1,4-Dioxane	0.46[b]	µg/L		4.5	1.1	-	1.4	-	-	-	-	-	-	-	-	0.20	-	-	-	0.28	-	0.50	0.49 J-	-	-	-	-
Polychlorinated biphenyls (PCBs)																											
Dichlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	0.0019 B	0.0020 B	-	-	-	0.082	0.0033 J	-	-	-	-	-
Heptachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	0.0065 J	-	-	-	-	-	0.21	0.0052 J	-	-	-	-	-
Monochlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	-	-	-	-	-	-
Pentachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	0.010	-	-	-	-	-	0.49	-	-	-	-	-	-
Tetrachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.012	-	-	-	-	-	-
Trichlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.018	-	-	-	-	-	-
Total Polychlorinated biphenyls (PCBs)	0.5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	-
Metals																											
Antimony	0.006	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	0.01	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	0.004	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (total)	0.1	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (hexavalent)	0.1	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NE	mg/L		-	43.4	19.4	8.8	-	-	-	-	-	-	-	104	8.6	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NE	mg/L		-	-	-	-	-	-	-	-	-	-	-	0.0029 J	-	-	-	-	-	-	-	-	-	-	-	-
Copper	1.3	mg/L		-	-	-	-	-	-	-	-	-	-	-	0.0032 J	-	-	-	-	-	-	-	-	-	-	-	-
Iron	0.3	mg/L		-	25.5	116	1.9	-	-	-	-	-	-	-	3.4	0.30	-	-	-	-	-	-	-	-	-	-	-
Lead	0.015	mg/L		-	-	-	-	-	-	-	-	-	-	-	0.0031	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NE	mg/L		-	8.7	36.6	3.7	-	-	-	-	-	-	-	22.3	4.0	-	-	-	-	-	-	-	-	-	-	-
Manganese	0.05	mg/L		-	4.7	41.1	0.13	-	-	-	-	-	-	-	0.025	0.14	-	-	-	-	-	-	-	-	-	-	-
Nickel	0.073	mg/L		-	-	-	-	-	-	-	-	-	-	-	0.0040 J	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NE	mg/L		-	6.0	3.2	5.0	-	-	-	-	-	-	-	7.7	2.7	-	-	-	-	-	-	-	-	-	-	-
Selenium	0.05	mg/L		-	-	-	-	-	-	-	-	-	-	-	0.0022 J	-	-	-	-	-	-	-	-	-	-	-	-
Silica	NE	mg/L		-	10.1	11.1	8.6	-	-	-	-	-	-	-	10.5	2.9	-	-	-	-	-	-	-	-	-	-	-
Sodium	NE	mg/L		-	452	347	48.9	-	-	-	-	-	-	-	11.4	13.0	-	-	-	-	-	-	-	-	-	-	-
Zinc	5	mg/L		-	-	-	-	-	-	-	-	-	-	-	0.042	-	-	-	-	-	-	-	-	-	-	-	-
Monitored Natural Attenuation (MNA)																											
Alkalinity, Total (As CACO3)	NE	mg/L		-	76	45	11 B	-	-	-	-	-	5 B	-	92	14 B	-	-	-	-	-	-	56	-	-	-	-
Orthophosphate	NE	mg/L		-	-	0.0059 J	0.0030 J	-	-	-	-	-	0.0059 J	-	0.0030 J	0.013 J	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Ammonia (As N)	NE	mg/L		-	0.219 B	2.25	-	-	-	-	-	-	0.212	-	0.289 B	0.388	-	-	-	-	-	-	0.029 B	-	-	-	-
Chloride	NE	mg/L		-	888	905	106	-	-	-	-	-	198	-	10.9	30.8	-	-	-	-	-	-	122	-	-	-	-
Nitrate	NE	mg/L		-	-	-	-	-	-	-	-	-	0.16 J	-	2.6	0.92	-	-	-	-	-	-	-	-	-	-	-
Sulfate	NE	mg/L		-	23.1	2.1	8.8	-	-	-	-	-	23.5	-	291	24.6	-	-	-	-	-	-	4.4	-	-	-	-
Phosphorus	NE	mg/L		-	0.026 B	0.021 J	0.033 J	-	-	-	-	-	-	-	0.039 J	0.13	-	-	-	-	-	-	-	-	-	-	-
Ethane	NE	µg/L		-	-	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0 J	-	-	-	-
Ethene	NE	µg/L		-	-	1.6 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0	-	-	-	-
Methane	NE	µg/L		-	20.7	953	3.2	-	-	-	-	-	37.0 J	-	0.78 J	2.4	-	-	-	-	-	-	1590	-	-	-	-
Total Dissolved Solids (TDS)	NE	mg/L		-	1370	1440	171	-	-	-	-	-	350	-	503	69	-	-	-	-	-	-	266	-	-	-	-
Total Organic Carbon (TOC)	NE	mg/L		-	2.4	3.3	1.7	-	-	-	-	-	1.6	-	4.0	1.2	-	-	-	-	-	-	3.0	-	-	-	-

Notes:
- = Not Sampled or Not Detected
µg/L = Micrograms per liter
mg/L = Milligrams per liter
[a] = Maryland Department of the Environment (MDE) Cleanup Standards for Soil and Groundwater;
http://www.phaseonline.com/assets/Site_18/files/MDE%20June%202008%20VCP%20Cleanup%20Standards.pdf
[b] = United States Environmental Protection Agency Tapwater Regional Screening Level;
http://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
D = Duplicate
J = Indicates an estimated value
U = Indicates that a compound was analyzed for but not detected
B = Not detected substantially above the level reported in the laboratory or field blanks
NE = Not Established
Exceeds MDE Groundwater Standard

Table 5
2018 Groundwater Sampling Event Detections - All Analyses
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Analyte	MDE GW Standard[a]	Units	Sample ID	MRC-MW60A	MRC-MW60B	MRC-MW62A	MRC-MW62C	MRC-MW63A	MRC-MW64A	MRC-MW69A	MRC-MW69B	MRC-MW70A	MRC-MW70B	MRC-MW71B	MRC-MW72B	MRC-MW73A	MRC-MW73B	MRC-MW74A	MRC-MW74B	MRC-MW74C	MRC-MW76A	MRC-MW76B	MRC-MW78B	MRC-MW79B	MRC-MW81A	MRC-MW81B	MRC-MW87A
			Date Sampled	4/5/2018	4/5/2018	4/5/2018	4/5/2018	4/6/2018	4/9/2018	4/9/2018	4/9/2018	4/5/2018	4/5/2018	4/4/2018	4/13/2018	4/12/2018	4/12/2018	4/13/2018	4/13/2018	4/13/2018	4/5/2018	4/5/2018	4/6/2018	4/9/2018	4/6/2018	4/6/2018	4/9/2018
Volatile Organic Compounds (VOCs) & Semi-Volatile Organic Compounds (SVOC																										
1,1,1-Trichloroethane	200	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	µg/L		-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	1.2	-	-	-
1,1-Dichloroethane	90	µg/L		-	-	-	-	4.2	0.68 J	-	-	-	5.4	4.5	-	-	-	-	-	-	-	2.1	-	-	-	-	-
1,1-Dichloroethylene	7	µg/L		4.0	30.4	-	-	3.3	-	-	-	-	-	61.9	-	-	-	6.9	-	-	-	1.3	-	26.3	-	7.3	-
1,2,3-Trichlorobenzene	NE	µg/L		-	-	1.1	-	-	1.1 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	µg/L		-	-	4.8	-	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	µg/L		-	-	0.48	-	-	0.48 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethylene (total)	5.5	µg/L		571	235 J	0.98	-	6.5	0.98 J	-	-	0.69 J	-	7.7	189	-	0.91 J	2.3	846 J	1.5 J	-	1.6 J	0.59 J	2940	-	304	-
1,2-Dichloropropane	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	1.8	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36 J	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	µg/L		-	-	0.66	-	-	0.66 J	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-
2-Butanone	700	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7 J	-	-	-	-
2-Phenylbutane	NE	µg/L		1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	550	µg/L		6.9 J	-	-	-	4.8 J	7.7 J	4.2 J	6.5 J	6.3 J	5.7 J	-	4.0 J	-	-	-	3.9 J	3.6 J	-	4.8 J	-	-	-	3.6 J	7.5 J
Benzene	5	µg/L		0.41 J	0.83 J	-	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-	-	4.0	-	0.50 J	-
Bromoform	80	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	100	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32 J	-	-	-	-
Carbon Tetrachloride	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	µg/L		-	-	0.45	-	-	0.45 J	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-	-
Chloroethane	3.6	µg/L		-	-	-	-	-	-	-	-	-	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	80	µg/L		-	-	1.9	-	-	1.9	-	-	-	-	-	-	-	-	22.7	-	-	-	-	-	0.43 J	-	-	-
Chloromethane	19	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis -1,2-Dichloroethene	70	µg/L		571	235	0.98	-	6.5	0.98 J	-	-	0.69 J	-	7.7	189	-	0.91 J	2.3	996	1.5	-	1.6	0.59 J	2910	-	301	-
Cyclohexane	NE	µg/L		0.80 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.38 J	-	-	-
Dichlorodifluoromethane (CFC-12)	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisopropyl Ether	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.0
Ethyl Tertiary-Butyl Ether	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49 J	-	-	-	-
Ethylbenzene	700	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freon TF (Chlorinated fluorocarbon)	NE	µg/L		-	-	-	-	-	-	-	-	-	-	0.76 J	1.2	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	66	µg/L		2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl acetate	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl *Tert* -Butyl Ether	20	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-
Methylcyclohexane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59 J	-
Methylene Chloride	5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	-
mp-xylene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.65	µg/L		-	-	1.3	-	-	1.3 J	0.37 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-Xylene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tert -Butyl Alcohol	NE	µg/L		-	-	38.2	-	-	38.2	-	-	-	-	-	-	-	-	-	-	-	-	-	13.7	4.6 J	-	-	4.7 J
Tetrachloroethene	5	µg/L		81.2	10.7	3.5	-	-	3.5	-	-	-	-	0.57 J	-	-	-	0.39 J	-	-	-	-	-	1.3	-	-	-
Toluene	1000	µg/L		-	0.54 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41 J	-	-	-
Trans -1,2-Dichloroethene	100	µg/L		2.2	2.9	-	-	-	-	-	-	-	-	-	9.8	-	-	10.4	-	-	-	-	-	27.8	-	1.4	-
Trichloroethene	5	µg/L		1920	6120	1.4	-	4.6	1.4	-	-	-	-	55.4	3390	-	24.9	59.1	34300	32.9	0.72 J	10.4	-	1670	-	46.8	-
Trichlorofluoromethane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	µg/L		80.1	5.3	-	-	1.1	-	-	-	-	-	-	-	-	-	1.4	-	-	0.56 J	-	-	75.1	-	110	-
Xylenes (Total)	10000	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane																											
1,4-Dioxane	0.46[b]	µg/L		-	0.20	-	-	1.9	-	16.8	0.20	-	25.6	13.5	-	-	-	-	-	-	-	-	-	5.9	0.30	0.36	
Polychlorinated biphenyls (PCBs)																											
Dichlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0020 B	-	0.0024 B	-	-	-	-	-	-	-
Heptachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.012 J	-	-	-	-	-	-	-
Hexachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013	0.0080 J	0.045	-	-	-	-	-	-	-
Monochlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.067	0.065	0.10	-	-	-	-	-	-	-
Tetrachlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.044	0.046	0.034	-	-	-	-	-	-	-
Trichlorobiphenyls, Total	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0065 B	-	-	-	-	-	-	-	-
Total Polychlorinated biphenyls (PCBs)	0.5	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	0.13	0.20	-	-	-	-	-	-	-
Metals																											
Antimony	0.006	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	0.0010 J	-	-	-	-	-	-	-	-	0.00088 J	-	-
Arsenic	0.01	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0018 J	-	-
Beryllium	0.004	mg/L		0.0012	-	-	-	-	-	-	-	-	-	-	0.00066 J	-	0.0020	-	-	-	-	-	-	-	-	-	-
Chromium (total)	0.1	mg/L		-	-	-	-	-	-	-	-	-	-	-	0.0020 B	0.0012 B	0.00091 B	0.0012 B	0.0013 B	-	-	-	-	-	0.0017 J	0.0017 J	-
Chromium (hexavalent)	0.1	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NE	mg/L		-	6.4	-	-	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NE	mg/L	0.071	0.042	-	-	-	-	-	-	-	-	-	0.0070	0.0027 J	0.015	0.0031 J	0.0092	-	-	-	-	-	-	0.0021 J	0.038	-
Copper	1.3	mg/L	0.0025 J	-	-	-	-	-	-	-	-	-	-	0.0022 J	0.0022 J	0.0060	-	-	-	-	-	-	-	-	0.0038 J	0.0026 J	-
Iron	0.3	mg/L		13.0	-	-	-	-	-	-	-	-	-	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.015	mg/L		-	-	-	-	-	-	-	-	-	-	0.00075 J	-	-	-	0.00087 J	-	-	-	-	-	-	-	-	-
Magnesium	NE	mg/L		5.3	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	0.05	mg/L		2.1	-	-	-	-	-	-	-	-	-	0.063	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	0.073	mg/L	0.059	0.065	-	-	-	-	-	-	-	-	-	0.011	-	0.020	-	0.012	-	-	-	-	-	-	0.0088	0.066	-
Potassium	NE	mg/L		2.2	-	-	-	-	-	-	-	-	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	0.05	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	NE	mg/L		9.9	-	-	-	-	-	-	-	-	-	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NE	mg/L		34.6	-	-	-	-	-	-	-	-	-	9.7	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	5	mg/L	0.0076	0.11	-	-	-	-	-	-	-	-	-	0.080	0.015 B	0.037	0.012 B	0.045	-	-	-	-	-	-	0.016 B	0.24	-
Monitored Natural Attenuation (MNA)																											
Alkalinity, Total (As CACO3)	NE	mg/L		-	45	-	-	-	-	-	-	-	-	34	8 B	-	-	-	-	-	-	-	-	-	-	-	-
Orthophosphate	NE	mg/L		-	0.0030 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Ammonia (As N)	NE	mg/L		-	0.158 B	-	-	-	-	-	-	-	-	-	0.686	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NE	mg/L		-	63.8	-	-	-	-	-	-	-	-	148	20.4	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	NE	mg/L		-	-	-	-	-	-	-	-	-	-	0.060 J	0.44	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	NE	mg/L		-	3.0	-	-	-	-	-	-	-	-	25.6	1.2 J	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	NE	mg/L		-	0.083 J	-	-	-	-	-	-	-	-	-	0.040 J	-	-	-	-	-	-	-	-	-	-	-	-
Ethane	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	NE	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	NE	µg/L		-	68.5	-	-	-	-	-	-	-	-	4.1	3.8	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	NE	mg/L		-	177	-	-	-	-	-	-	-	-	330	126	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	NE	mg/L		-	0.47 J	-	-	-	-	-	-	-	-	2.7	0.62	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- = Not Sampled or Not Detected
µg/L = Micrograms per liter
mg/L = Milligrams per liter
[a] = Maryland Department of the Environment (MDE) Cleanup Standards for Soil and Groundwater;
http://www.phaseonline.com/assets/Site_18/files/MDE%20June%202008%20VCP%20Cleanup%20Standards.pdf
[b] = United States Environmental Protection Agency Tapwater Regional Screening Level;
http://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
D = Duplicate
J = Indicates an estimated value
U = Indicates that a compound was analyzed for but not detected
B = Not detected substantially above the level reported in the laboratory or field blanks
NE = Not Established
Exceeds MDE Groundwater Standard

Table 5
2018 Groundwater Sampling Event Detections - All Analyses
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland
Page 6 of 6

Analyte	MDE GW Standard[a]	Units	MRC-MW87B	MRC-MW90B	MRC-MW92C	MRC-MW93A	MRC-MW95B	MRC-MW96A	MRC-MW96B	MRC-MW96B-DUP	MRC-MW98A	MRC-MW98B	MRC-MW98B-DUP	MRC-SEMW-7I	MRC-SEMW-8I	MRC-SEMW-8S	MRC-SEMW-9I	MRC-SEMW-9S	MRC-SWMW-1I	MRC-SWMW-2I	MRC-SWMW-3I	MRC-SWMW-3I-D	MRC-SWMW-4I	MRC-SWMW-4S	MRC-SWMW-5I	MRC-SWMW-5I-D
Sample ID			MRC-MW87B	MRC-MW90B	MRC-MW92C	MRC-MW93A	MRC-MW95B	MRC-MW96A	MRC-MW96B	MRC-MW96B-DUP	MRC-MW98A	MRC-MW98B	MRC-MW98B-DUP	MRC-SEMW-7I	MRC-SEMW-8I	MRC-SEMW-8S	MRC-SEMW-9I	MRC-SEMW-9S	MRC-SWMW-1I	MRC-SWMW-2I	MRC-SWMW-3I	MRC-SWMW-3I-D	MRC-SWMW-4I	MRC-SWMW-4S	MRC-SWMW-5I	MRC-SWMW-5I-D
Date Sampled			4/9/2018	4/6/2018	4/6/2018	4/12/2018	4/9/2018	4/12/2018	4/12/2018	4/11/2018	4/12/2018	4/12/2018	4/12/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/13/2018	4/12/2018	4/12/2018	4/12/2018	4/12/2018	4/5/2018	4/5/2018	4/11/2018	4/11/2018
Volatile Organic Compounds (VOCs) & Semi-Volatile Organic Compounds (SVOC																										
1,1,1-Trichloroethane	200	µg/L	-	-	-	-	-	-	-	-	-	13.8	13.5	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	5	µg/L	-	-	-	-	-	-	-	-	-	1.1	1.3	0.35 J	-	0.67 J	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	90	µg/L	-	-	-	-	-	-	-	-	1.4	85.2	84.1	-	-	-	-	-	3.1	4.9	1.1	1.1	9.8	2.1	3.0	3.1
1,1-Dichloroethylene	7	µg/L	-	8.6	-	-	-	43.6	-	-	0.65 J	195	201	1.2	3.7	2.2	-	2.2	-	-	0.39 J	0.35 J	28.3	1.9	-	-
1,2,3-Trichlorobenzene	NE	µg/L	-	1.3 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	70	µg/L	-	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	NE	µg/L	-	-	-	-	-	-	15.6	15.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	5	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.35 J	0.54 J	-	-	1.5	-	0.84 J	0.85 J
1,2-Dichloroethylene (total)	5.5	µg/L	3.2	2.2	3.5	1.7 J	-	22500	14.3	13.2	0.54 J	23.7 J	36.3 J	126	1830	187	12.1	190	-	-	1.0 J	1.6 J	94.5	6.1	1.2 J	1.2 J
1,2-Dichloropropane	5	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	1.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25 J	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	75	µg/L	-	0.35 J	-	-	-	-	-	-	-	-	-	0.39 J	-	0.36 J	-	0.56 J	-	-	-	-	-	-	-	-
2-Butanone	700	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Phenylbutane	NE	µg/L	-	-	-	-	-	-	2.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	550	µg/L	7.2 J	5.3 J	4.2 J	3.9 J	6.4 J	5.5 J	-	-	-	5.1 J	-	-	4.5 J	-	-	3.2 J	4.3 J	-	7.2 J	4.2 J	-	5.9 J	-	-
Benzene	5	µg/L	-	-	-	-	-	0.63 J	527	580	-	1.9	1.9	-	-	-	-	-	3.0	10.6	-	-	9.8	0.35 J	4.0	4.1
Bromoform	80	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	100	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	5	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	100	µg/L	-	-	-	-	-	-	-	-	-	-	-	2.9	-	2.9	-	5.9	-	-	-	-	-	-	-	-
Chloroethane	3.6	µg/L	-	-	-	-	-	-	-	-	-	22.0	20.7	-	-	-	-	-	1.4	5.6	-	-	6.6	-	4.1	4.4
Chloroform	80	µg/L	-	0.46 J	-	-	-	-	0.37 J	-	-	0.45 J	0.41 J	5.6	-	15.2	0.66 J	16.7	-	-	-	-	-	-	-	-
Chloromethane	19	µg/L	-	-	-	-	-	-	1.3	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis -1,2-Dichloroethene	70	µg/L	3.2	2.2	3.5	1.7	0.41 J	22500	12.6	11.6	0.54 J	23.7 J	36.3 J	124	1830	185	11.5	187	-	0.39 J	1.0	1.2	94.5	5.4	0.71 J	0.69 J
Cyclohexane	NE	µg/L	-	-	-	-	-	-	8.8	8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51 J	-	-	-	-	-	-	-	-	-	-
Diisopropyl Ether	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Tertiary-Butyl Ether	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700	µg/L	-	-	-	-	-	-	6.1	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freon TF (Chlorinated fluorocarbon)	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	132	0.86 J	-	-	-	-	-	0.40 J	-	-	-
Isopropylbenzene	66	µg/L	-	-	-	-	-	-	11.2	11.2	-	-	-	-	-	-	-	-	-	0.26 J	-	-	-	-	-	-
Methyl acetate	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl *Tert* -Butyl Ether	20	µg/L	-	-	-	-	-	-	29.7	27.8	-	-	-	2.0	4.9	-	7.4	1.2	-	-	-	-	-	-	-	-
Methylcyclohexane	NE	µg/L	0.65 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	5	µg/L	-	-	-	-	-	-	-	-	-	4.2	4.8	-	-	5.3	-	1.5	-	-	-	-	-	-	-	-
mp-xylene	NE	µg/L	-	-	-	-	-	-	35.3	35.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.65	µg/L	-	-	-	-	-	-	23.4	27.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Butylbenzene	NE	µg/L	-	-	-	-	-	-	-	1.9 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	NE	µg/L	-	-	-	-	-	-	4.2	4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-Xylene	NE	µg/L	-	-	-	-	-	-	78.6	76.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tert -Butyl Alcohol	NE	µg/L	-	-	-	-	-	2.9 J	3.1 J	3.2 J	-	-	-	-	-	-	-	-	-	-	-	5.6 J	4.0 J	-	-	-
Tetrachloroethene	5	µg/L	-	-	-	-	-	-	-	-	-	5.4	5.2	0.63 J	-	-	-	0.43 J	-	-	-	-	-	-	-	-
Toluene	1000	µg/L	-	-	-	-	-	4.0	1.7	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans -1,2-Dichloroethene	100	µg/L	-	-	-	-	-	82.5	1.7	1.6	-	-	-	1.5	2.5	1.1	0.64 J	2.5	-	-	-	0.36 J	-	0.75 J	0.44 J	0.55 J
Trichloroethene	5	µg/L	55.9	50.7	3.4	1.9	1.7	2150	13.5	13.1	3.5	414	424	29900	1080	24500	236	32800	-	0.91 J	1.1	1.0 J	6.5	4.2	1.0	1.1
Trichlorofluoromethane	NE	µg/L	-	0.63 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	2	µg/L	-	-	-	-	-	18.2	0.92 J	0.88 J	-	0.94 J	0.86 J	0.72 J	1.0	1.4	-	1.3	0.68 J	0.95 J	0.37 J	0.33 J	13.2	1.2	-	-
Xylenes (Total)	10000	µg/L	-	-	-	-	-	-	114	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dioxane																										
1,4-Dioxane	0.46[b]	µg/L	1.1	1.4				4.1	0.50	0.43	0.98	118	96.0	0.15	0.14	0.28	0.17	0.11	-	-	-	-	-	-	-	-
Polychlorinated biphenyls (PCBs)																										
Dichlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	0.0038 B	0.0045 B	-	-	0.0025 J	-	-	-	-	-	-	-	-
Heptachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monochlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobiphenyls, Total	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	0.013 B	-	-	-	-	-	-	-	-	-	-	-	-
Total Polychlorinated biphenyls (PCBs)	0.5	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																										
Antimony	0.006	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	0.01	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	0.004	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (total)	0.1	mg/L	-	-	0.0028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (hexavalent)	0.1	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NE	mg/L	-	-	0.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	1.3	mg/L	-	-	0.0021 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	0.3	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.015	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	0.05	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	0.073	mg/L	-	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	0.05	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	5	mg/L	-	-	0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitored Natural Attenuation (MNA)																										
Alkalinity, Total (As CACO3)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orthophosphate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Ammonia (As N)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethane	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	NE	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	NE	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- = Not Sampled or Not Detected
µg/L = Micrograms per liter
mg/L = Milligrams per liter
[a] = Maryland Department of the Environment (MDE) Cleanup Standards for Soil and Groundwater;
http://www.phaseonline.com/assets/Site_18/files/MDE%20June%202008%20VCP%20Cleanup%20Standards.pdf
[b] = United States Environmental Protection Agency Tapwater Regional Screening Level;
http://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables
D = Duplicate
J = Indicates an estimated value
U = Indicates that a compound was analyzed for but not detected
B = Not detected substantially above the level reported in the laboratory or field blanks
NE = Not Established
Exceeds MDE Groundwater Standard

APPENDICES

Appendix A—June 2018 Monitoring Well Repair Report

Appendix B—Daily Field Reports and Low-Flow Sampling Forms

Appendix C—Investigative Derived Waste Documentation

Appendix D—Data Validation Report

Appendix E—2018 Groundwater Analytical Results

Appendix F—Laboratory Analytical Reports

Appendix G—Chlorinated Ethene Time-Series Trend Charts

APPENDIX A
June 2018 Monitoring Well Repair Report

JUNE 2018 MONITORING WELL REPAIR REPORT
LOCKHEED MARTIN CORPORATION
MIDDLE RIVER COMPLEX
2323 EASTERN BOULEVARD
MIDDLE RIVER, MARYLAND

Prepared for:
Lockheed Martin Corporation

Prepared by:
AECOM Technical Services, Inc.

September 2018

Approved by:
Lockheed Martin, Inc.

Revision: 1

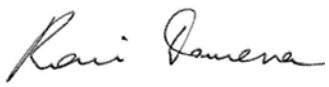

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TABLE OF CONTENTS

Section **Page**

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

List of Figures ..... **ii**

List of Tables ..... **ii**

Appendices ..... **ii**

Acronyms and Abbreviations ..... **iii**

Executive Summary **1**

Section 1 Introduction **1-1**

Section 2 Site Background **2-3**

2.1 Middle River Complex Background 2-3

2.1.1 Middle River Complex History 2-3

2.2 Monitoring Well Network & Maintenance 2-4

2.2.1 Monitoring Well Network 2-4

2.2.2 Monitoring Well Repair Program History 2-4

Section 3 Well Repair Field Activities **3-1**

3.1 Utility Clearance and Permitting 3-1

3.2 Location of Missing Monitoring Wells 3-1

3.3 Well Hardware Replacement 3-2

3.4 Well Pad and Manway Replacement 3-2

3.5 Well Redevelopment 3-3

3.6 Documentation 3-4

3.7 Equipment Decontamination 3-4

3.8 Waste Management 3-5

3.9 Site Restoration 3-5

Section 4 Summary **4-1**

Section 5 References **5-1**

LIST OF FIGURES

Figure 1 Middle River Complex Location Map
Figure 2 Site Layout and Tax Blocks
Figure 3 2018 Monitoring Well Network
Figure 4 Monitoring Well Maintenance and Repairs

LIST OF TABLES

Table 1 Middle River Complex Monitoring Well Repair History
Table 2 Middle River Complex Monitoring Well Repairs – June 2018
Table 3 Location of Missing Monitoring Wells

APPENDICES

Appendix A—Monitoring Well Repair Photo Log
Appendix B—Daily Field Reports

ACRONYMS AND ABBREVIATIONS

AECOM	AECOM Technical Services, Inc.
DTB	depth to bottom
LMC	Lockheed Martin Corporation
LMCPI	Lockheed Martin Corporation Properties, Inc.
MRC	Middle River Complex
PVC	polyvinyl chloride
RTO	Remediation Technical Operations
Tetra Tech	Tetra Tech, Inc.
USDOT	United States Department of Transportation
WLM	water level meter

EXECUTIVE SUMMARY

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared this Monitoring Well Repair Report for the June 2018 monitoring well repair and maintenance event at the Lockheed Martin Corporation Middle River Complex in Middle River, Maryland. The objectives for the monitoring well repair program are to identify, document, and repair monitoring wells in need of bolt/washer replacements, new well pads and manways, and/or well redevelopment.

The purpose of conducting and tracking monitoring well conditions and implementing repairs is to

- maintain monitoring well integrity over time;
- prevent surface water runoff and potential contamination carried by the runoff from entering damaged wells;
- maintain groundwater sample integrity by minimizing risk of sample fouling caused by monitoring well degradation; and
- identify and remove sediment accumulation via redevelopment to ensure representative groundwater conditions for chemical analyses.

Observations of monitoring well conditions were recorded on April 2 through 6, 2018, during the annual synoptic groundwater level measurement event. Seven wells that could not be located during this event were referred to Tetra Tech, Inc. for location and necessary modification. Tetra Tech, Inc. assisted in finding seven monitoring wells, repairing one well and abandoning another, both damaged during Tetra Tech's sediment remediation program. Monitoring well repairs were conducted on June 25 through 29, 2018. On-site activities included

- replacement of hardware (e.g., bolts, washers, gaskets, locks, etc.) in 80 wells;
- replacement of manways and concrete pads in eight wells; and

- redevelopment of nine monitoring wells.

All repair and maintenance work was conducted in accordance with the 2018 Monitoring Well Repair Work Plan (AECOM, 2018) and the Remediation Contractor's ESH Handbook (Lockheed Martin Corporation, 2014).

SECTION 1
INTRODUCTION

On behalf of Lockheed Martin Corporation, AECOM Technical Services, Inc., has prepared the following Monitoring Well Repair Report for June 2018 monitoring well repair activities at the Middle River Complex in Middle River, Maryland, which is part of the Chesapeake Industrial Park, located at 2323 Eastern Boulevard in Middle River, Maryland, approximately 11.5 miles northeast of downtown Baltimore. Ongoing site investigations and environmental sampling activities at Middle River Complex have identified soil and groundwater contamination associated with historical plant activities, including detections above formal regulatory limits, or site-specific limits where regulatory limits are absent, for volatile organic compounds, polychlorinated biphenyls, metals, and 1,4-dioxane. Numerous monitoring wells have been installed on- and off-site to characterize groundwater contamination at the Middle River Complex (**Figure 1**). Over time, the conditions of some of the wells have deteriorated and required maintenance. The purpose of conducting and tracking monitoring well conditions and implementing repairs is to

- maintain monitoring well integrity over time;
- prevent surface water runoff and potential contamination carried by the runoff from entering damaged wells;
- maintain groundwater sample integrity by minimizing risk of sample fouling caused by monitoring well degradation; and
- identify and remove sediment accumulation via redevelopment to ensure representative groundwater conditions for chemical analyses.

This Monitoring Well Repair Report details observations of the conditions of on-site monitoring wells and subsequent well repair and maintenance activities. Repairs included, but were not limited to, replacing or repairing surface concrete pads, replacing missing or damaged hardware (e.g., compression plugs, bolts and washers, gaskets, well locks), and replacing manways.

This report is organized as follows:

Section 1—Introduction: Presents objectives for the monitoring well repair program.

Section 2—Site Background: Briefly describes site history and well maintenance history.

Section 3—Well Repair Field Activities: Presents the technical approaches to well repair and maintenance.

Section 4—Summary: Summarizes the result of site activities.

Section 5—References: Cites references used to compile this report.

SECTION 2
SITE BACKGROUND

2.1 MIDDLE RIVER COMPLEX BACKGROUND

The Middle River Complex (MRC) is part of the Chesapeake Industrial Park at 2323 Eastern Boulevard in Middle River, Maryland, approximately 11.5 miles northeast of downtown Baltimore. It comprises approximately 161 acres, including 12 main buildings, an active industrial area and yard, perimeter parking lots, an athletic field, a vacant concrete lot, a trailer and parts storage lot, and numerous grassy spaces along its perimeter. It is bounded by Eastern Boulevard (Route 150) to the north, Martin State Airport to the east, Dark Head Cove to the south, and Cow Pen Creek to the west. **Figure 2** is a map of the MRC site layout.

Lockheed Martin Corporate Properties, Inc., (LMCPI) owns the MRC. LMCPI's primary activities at the MRC include facility and building management and maintenance. The main tenant at the site, MRA Systems, Inc., a subsidiary of General Electric Company, designs, manufactures, fabricates, tests, overhauls, repairs, and maintains aeronautical structures, parts, and components for military and commercial applications. Lockheed Martin Rotary and Mission Systems, a division of Lockheed Martin Corporation (LMC), conducts engineering activities and fabricates, assembles, tests, and otherwise supports vertical-launch systems. Applied NanoStructured Solutions, LLC, engaging in research and design of nanotechnology applications, also occupies a portion of the MRC.

2.1.1 Middle River Complex History

In 1929, the Glenn L. Martin Company, a predecessor entity of LMC, acquired large parcels of undeveloped land in Middle River, Maryland, to manufacture aircraft for United States government and commercial clients. In the early 1960s, Glenn L. Martin Company merged with American-Marietta Company to form Martin Marietta Corporation. Around 1975, the adjacent eastern airport area (currently Martin State Airport), approximately 750 acres, was transferred to the State of Maryland. In the mid-1990s, Martin Marietta Corporation merged with Lockheed Corporation to form LMC. Shortly after the merger, General Electric Company entities acquired

most of LMC's aeronautical business in Middle River and a General Electric subsidiary, MRA Systems, Inc., began operations.

2.2 MONITORING WELL NETWORK & MAINTENANCE

2.2.1 Monitoring Well Network

Development of a permanent groundwater monitoring well network began at the MRC in 2005, after the 2003 Phase I Environmental Site Assessment and 2004 Historical Records Review (Tetra Tech, Inc. [Tetra Tech], 2009). The well network clusters around historically identified contaminant plumes that include volatile organic compounds, polychlorinated biphenyls, and 1,4-dioxane. Additional wells were installed in the years since 2005 based on subsequent soil and groundwater investigations to further delineate contaminant distributions within shallow (surficial), intermediate, and deep groundwater aquifers at the MRC. The 2018 monitoring well network is shown in **Figure 3**.

2.2.2 Monitoring Well Repair Program History

The annual well inspection and repair program began in 2011 (Tetra Tech, 2011). Well repair activities have included replacement of well hardware (bolts, washers, gaskets, well locks, etc.), well manways and covers, and concrete pads, as well as modifications to polyvinyl chloride (PVC) pipe well casing, well re-installations, and new survey of re-installed or modified monitoring wells (Tetra Tech, 2013; 2016). **Table 1** summarizes the history of monitoring well repairs since 2011.

In 2011, 30 wells were repaired, including loose grout and sediment removal and patch grouting at 20 wells (Tetra Tech, 2011). Well pads and manways were replaced at nine wells, and the PVC casing was extended at four wells (MRC-MW02A, MRC-MW60B, MRC-MW68A, and MRC-MW79B). Sediment accumulation within the PVC casing at MRC-MW56A was also removed. Additionally, MRC-MW45A was scheduled for redevelopment, but recommended for abandonment because of insufficient recharge into the well casing.

In 2012, 13 wells needed repair, including well pad and manway replacement at seven wells (Tetra Tech, 2012). Concrete filler was used to fill in minor cracks at five wells, and new hardware (bolts) was installed at one well (MRC-MW52A).

In 2013, 36 wells were repaired, including replacing bolts in 29 wells, well covers and concrete pads at six wells, and modifying the PVC casing at wells MRC-MW101A/B (Tetra Tech, 2013). The PVC casing modification involved cutting the PVC sufficiently below grade so that the well cover could fit securely on the flush-mounted manway. These wells were resurveyed by a professional surveyor after modification completion. In 2014, 16 wells were repaired, including replacing bolts at nine wells and replacing well covers and concrete pads at seven wells (Tetra Tech, 2014).

In 2014, monitoring well repair activities were completed at 18 wells, including replacing missing or damaged hardware at nine wells and replacing manways and well pads at an additional nine wells (Tetra Tech, 2014).

In 2015, repair activities were completed at 13 wells, including replacing missing or damaged hardware at four wells and replacing manways and well pads at an additional nine well locations (Tetra Tech, 2015).

In 2016, 12 wells were repaired, including replacing concrete pads at nine wells and replacing well covers at three wells (Tetra Tech, 2016). Additionally, well MRC-MW79B was replaced because of damage from on-site operational activities at the MRC. The well was resurveyed by a professional surveyor after well installation was completed.

In 2017, six well pads and manways were replaced (Tetra Tech, 2017).

SECTION 3
WELL REPAIR FIELD ACTIVITIES

The overall objective of the monitoring well repair and maintenance program at the Middle River Complex (MRC) is to support the long-term groundwater monitoring program by maintaining the operational condition of monitoring wells within the MRC's monitoring well complex. All on-site monitoring wells were inspected on April 2 through April 6, 2018, during the annual synoptic groundwater level measurement event conducted by AECOM Technical Services, Inc. (AECOM). Wells that could not be located by AECOM were identified and shared with Tetra Tech, Inc., (Tetra Tech) to be located before the start of monitoring well repair activities.

The monitoring well repair event was completed on June 25 through 29, 2018. All repair and maintenance work was conducted in accordance with the 2018 Monitoring Well Repair Work Plan (AECOM, 2018). Since monitoring well nomenclature for all wells includes the "MRC-" prefix, all references to specific wells in Section 3 will be abbreviated to exclude the prefix (e.g., "MRC-MW15A" to "MW15A" and "MRC-SEMW-3I" to "SEMW-3I"). **Table 2** summarizes the monitoring well repair activities that occurred in 2018. **Figure 4** shows the locations of wells repaired during the June 2018 Monitoring Well Repair event.

Before start of work, AECOM and Tetra Tech, coordinated the location of seven monitoring wells that were missing during the April 2018 groundwater monitoring event. AECOM located one monitoring well (MW11A) and Tetra Tech located the remaining six wells (EW-1, EW-2, MW107B/C, MW09A, MW23A, and MW16A).

3.1 UTILITY CLEARANCE AND PERMITTING

Repair work was conducted within existing wells or within existing well pad footprints and depths; therefore, no further utility clearance or permitting was required.

3.2 LOCATION OF MISSING MONITORING WELLS

Before the start of monitoring well repair activities, Tetra Tech assisted in locating wells not found during the April 2018 groundwater monitoring event. The monitoring wells and their

current status are shown in **Table 3**. Tetra Tech located and/or repaired all seven of the missing wells (EW-1, EW-2, MW16A, MW107B/C, MW09A, MW11A, and MW23A) and AECOM sampled five of those monitoring wells (EW-1, EW-2, MW107B/C, MW16A, and MW11A) in June 2018. The results of June 2018 sampling activities will be detailed in an addendum to the April 2018 Groundwater Monitoring Report.

3.3 WELL HARDWARE REPLACEMENT

Monitoring well hardware refers to the replaceable parts of the well and includes bolts, washers, O-rings, compression plugs, well locks, and manway covers. Degraded or stripped bolts and missing or broken washers were replaced with 3/8-inch-16 thread size, 1-inch long extreme-strength stainless steel flanged hex head screws and comparably sized washers. There were several monitoring wells where bolts were of a different size than stated above. In these instances, AECOM maintained the same size bolt and retapped smaller female threads to fit the bolt housing. In order ensure a watertight seal at the bolts, comparably sized rubber washer gaskets were also replaced where needed. Compression plugs were selected to fit 2-inch- and 4-inch-diameter well casings and American Lock #A31KA Key #82141 keyed locks were replaced where well locks were missing or broken. All locks are keyed to one master key for all monitoring well locations at the MRC.

In all, bolts, steel washers, and/or rubber washers were replaced at 80 monitoring wells. Manway O-rings were replaced at eight wells, well locks were replaced at four wells, and compression plugs were replaced at two wells. No manway covers were replaced without full manway and well pad replacement.

3.4 WELL PAD AND MANWAY REPLACEMENT

Monitoring well pads refer to the concrete base surrounding the embedded manway that prevents surface water from infiltrating the inner well casing. Monitoring well pads are surface completions. The manway is the protective outer cover that creates a water-tight seal around the inner polyvinyl chloride (PVC) well casing. Over time, some well pads have deteriorated and some manway covers and manways have become bent and/or cracked. Replacement well pads were constructed with high-strength Sakrete concrete with two-square-foot 2-inch x 4-inch wooden frames to a uniform minimum depth of 6 inches. Monitoring well pads were completed with a broomed finish and edged. Any cracks in the existing monitoring well pads that warrant

repair were filled with Sikaflex to maintain the structural integrity of the pad. These repairs are temporary, so these well pads will most likely need full replacement in the future. The replacement manways were 8 inches in diameter with 12-inch steel skirts.

In June 2018, eight well pads and manways were replaced and an additional six pads were caulked with Sikaflex sealant. Some wells initially identified for manway or pad replacement were removed from the repair list upon closer investigation. At MW15A, MW26A, and SWMW-1I, lids were observed to be intact. At SEMW-3I, the manway was undamaged and the flush mount cover was discovered near the well and secured to the manway with new bolts.

3.5 WELL REDEVELOPMENT

A list of monitoring wells was initially identified for redevelopment during the April 2018 annual groundwater monitoring event. These wells were verified for redevelopment during additional groundwater sampling activities in June 2018 by checking the depth-to-bottom (DTB) measurements with a water level meter (WLM).

Monitoring well redevelopment was completed on June 27 through 29, 2018, using a 2-inch or 4-inch custom-built surge block with PVC and a cut-to-fit plunger. Alternating methods of manual surging with the surge block along the entire length of the screen and surging with a submersible Mega Purger Whale Pump were used to remove sediment accumulation and break down silt bridges occurring in each well. The DTB was confirmed with a WLM immediately after purge completion and the following day. Redevelopment was considered to be complete once the measured depth to bottom was within half a foot of the recorded total well depth, the monitoring well ran dry more than four times, or purging had reached 6 hours.

In total, nine monitoring wells were redeveloped because of thick accumulations of soft sediment in excess of 1.5 feet thick when compared to the wells' total depth of record. Approximately 400 gallons of sediment-laden water was purged from all nine wells. Five of the wells (MW12A, MW70A, MW70B, MW73A, and MW77A) were purged dry at least once during redevelopment. Initial purge water in all wells was very turbid, and in three wells (MW70A, MW70B, MW12A) the WLM and Whale Pump were thickly coated in fine black sediment when removed from the well. Sediment was removed from all monitoring wells, although several wells still retained high turbidity (more than 100 nephelometric turbidity units) after cessation of development. The end goal of development was total depth restoration to each of the monitoring wells.

Well development was begun at NMW-1I; however, AECOM personnel recognized that the identified well was not typical of a monitoring well because of the presence of dedicated tubing plumbed into the side of the well casing and powdery white material caked on the inside walls of the well casing. Approximately 25 gallons of sediment-laden water were purged before the field team lead instructed to cease redevelopment at this location pending further discussion of site observations. It was later determined with the Remediation Technical Operations (RTO) that the well location may have been mislabeled, and is in fact an injection well (likely IW-2). AECOM and the RTO will confirm with Tetra Tech the appropriate location and labeling of NMW-1I for future site activities.

3.6 DOCUMENTATION

All site activities, observations, and field data were recorded on electronic field log sheets via two of Esri's mobile applications, Survey123 and Collector for ArcGIS®, and submitted in daily field reports to the RTO and LMC. Site personnel photographed site activities and final work results at locations of major repairs to demonstrate completion to specifications. **Appendix A** presents a photo log and summary of repair activities at each of the eight well pad replacement locations. **Appendix B** presents daily field notes and associated photos of site activities during the June 2018 Monitoring Well Repair event.

3.7 EQUIPMENT DECONTAMINATION

Reusable equipment (e.g., water level meter, submersible pump, surge block, and rods) were decontaminated before and after each use. Between each sampling location, decontamination involved the following:

- Liquinox® and distilled water wash
- Distilled water rinse
- Air drying

All decontamination fluids were collected for disposal in United States Department of Transportation (USDOT)-approved 55-gallon steel drums. Disposable equipment used for well development (e.g., poly tubing, poly sheeting) was disposed of as general refuse.

3.8 WASTE MANAGEMENT

Waste generated by monitoring well repair and redevelopment activities consisted of purge water, rinse water, and construction debris (well development debris, concrete, well pad fill, and asphalt). Personal protective equipment, poly tubing, and poly sheeting were placed in industrial trash bags and disposed of as general refuse in an off-site trash receptacle. The purge and rinse water were containerized in USDOT-approved 55-gallon steel drums and temporarily staged on wooden pallets within a secondarily containerized central staging area established in Block E on the MRC for chemical/physical characterization and proper disposal at the end of well repair and redevelopment activities. Purge water collected from wells at the hazardous F001 plume originating at former underground storage tank 2 (e.g., EW-1, EW-2) were accumulated in a separate drum and stored in the hazardous waste containment area. Thirteen drums of material were accumulated during June 2018 field activities.

Drums were labeled with relevant site information, including beginning accumulation date, description of contents, origin and generator name, and consultant contact information. These drums will be picked up at a later date by Clean Harbors, Inc., for proper disposal. Waste characterization sampling and analysis was completed on July 13, 2018. Once the analytical data is received from the laboratory, AECOM will proceed with obtaining profiles and then manifests from Clean Harbors, Inc., in Baltimore, Maryland. These documents will be approved by LMC before removal of drums off-site and completion of disposal.

3.9 SITE RESTORATION

On completion of monitoring well repair and well development activities, site restoration was completed. No damage was done to surrounding asphalt or grass areas at the site. The RTO and LMC were informed of completion of repair activities.

SECTION 4
SUMMARY

This Monitoring Well Repair Report summarizes and describes on-site activities to repair damaged monitoring well hardware, manways, and concrete pads in June 2018 at the Middle River Complex in Middle River, Maryland. AECOM Technical Services, Inc., and Tetra Tech, Inc., coordinated the location of six monitoring wells that were missing during the April 2018 Groundwater Monitoring event. Tetra Tech located all seven of the missing wells (EW-1, EW-2, MW16A, MW107B/C, MW09A, MW11A, and MW23A) and AECOM sampled five of those monitoring wells (EW-1, EW-2, MW107B/C, MW16A, and MW11A) in June 2018. The results of June 2018 sampling activities will be detailed in an addendum to the April 2018 Groundwater Monitoring Report.

Well repair and redevelopment activities completed by AECOM Technical Services, Inc., during the 2018 Monitoring Well Repair event included the following:

- Replacing bolts, steel washers, and rubber washer gaskets (80 wells)
- Replacing or repairing manways and concrete well pads (eight wells)
- Redevelopment of monitoring wells (nine wells)
- Replacing manway gaskets (eight wells)
- Replacing well locks (six wells)
- Replacing well compression plugs (two wells)

In addition to monitoring well repair activities, silt bridging and thick fine sediment accumulation was observed during groundwater sampling activities during the April 2018 groundwater sampling event. Nine monitoring wells were identified and redeveloped to remove sediment accumulation in well screen intervals and at the bottom of well casings. Redevelopment activities generated approximately 400 gallons of sediment-laden purge water. Redevelopment

was considered complete once the measured depth to bottom of well casing was within half a foot of the recorded total well depth, the monitoring well ran dry more than four times, or purging had reached 6 hours.

It is recommended that several of these monitoring wells (MRC-MW73A, MRC-MW54A, MRC-91A, MRC-MW87A, and MRC-MW86A) be reconditioned and redeveloped in 2019, since the purge water was still turbid after meeting the redevelopment criteria and depth of record was not reached. In addition to traditional surge block and pumping methods, alternative reconditioning methods, such as adding water to monitoring wells that repeatedly ran dry or using air lift techniques for redevelopment of monitoring wells that are heavily sediment laden, are recommended for repair activities in 2019.

AECOM Technical Services, Inc., personnel will continue to coordinate with remedial technical operations personnel (CDM Smith) and Lockheed Martin Corporation to complete annual inspections of monitoring well conditions at the Middle River Complex. Additional attention will be paid to the conditions of wells in high traffic areas that may pose significant health and safety risks to site personnel.

SECTION 5
REFERENCES

AECOM Technical Services, Inc. (AECOM), 2018. *2018 Monitoring Well Repair Work Plan, Lockheed Martin Corporation Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. Prepared by AECOM, Germantown, Maryland, for Lockheed Martin Corporation, Bethesda, Maryland. June.

Lockheed Martin Corporation (LMC), 2014. *Remediation Contractor's ESH Handbook.* Prepared by LMC, Bethesda, Maryland. May.

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_____, 2011. *2011 Monitoring Well Repair Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. Prepared by Tetra Tech, Germantown, Maryland, for LMC, Bethesda, Maryland. October.

_____, 2012. *2012 Monitoring Well Repair Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. Prepared by Tetra Tech, Germantown, Maryland, for LMC, Bethesda, Maryland. July.

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_____, 2017. *Groundwater Monitoring Report March-April 2017, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. Prepared by Tetra Tech, Germantown, Maryland, for LMC, Bethesda, Maryland. October.

FIGURES



Aerial photograph provided by ESRI's ArcGIS Online World Imagery map service (© 2013 ESRI and its data suppliers).

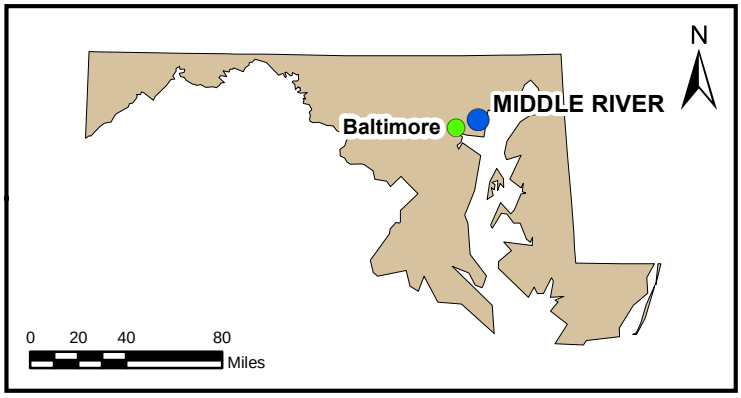

FIGURE 1

MIDDLE RIVER COMPLEX LOCATION MAP

Lockheed Martin Corporation
Middle River Complex, Middle River, Maryland

DATE MODIFIED:	CREATED BY:	SOURCE:
10/29/15	JEE	Tetra Tech 2016-2017 GW & SW Monitoring WP

AECOM

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_sitemap_may2015.mxd)
10/29/15 -- JEE

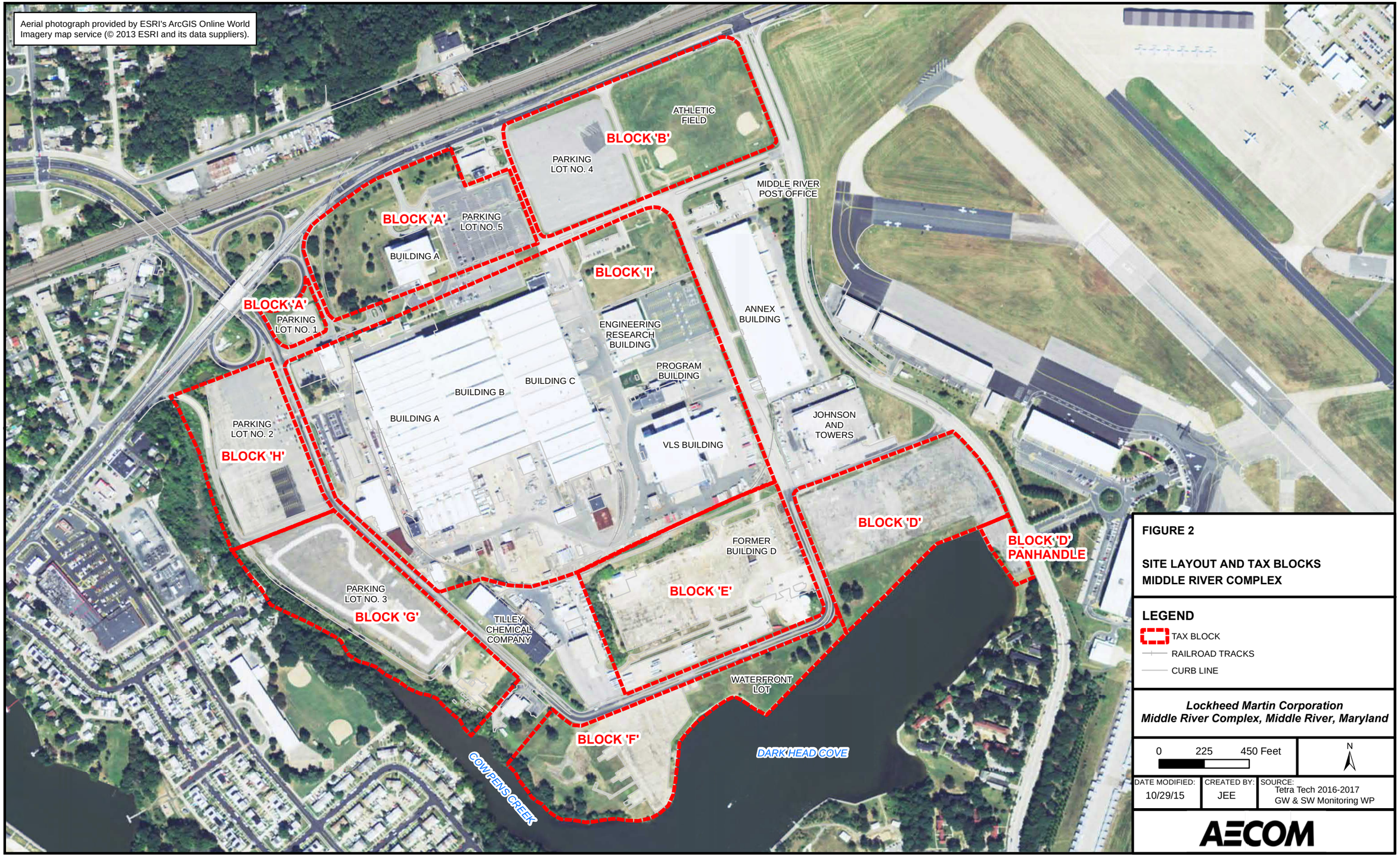

FIGURE 2

SITE LAYOUT AND TAX BLOCKS
MIDDLE RIVER COMPLEX

LEGEND

- TAX BLOCK
- RAILROAD TRACKS
- CURB LINE

Lockheed Martin Corporation
Middle River Complex, Middle River, Maryland

0 225 450 Feet

N

DATE MODIFIED:	CREATED BY:	SOURCE:
10/29/15	JEE	Tetra Tech 2016-2017 GW & SW Monitoring WP

AECOM

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_tax_blocks_jul2014_aerial.mxd)
10/29/15 -- JEE

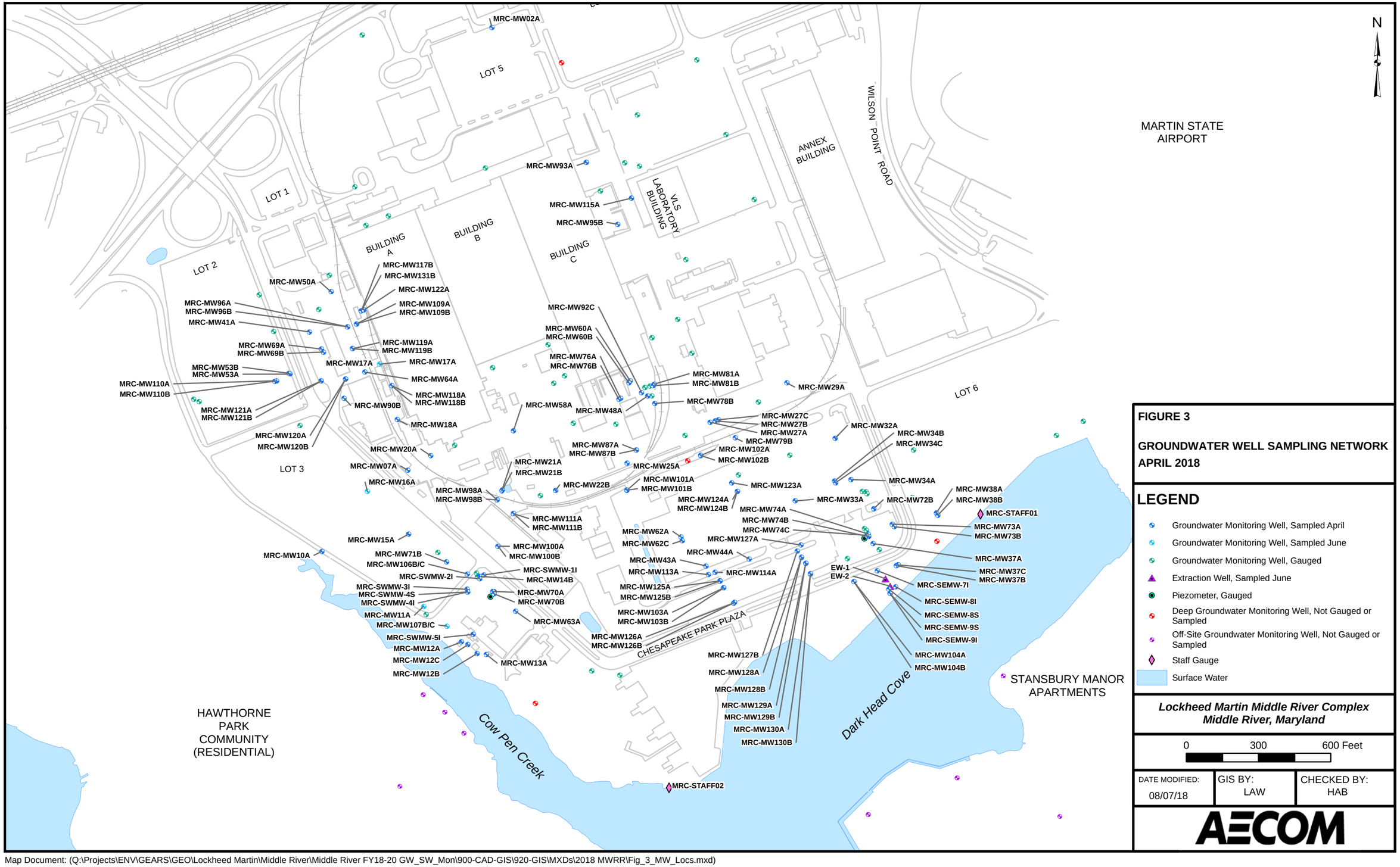

FIGURE 3

GROUNDWATER WELL SAMPLING NETWORK
APRIL 2018

LEGEND

- Groundwater Monitoring Well, Sampled April
- Groundwater Monitoring Well, Sampled June
- Groundwater Monitoring Well, Gauged
- Extraction Well, Sampled June
- Piezometer, Gauged
- Deep Groundwater Monitoring Well, Not Gauged or Sampled
- Off-Site Groundwater Monitoring Well, Not Gauged or Sampled
- Staff Gauge
- Surface Water

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
08/07/18	LAW	HAB

AECOM

Map Document: (Q:\Projects\ENV\GEARS\GEO\Lockheed Martin\Middle River\Middle River FY18-20 GW_SW_Mon\900-CAD-GIS\920-GIS\MXDs\2018 MWRR\Fig_3_MW_Locs.mxd)
08/07/18 -- LAW



FIGURE 4

2018 MONITORING WELL MAINTENANCE AND REPAIRS

LEGEND

- Monitoring Well, Maintenance and Repair
- Monitoring Well, No Repairs Needed
- Extraction Well, No Repairs Needed
- Piezometer, Maintenance and Repair
- Piezometer, No Repairs Needed
- Deep Groundwater Monitoring Well, Not Evaluated for Repairs
- Off-Site Groundwater Monitoring Well, Not Evaluated for Repairs
- Staff Gauge, Replaced
- Surface Water

Lockheed Martin Middle River Complex
Middle River, Maryland

0 300 600 Feet

DATE MODIFIED:	GIS BY:	CHECKED BY:
08/07/18	LAW	HAB

AECOM

Map Document: (Q:\Projects\ENV\GEARS\GEO\Lockheed Martin\Middle River\Middle River FY18-20 GW_SW_Mon\900-CAD-GIS\920-GIS\MXDs\2018 MWRR\Fig_4_2018_MWRR.mxd)
08/07/18 -- LAW

TABLES

Table 1
Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2018				2017		2016		
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Redevelopment	Hardware[a]	Pad/Manway Repair/Replacement[b]	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration
MRC-MW01A	1472100.849	607381.686	A	2	33.6									
MRC-MW02A	1472639.485	607412.069	A	2	27.0	X								
MRC-MW03A	1473097.977	607778.321	B	2	14.0	X								
MRC-MW04A	1473444.71	606446.692	I	2	14.0									
MRC-MW05A	1472612.187	606827.234	I	2	34.0	X								
MRC-MW06A	1472069.592	606750.559	G	2	33.0									
MRC-MW07A	1472290.156	605572	I	2	22.0	X								
MRC-MW08A	1471400.13	605867.84	H	2	13.0									
MRC-MW100A	1472664.712	605256.339	Tilley	2	19.0	X								
MRC-MW101A	1473199.865	605489.138	E	2	18.0									
MRC-MW101B	1473199.833	605489.296	E	2	35.0									
MRC-MW103A	1473601.591	605082.812	E	2	17.0	X			X					
MRC-MW103B	1473601.821	605082.793	E	2	37.0									
MRC-MW104A	1474143.363	605108.877	F	2	15.0	X								
MRC-MW106B/C	1472537.618	605140.997	G	2	50.0	X	X							
MRC-MW107B/C	1472452.501	604923.894	G	2	55.0		X	X						
MRC-MW10A	1471933.286	605235.102	G	2	13.0	X	X							
MRC-MW109A	1472077.070	606180.500	I	2	15.0						X			
MRC-MW109B	1472077.070	606180.500	I	2	48.0						X			
MRC-MW11A[c]	1472355.926	605006.565	G	2	13.0		X				X			
MRC-MW110A	1471744.82	605944.28	H	2	22.0	X								
MRC-MW110B	1471737.43	605942.23	H	2	55.0									
MRC-MW111A	1472728.99	605391.72	Tilley	2	15.0	X	X							
MRC-MW113A	1473538.344	605138.3424	E	2	16.0	X								
MRC-MW116A	1473190.81	606848.5699	I	2	35.0	X								
MRC-MW12A	1472512.697	604858.647	G	2	14.0	X			X					
MRC-MW12B	1472577.976	604810.756	G	2	30.0									
MRC-MW12C	1472539.241	604846.568	G	2	75.0								X	
MRC-MW13A	1472615.872	604806.343	G	2	14.0									
MRC-MW14A	1472576.174	605143.252	G	2	13.0	X								
MRC-MW14C	1472579.874	605129.347	G	2	75.0	X								
MRC-MW15A	1472292.64	605305.957	G	2	13.0	X								
MRC-MW16A	1472122.300	605483.730	G	2	13.0						X			
MRC-MW17A	1472172.744	606013.139	I	2	19.0	X								
MRC-MW18A	1472245.778	605782.687	I	2	26.0									
MRC-MW20A	1472385.328	605631.901	I	2	25.0	X								
MRC-MW21A	1472682.591	605490.963	I	2	16.0	X							X	
MRC-MW22A	1472840.741	605466.208	I	2	40.0	X						X		
MRC-MW22B	1472903.686	605487.609	I	2	37.0	X								
MRC-MW24A	1473544.144	605834.626	I	2	20.0									
MRC-MW25A	1473200.497	605602.133	I	2	30.0						X			
MRC-MW26A	1473441.38	605717.91	I	2	23.0	X							X	
MRC-MW27A	1473579.647	605782.019	I	2	18.5									
MRC-MW27B	1473567.600	605776.729	I	2	40.0									
MRC-MW27C	1473545.511	605771.676	I	2	78.0									
MRC-MW28A	1473746.205	605854.879	I	2	17.5								X	
MRC-MW29A	1473864.798	605934.82	I	2	15.0	X								

TD - Total Depth
in - inches
ft bgs - feet below ground surface
a - Hardware includes bolts, washers, gaskets, compression plugs, well locks
b - Includes well pad/manway replacement, manway cover replacement, crack repair, grout erosion repair
c - Completed by Tetra Tech, Inc. (June 2018)
-- = Not applicable

Table 1
Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2015			2014			2013		
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration
MRC-MW01A	1472100.849	607381.686	A	2	33.6							X		
MRC-MW02A	1472639.485	607412.069	A	2	27.0							X		
MRC-MW03A	1473097.977	607778.321	B	2	14.0									
MRC-MW04A	1473444.71	606446.692	I	2	14.0									
MRC-MW05A	1472612.187	606827.234	I	2	34.0									
MRC-MW06A	1472069.592	606750.559	G	2	33.0									
MRC-MW07A	1472290.156	605572	I	2	22.0							X		
MRC-MW08A	1471400.13	605867.84	H	2	13.0								X	
MRC-MW100A	1472664.712	605256.339	Tilley	2	19.0									
MRC-MW101A	1473199.865	605489.138	E	2	18.0									X
MRC-MW101B	1473199.833	605489.296	E	2	35.0							X		X
MRC-MW103A	1473601.591	605082.812	E	2	17.0					X				
MRC-MW103B	1473601.821	605082.793	E	2	37.0					X				
MRC-MW104A	1474143.363	605108.877	F	2	15.0									
MRC-MW106B/C	1472537.618	605140.997	G	2	50.0									
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MRC-MW109A	1472077.070	606180.500	I	2	15.0		X							
MRC-MW109B	1472077.070	606180.500	I	2	48.0		X							
MRC-MW11A[c]	1472355.926	605006.565	G	2	13.0									
MRC-MW110A	1471744.82	605944.28	H	2	22.0					X				
MRC-MW110B	1471737.43	605942.23	H	2	55.0					X				
MRC-MW111A	1472728.99	605391.72	Tilley	2	15.0									
MRC-MW113A	1473538.344	605138.3424	E	2	16.0									
MRC-MW116A	1473190.81	606848.5699	I	2	35.0									
MRC-MW12A	1472512.697	604858.647	G	2	14.0							X		
MRC-MW12B	1472577.976	604810.756	G	2	30.0							X		
MRC-MW12C	1472539.241	604846.568	G	2	75.0									
MRC-MW13A	1472615.872	604806.343	G	2	14.0							X		
MRC-MW14A	1472576.174	605143.252	G	2	13.0									
MRC-MW14C	1472579.874	605129.347	G	2	75.0							X		
MRC-MW15A	1472292.64	605305.957	G	2	13.0		X							
MRC-MW16A	1472122.300	605483.730	G	2	13.0									
MRC-MW17A	1472172.744	606013.139	I	2	19.0	X						X		
MRC-MW18A	1472245.778	605782.687	I	2	26.0		X		X					
MRC-MW20A	1472385.328	605631.901	I	2	25.0		X					X		
MRC-MW21A	1472682.591	605490.963	I	2	16.0									
MRC-MW22A	1472840.741	605466.208	I	2	40.0				X					
MRC-MW22B	1472903.686	605487.609	I	2	37.0							X		
MRC-MW24A	1473544.144	605834.626	I	2	20.0							X		
MRC-MW25A	1473200.497	605602.133	I	2	30.0		X							
MRC-MW26A	1473441.38	605717.91	I	2	23.0								X	
MRC-MW27A	1473579.647	605782.019	I	2	18.5								X	
MRC-MW27B	1473567.600	605776.729	I	2	40.0							X		
MRC-MW27C	1473545.511	605771.676	I	2	78.0								X	
MRC-MW28A	1473746.205	605854.879	I	2	17.5		X							
MRC-MW29A	1473864.798	605934.82	I	2	15.0									

TD - Total Depth
in - inches
ft bgs - feet below ground surface
a - Hardware includes bolts, washers, gaskets, compression plugs, well locks
b - Includes well pad/manway replacement, manway cover replacement, crack repair, grout erosion repair
c - Completed by Tetra Tech, Inc. (June 2018)
-- = Not applicable

Table 1
Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2012			2011			
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Redevelopment
MRC-MW01A	1472100.849	607381.686	A	2	33.6							
MRC-MW02A	1472639.485	607412.069	A	2	27.0						X	
MRC-MW03A	1473097.977	607778.321	B	2	14.0							
MRC-MW04A	1473444.71	606446.692	I	2	14.0		X					
MRC-MW05A	1472612.187	606827.234	I	2	34.0							
MRC-MW06A	1472069.592	606750.559	G	2	33.0					X		
MRC-MW07A	1472290.156	605572	I	2	22.0							
MRC-MW08A	1471400.13	605867.84	H	2	13.0							
MRC-MW100A	1472664.712	605256.339	Tilley	2	19.0							
MRC-MW101A	1473199.865	605489.138	E	2	18.0							
MRC-MW101B	1473199.833	605489.296	E	2	35.0							
MRC-MW103A	1473601.591	605082.812	E	2	17.0							
MRC-MW103B	1473601.821	605082.793	E	2	37.0							
MRC-MW104A	1474143.363	605108.877	F	2	15.0							
MRC-MW106B/C	1472537.618	605140.997	G	2	50.0							
MRC-MW107B/C	1472452.501	604923.894	G	2	55.0							
MRC-MW10A	1471933.286	605235.102	G	2	13.0					X		
MRC-MW109A	1472077.070	606180.500	I	2	15.0							
MRC-MW109B	1472077.070	606180.500	I	2	48.0							
MRC-MW11A[c]	1472355.926	605006.565	G	2	13.0							
MRC-MW110A	1471744.82	605944.28	H	2	22.0							
MRC-MW110B	1471737.43	605942.23	H	2	55.0							
MRC-MW111A	1472728.99	605391.72	Tilley	2	15.0							
MRC-MW113A	1473538.344	605138.3424	E	2	16.0							
MRC-MW116A	1473190.81	606848.5699	I	2	35.0							
MRC-MW12A	1472512.697	604858.647	G	2	14.0							
MRC-MW12B	1472577.976	604810.756	G	2	30.0					X		
MRC-MW12C	1472539.241	604846.568	G	2	75.0							
MRC-MW13A	1472615.872	604806.343	G	2	14.0							
MRC-MW14A	1472576.174	605143.252	G	2	13.0							
MRC-MW14C	1472579.874	605129.347	G	2	75.0							
MRC-MW15A	1472292.64	605305.957	G	2	13.0					X		
MRC-MW16A	1472122.300	605483.730	G	2	13.0							
MRC-MW17A	1472172.744	606013.139	I	2	19.0							
MRC-MW18A	1472245.778	605782.687	I	2	26.0							
MRC-MW20A	1472385.328	605631.901	I	2	25.0							
MRC-MW21A	1472682.591	605490.963	I	2	16.0							
MRC-MW22A	1472840.741	605466.208	I	2	40.0							
MRC-MW22B	1472903.686	605487.609	I	2	37.0							
MRC-MW24A	1473544.144	605834.626	I	2	20.0					X		
MRC-MW25A	1473200.497	605602.133	I	2	30.0		X			X		
MRC-MW26A	1473441.38	605717.91	I	2	23.0							
MRC-MW27A	1473579.647	605782.019	I	2	18.5					X		
MRC-MW27B	1473567.600	605776.729	I	2	40.0							
MRC-MW27C	1473545.511	605771.676	I	2	78.0							
MRC-MW28A	1473746.205	605854.879	I	2	17.5		X					
MRC-MW29A	1473864.798	605934.82	I	2	15.0							

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a - Hardware includes bolts, washers, gaskets, compression plugs, well locks
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Table 1
Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2018				2017		2016		
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Redevelopment	Hardware[a]	Pad/Manway Repair/Replacement[b]	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration
MRC-MW30A	1473663.575	605551.844	E	2	14.0	X	X		X					
MRC-MW31A	1473876.501	605634.114	E	2	14.0	X								
MRC-MW32A	1474065.342	605705.126	E	2	14.0									
MRC-MW33A	1473899.215	605444.467	E	2	14.0	X								
MRC-MW34A	1474131.143	605533.404	E	2	14.0	X								
MRC-MW34B	1474062.907	605527.587	E	2	30.0									
MRC-MW34C	1474067.026	605519.899	E	2	55.0	X								
MRC-MW35A	1474392.191	605655.646	D	2	13.0									
MRC-MW36A	1474116.347	605204.225	E	2	18.5	X								
MRC-MW37A	1474222.876	605266.991	E	2	18.37							X		
MRC-MW37B	1474319.262	605175.916	F	2	31.0	X								
MRC-MW37C	1474327.078	605178.671	F	2	70.0						X			
MRC-MW38A	1474485.51	605394.017	D	2	14.0	X								
MRC-MW41A	1471881.419	606147.293	I	2	16.0	X								
MRC-MW42A	1473154.463	605764.049	I	2	19.0	X	X							
MRC-MW43A	1473528.292	605174.296	E	2	13.5	X								
MRC-MW45A	1473240.91	604324.59	G	Abandoned	--									
MRC-MW47A	1473286.46	605880.78	F	Abandoned	--									
MRC-MW48A	1473286.462	605880.783	I	2	21.0									
MRC-MW50A	1471971.446	606313.404	I	2	26.0	X								
MRC-MW51A	1471672.905	606300.933	H	2	21.9								X	
MRC-MW52A	1471732.662	606147.4	H	2	13.0									
MRC-MW53A	1471800.825	605971.746	H	2	13.0	X					X	X		
MRC-MW53B	1471795.644	605975.227	H	2	49.0	X								
MRC-MW54A	1471842.233	605758.031	G	2	14.0	X			X					
MRC-MW55A	1472872.9	606094.42	I	2	22.0	X								
MRC-MW56A	1472896.269	605933.191	I	2	12.5	X								
MRC-MW57A	1472941.585	605964.873	I	2	36.5									
MRC-MW58A	1472728.795	605736.028	I	2	18.0	X								
MRC-MW59A	1472977.106	605767.718	I	2	34.1								X	
MRC-MW60A	1473208.338	605934.580	I	2	22.0									
MRC-MW60B	1473213.390	605934.580	I	2	32.0									
MRC-MW61A	1473410.711	606198.912	I	2	24.2								X	
MRC-MW62C	1473429.634	605279.690	E	2	65.0									
MRC-MW64A	1472111.387	605979.506	I	2	16.0	X								
MRC-MW65A	1473054.409	604738.829	F	2	18.0	X								
MRC-MW66A	1473171.001	604719.608	F	2	19.0	X								
MRC-MW67A	1472115.893	606590.647	I	2	37.0	X								
MRC-MW68A	1472208.845	606628.642	I	2	38.0	X			X					
MRC-MW69A	1471930.906	606075.749	I	2	17.0	X								
MRC-MW69B	1471939.199	606063.131	I	2	40.1	X								
MRC-MW70A	1472643.2	605068.244	G	3	14.0	X			X					
MRC-MW70B	1472647.785	605058.755	G	3	30.0	X			X					
MRC-MW71A	1472414.518	605230.001	G	2	14.0	X	X							
MRC-MW71B	1472450.169	605190.212	G	2	30.0	X	X							
MRC-MW72B	1474225.419	605412.56	E	2	35.0	X			X					
MRC-MW73A	1474302.29	605348.533	E	2	17.0	X			X					

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Table 1
Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2015			2014			2013		
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration
MRC-MW30A	1473663.575	605551.844	E	2	14.0							X		
MRC-MW31A	1473876.501	605634.114	E	2	14.0							X		
MRC-MW32A	1474065.342	605705.126	E	2	14.0									
MRC-MW33A	1473899.215	605444.467	E	2	14.0									
MRC-MW34A	1474131.143	605533.404	E	2	14.0									
MRC-MW34B	1474062.907	605527.587	E	2	30.0							X		
MRC-MW34C	1474067.026	605519.899	E	2	55.0							X		
MRC-MW35A	1474392.191	605655.646	D	2	13.0									
MRC-MW36A	1474116.347	605204.225	E	2	18.5									
MRC-MW37A	1474222.876	605266.991	E	2	18.37									
MRC-MW37B	1474319.262	605175.916	F	2	31.0									
MRC-MW37C	1474327.078	605178.671	F	2	70.0									
MRC-MW38A	1474485.51	605394.017	D	2	14.0							X		
MRC-MW41A	1471881.419	606147.293	I	2	16.0				X					
MRC-MW42A	1473154.463	605764.049	I	2	19.0	X								
MRC-MW43A	1473528.292	605174.296	E	2	13.5							X		
MRC-MW45A	1473240.91	604324.59	G	Abandoned	--									
MRC-MW47A	1473286.46	605880.78	F	Abandoned	--	X								
MRC-MW48A	1473286.462	605880.783	I	2	21.0				X			X		
MRC-MW50A	1471971.446	606313.404	I	2	26.0		X							
MRC-MW51A	1471672.905	606300.933	H	2	21.9									
MRC-MW52A	1471732.662	606147.4	H	2	13.0					X				
MRC-MW53A	1471800.825	605971.746	H	2	13.0				X					
MRC-MW53B	1471795.644	605975.227	H	2	49.0									
MRC-MW54A	1471842.233	605758.031	G	2	14.0				X			X		
MRC-MW55A	1472872.9	606094.42	I	2	22.0									
MRC-MW56A	1472896.269	605933.191	I	2	12.5									
MRC-MW57A	1472941.585	605964.873	I	2	36.5							X		
MRC-MW58A	1472728.795	605736.028	I	2	18.0									
MRC-MW59A	1472977.106	605767.718	I	2	34.1									
MRC-MW60A	1473208.338	605934.580	I	2	22.0							X		
MRC-MW60B	1473213.390	605934.580	I	2	32.0									
MRC-MW61A	1473410.711	606198.912	I	2	24.2									
MRC-MW62C	1473429.634	605279.690	E	2	65.0							X		
MRC-MW64A	1472111.387	605979.506	I	2	16.0									
MRC-MW65A	1473054.409	604738.829	F	2	18.0									
MRC-MW66A	1473171.001	604719.608	F	2	19.0									
MRC-MW67A	1472115.893	606590.647	I	2	37.0							X		
MRC-MW68A	1472208.845	606628.642	I	2	38.0		X							
MRC-MW69A	1471930.906	606075.749	I	2	17.0					X				
MRC-MW69B	1471939.199	606063.131	I	2	40.1					X				
MRC-MW70A	1472643.2	605068.244	G	3	14.0									
MRC-MW70B	1472647.785	605058.755	G	3	30.0									
MRC-MW71A	1472414.518	605230.001	G	2	14.0									
MRC-MW71B	1472450.169	605190.212	G	2	30.0							X		
MRC-MW72B	1474225.419	605412.56	E	2	35.0									
MRC-MW73A	1474302.29	605348.533	E	2	17.0									

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Table 1
Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2012			2011			
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Redevelopment
MRC-MW30A	1473663.575	605551.844	E	2	14.0							
MRC-MW31A	1473876.501	605634.114	E	2	14.0							
MRC-MW32A	1474065.342	605705.126	E	2	14.0					X		
MRC-MW33A	1473899.215	605444.467	E	2	14.0							
MRC-MW34A	1474131.143	605533.404	E	2	14.0							
MRC-MW34B	1474062.907	605527.587	E	2	30.0							
MRC-MW34C	1474067.026	605519.899	E	2	55.0							
MRC-MW35A	1474392.191	605655.646	D	2	13.0		X			X		
MRC-MW36A	1474116.347	605204.225	E	2	18.5							
MRC-MW37A	1474222.876	605266.991	E	2	18.37							
MRC-MW37B	1474319.262	605175.916	F	2	31.0							
MRC-MW37C	1474327.078	605178.671	F	2	70.0							
MRC-MW38A	1474485.51	605394.017	D	2	14.0					X		
MRC-MW41A	1471881.419	606147.293	I	2	16.0							
MRC-MW42A	1473154.463	605764.049	I	2	19.0							
MRC-MW43A	1473528.292	605174.296	E	2	13.5							
MRC-MW45A	1473240.91	604324.59	G	Abandoned	--							X
MRC-MW47A	1473286.46	605880.78	F	Abandoned	--							
MRC-MW48A	1473286.462	605880.783	I	2	21.0					X		
MRC-MW50A	1471971.446	606313.404	I	2	26.0					X		
MRC-MW51A	1471672.905	606300.933	H	2	21.9							
MRC-MW52A	1471732.662	606147.4	H	2	13.0	X						
MRC-MW53A	1471800.825	605971.746	H	2	13.0		X					
MRC-MW53B	1471795.644	605975.227	H	2	49.0							
MRC-MW54A	1471842.233	605758.031	G	2	14.0							
MRC-MW55A	1472872.9	606094.42	I	2	22.0							
MRC-MW56A	1472896.269	605933.191	I	2	12.5					X		
MRC-MW57A	1472941.585	605964.873	I	2	36.5		X					
MRC-MW58A	1472728.795	605736.028	I	2	18.0							
MRC-MW59A	1472977.106	605767.718	I	2	34.1					X		
MRC-MW60A	1473208.338	605934.580	I	2	22.0							
MRC-MW60B	1473213.390	605934.580	I	2	32.0						X	
MRC-MW61A	1473410.711	606198.912	I	2	24.2							
MRC-MW62C	1473429.634	605279.690	E	2	65.0							
MRC-MW64A	1472111.387	605979.506	I	2	16.0					X		
MRC-MW65A	1473054.409	604738.829	F	2	18.0					X		
MRC-MW66A	1473171.001	604719.608	F	2	19.0							
MRC-MW67A	1472115.893	606590.647	I	2	37.0							
MRC-MW68A	1472208.845	606628.642	I	2	38.0		X			X	X	
MRC-MW69A	1471930.906	606075.749	I	2	17.0							
MRC-MW69B	1471939.199	606063.131	I	2	40.1							
MRC-MW70A	1472643.2	605068.244	G	3	14.0							
MRC-MW70B	1472647.785	605058.755	G	3	30.0							
MRC-MW71A	1472414.518	605230.001	G	2	14.0		X					
MRC-MW71B	1472450.169	605190.212	G	2	30.0							
MRC-MW72B	1474225.419	605412.56	E	2	35.0							
MRC-MW73A	1474302.29	605348.533	E	2	17.0							

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Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2018				2017		2016		
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Redevelopment	Hardware[a]	Pad/Manway Repair/Replacement[b]	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration
MRC-MW73B	1474311.024	605337.690	E	2	34.0									
MRC-MW74A	1474202.457	605307.163	E	3	18.2	X								
MRC-MW76A	1473173.803	605871.162	I	2	19.0									
MRC-MW77A	1473440.469	606011.029	I	2	17.0	X			X				X	
MRC-MW78B	1473316.301	605849.753	I	4	34.0	X								
MRC-MW79B	1473649.776	605705.719	E	2	37.0									X
MRC-MW81B	1473308.412	605923.602	I	2	32.0									
MRC-MW82A	1473243.361	607048.205	I	2	30.0									
MRC-MW83A	1473490.53	607277.689	I	2	35.0	X								
MRC-MW86A	1473304.304	606123.065	I	2	16.0	X			X					
MRC-MW86B	1473304.134	606122.733	I	2	35.0									
MRC-MW87A	1473238.641	605656.422	I	2	16.0	X			X					
MRC-MW87B	1473238.603	605656.749	I	2	34.5									
MRC-MW88A	1473090.29	606733.037	I	2	24.5									
MRC-MW90B	1472025.307	605870.732	I	2	40.0	X								
MRC-MW91A	1472642.085	605998.952	I	2	20.0	X			X					
MRC-MW91B	1472642.008	605998.809	I	2	70.0	X								
MRC-MW93A	1473031.196	606851.435	I	2	14.0	X								
MRC-MW93B	1473031.364	606851.394	I	2	75.0	X			X					
MRC-MW94B	1473252.329	606834.999	I	2	52.0	X								
MRC-MW95B	1473161.721	606594.2	I	2	55.0	X								
MRC-MW96A	1472040.273	606168.256	I	2	20.0	X								
MRC-MW96B	1472040.22	606168.025	I	2	49.0	X								
MRC-MW98B	1472661.04	605448.6	I	2	37.0	X								
MRC-NMW-1I	1473296.06	605922.396	I	2	35.0	X			X					
MRC-PZ02A	1472647.359	605065.862	G	2	15.0	X								
MRC-PZ02B	1472633.427	605047.433	G	2	30.0	X								
MRC-SEMW-3I	1474197.49	605473.707	E	2	30.0	X								
MRC-SWMW-2I	1472588.39	605121.527	G	2	30.0	X								
MRC-SWMW-3I	1472536.69	605077.42	G	2	17.0	X								
MRC-SWMW-4I	1472538.32	605066.043	G	2	35.0	X								
MRC-SWMW-5I	1472561.35	604890.065	G	2	30.0	X								
MRC-OF02A	1472353.837	604640.094	--	2	26.0									
MRC-OF02B	1472353.837	604640.094	--	2	44.0									
MRC-OF02C	1472353.837	604640.094	--	2	68.0									
MRC-OW1S	1473272.022	605904.896	I	2	10.0									
MRC-OW1D	1473272.022	605904.896	I	2	28.8									
MRC-OW2S	1473284.156	605912.836	I	2	9.9									
MRC-OW2D	1473284.156	605912.836	I	2	30.0									
MRC-OW3S	1473276.525	605891.202	I	2	9.1									
MRC-OW3D	1473276.525	605891.202	I	2	28.7									
MRC-OW4S	1472572.264	605132.497	G	2	14.8									
MRC-OW4D	1472572.264	605132.497	G	2	28.8									
MRC-OW5S	1472567.41	605118.57	G	2	11.6									
MRC-PZ02A	1472647.359	605065.862	G	1	14.0	X			X					
MRC-PZ02B	1472633.427	605047.433	G	1	30.0	X								

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Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2015			2014			2013		
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration
MRC-MW73B	1474311.024	605337.690	E	2	34.0							X		
MRC-MW74A	1474202.457	605307.163	E	3	18.2									
MRC-MW76A	1473173.803	605871.162	I	2	19.0							X		
MRC-MW77A	1473440.469	606011.029	I	2	17.0							X		
MRC-MW78B	1473316.301	605849.753	I	4	34.0									
MRC-MW79B	1473649.776	605705.719	E	2	37.0									
MRC-MW81B	1473308.412	605923.602	I	2	32.0					X				
MRC-MW82A	1473243.361	607048.205	I	2	30.0				X					
MRC-MW83A	1473490.53	607277.689	I	2	35.0									
MRC-MW86A	1473304.304	606123.065	I	2	16.0				X					
MRC-MW86B	1473304.134	606122.733	I	2	35.0				X					
MRC-MW87A	1473238.641	605656.422	I	2	16.0		X							
MRC-MW87B	1473238.603	605656.749	I	2	34.5		X							
MRC-MW88A	1473090.29	606733.037	I	2	24.5							X		
MRC-MW90B	1472025.307	605870.732	I	2	40.0					X				
MRC-MW91A	1472642.085	605998.952	I	2	20.0									
MRC-MW91B	1472642.008	605998.809	I	2	70.0									
MRC-MW93A	1473031.196	606851.435	I	2	14.0									
MRC-MW93B	1473031.364	606851.394	I	2	75.0									
MRC-MW94B	1473252.329	606834.999	I	2	52.0									
MRC-MW95B	1473161.721	606594.2	I	2	55.0	X								
MRC-MW96A	1472040.273	606168.256	I	2	20.0									
MRC-MW96B	1472040.22	606168.025	I	2	49.0									
MRC-MW98B	1472661.04	605448.6	I	2	37.0							X		
MRC-NMW-1I	1473296.06	605922.396	I	2	35.0									
MRC-PZ02A	1472647.359	605065.862	G	2	15.0									
MRC-PZ02B	1472633.427	605047.433	G	2	30.0									
MRC-SEMW-3I	1474197.49	605473.707	E	2	30.0									
MRC-SWMW-2I	1472588.39	605121.527	G	2	30.0									
MRC-SWMW-3I	1472536.69	605077.42	G	2	17.0									
MRC-SWMW-4I	1472538.32	605066.043	G	2	35.0									
MRC-SWMW-5I	1472561.35	604890.065	G	2	30.0									
MRC-OF02A	1472353.837	604640.094	--	2	26.0							X		
MRC-OF02B	1472353.837	604640.094	--	2	44.0							X		
MRC-OF02C	1472353.837	604640.094	--	2	68.0							X		
MRC-OW1S	1473272.022	605904.896	I	2	10.0									
MRC-OW1D	1473272.022	605904.896	I	2	28.8									
MRC-OW2S	1473284.156	605912.836	I	2	9.9									
MRC-OW2D	1473284.156	605912.836	I	2	30.0									
MRC-OW3S	1473276.525	605891.202	I	2	9.1									
MRC-OW3D	1473276.525	605891.202	I	2	28.7									
MRC-OW4S	1472572.264	605132.497	G	2	14.8									
MRC-OW4D	1472572.264	605132.497	G	2	28.8									
MRC-OW5S	1472567.41	605118.57	G	2	11.6									
MRC-PZ02A	1472647.359	605065.862	G	1	14.0									
MRC-PZ02B	1472633.427	605047.433	G	1	30.0									

TD - Total Depth
in - inches
ft bgs - feet below ground surface
a - Hardware includes bolts, washers, gaskets, compression plugs, well locks
b - Includes well pad/manway replacement, manway cover replacement, crack repair, grout erosion repair
c - Completed by Tetra Tech, Inc. (June 2018)
-- = Not applicable

Table 1
Middle River Complex Monitoring Well Repair History, 2011-2018

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record (ft bgs)	2012			2011			
						Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Hardware[a]	Pad/Manway Repair/Replacement[b]	Well Casing Replacement/Alteration	Redevelopment
MRC-MW73B	1474311.024	605337.690	E	2	34.0							
MRC-MW74A	1474202.457	605307.163	E	3	18.2							
MRC-MW76A	1473173.803	605871.162	I	2	19.0							
MRC-MW77A	1473440.469	606011.029	I	2	17.0					X		
MRC-MW78B	1473316.301	605849.753	I	4	34.0							
MRC-MW79B	1473649.776	605705.719	E	2	37.0					X	X	
MRC-MW81B	1473308.412	605923.602	I	2	32.0							
MRC-MW82A	1473243.361	607048.205	I	2	30.0					X		
MRC-MW83A	1473490.53	607277.689	I	2	35.0					X		
MRC-MW86A	1473304.304	606123.065	I	2	16.0							
MRC-MW86B	1473304.134	606122.733	I	2	35.0							
MRC-MW87A	1473238.641	605656.422	I	2	16.0		X					
MRC-MW87B	1473238.603	605656.749	I	2	34.5		X					
MRC-MW88A	1473090.29	606733.037	I	2	24.5							
MRC-MW90B	1472025.307	605870.732	I	2	40.0							
MRC-MW91A	1472642.085	605998.952	I	2	20.0							
MRC-MW91B	1472642.008	605998.809	I	2	70.0							
MRC-MW93A	1473031.196	606851.435	I	2	14.0							
MRC-MW93B	1473031.364	606851.394	I	2	75.0							
MRC-MW94B	1473252.329	606834.999	I	2	52.0							
MRC-MW95B	1473161.721	606594.2	I	2	55.0							
MRC-MW96A	1472040.273	606168.256	I	2	20.0		X					
MRC-MW96B	1472040.22	606168.025	I	2	49.0		X					
MRC-MW98B	1472661.04	605448.6	I	2	37.0							
MRC-NMW-1I	1473296.06	605922.396	I	2	35.0							
MRC-PZ02A	1472647.359	605065.862	G	2	15.0							
MRC-PZ02B	1472633.427	605047.433	G	2	30.0							
MRC-SEMW-3I	1474197.49	605473.707	E	2	30.0							
MRC-SWMW-2I	1472588.39	605121.527	G	2	30.0							
MRC-SWMW-3I	1472536.69	605077.42	G	2	17.0							
MRC-SWMW-4I	1472538.32	605066.043	G	2	35.0							
MRC-SWMW-5I	1472561.35	604890.065	G	2	30.0							
MRC-OF02A	1472353.837	604640.094	--	2	26.0							
MRC-OF02B	1472353.837	604640.094	--	2	44.0							
MRC-OF02C	1472353.837	604640.094	--	2	68.0							
MRC-OW1S	1473272.022	605904.896	I	2	10.0					X		
MRC-OW1D	1473272.022	605904.896	I	2	28.8					X		
MRC-OW2S	1473284.156	605912.836	I	2	9.9					X		
MRC-OW2D	1473284.156	605912.836	I	2	30.0					X		
MRC-OW3S	1473276.525	605891.202	I	2	9.1					X		
MRC-OW3D	1473276.525	605891.202	I	2	28.7					X		
MRC-OW4S	1472572.264	605132.497	G	2	14.8					X		
MRC-OW4D	1472572.264	605132.497	G	2	28.8					X		
MRC-OW5S	1472567.41	605118.57	G	2	11.6					X		
MRC-PZ02A	1472647.359	605065.862	G	1	14.0					X		
MRC-PZ02B	1472633.427	605047.433	G	1	30.0					X		

TD - Total Depth
in - inches
ft bgs - feet below ground surface
a - Hardware includes bolts, washers, gaskets, compression plugs, well locks
b - Includes well pad/manway replacement, manway cover replacement, crack repair, grout erosion repair
c - Completed by Tetra Tech, Inc. (June 2018)
-- = Not applicable

Table 2: Monitoring Well Repairs—June 2018
Middle River Complex

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record	Measured TD (from TOC)	Rating	Initial Field Observation—April 2018	Repair/Replacement Activity—June 2018
MRC-MW02A	1472639.485	607412.069	A	2	27.0	26.98	Good	Bolts are stripped	2 bolts
MRC-MW03A	1473097.977	607778.321	B	2	14.0	13.69	Average	Asphalt cracking around well; no well pad	Fill asphalt cracks with Sikaflex sealant
MRC-MW05A	1472612.187	606827.234	I	2	34.0	33.65	Average	Missing 1 rubber and 1 metal washer	1 washer set
MRC-MW07A	1472290.156	605572	I	2	22.0	21.54	Average	No washers (rubber and metal)	2 washer sets
MRC-MW100A	1472664.712	605256.339	I	2	19.0	18.52	Average	Missing 1 rubber washer	1 rubber washer
MRC-MW103A	1473601.591	605082.812	E	2	17.0	16.00	Good	1.19' difference between TT TD and measured TD; soft/silted bottom	Well redevelopment
MRC-MW104A	1474143.363	605108.877	F	2	15.0	14.56	Average	No washers (rubber or metal)	2 washer sets
MRC-MW106B/C	1472537.618	605140.997	G	2	50.0	49.92	Poor	Cracked well pad; missing washers; bent bolt and missing bolt housing; flush mount cover O-ring missing	New well pad; manway; 3 washer sets; and 3 bolts
MRC-MW10A	1471933.286	605235.102	G	2	13.0	13.00	Poor	Cracked, rusted out manway; cracked flush mount cover; missing washers and O-ring	New well pad; manway; 2 washer sets; and 2 bolts
MRC-MW11A	147355.926	605006.565	G	2	13.0	13.00	Poor	Damaged from third-party construction activity (Found June 2018)	Restoration by Tetra Tech
MRC-MW110A	1471744.82	605944.28	H	2	22.0	21.52	Poor	Cracked and rusted flush mount cover; missing 1 set of bolts and washers; no flush mount cover rubber O-ring	Flush mount cover; 2 washer sets; and 2 bolts
MRC-MW111A	1472728.99	605391.72	I	2	15.0	14.57	Average	Missing 2 rubber washers and half of well pad	2 rubber washers and new well pad. Area will be saw cut square first; manway does not need to be replaced.
MRC-MW113A	1473538.344	605138.342	E	2	16.0	15.40	Good	Missing 1 set of washers (rubber and metal)	1 washer set
MRC-MW116A	1473190.81	606848.57	I	2	35.0	35.00	Average	No rubber washers	2 rubber washers
MRC-MW12A	1472512.697	604858.647	G	2	14.0	13.00	Poor	Well buried; cracked pad; missing bolts; 1.14' difference between TT TD and measured TD; soft/silted bottom	Well redevelopment; 2 bolts; and Sikaflex sealant
MRC-MW14A	1472576.174	605143.252	G	2	13.0	12.76	Poor	No well pad	New well pad
MRC-MW14C	1472579.874	605129.347	G	2	75.0	74.25	Average	Missing 2 rubber washers	2 rubber washers
MRC-MW15A	1472292.64	605305.957	G	2	13.0	12.79	Average	Missing 2 rubber and metal washers. Missing flush mount cover rubber O-ring	2 washer sets and flush mount cover O-ring

TD = Total Depth
TOC = Top of Casing
TT = Tetra Tech

Table 2: Monitoring Well Repairs—June 2018
Middle River Complex

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record	Measured TD (from TOC)	Rating	Initial Field Observation—April 2018	Repair/Replacement Activity—June 2018
MRC-MW17A	1472172.744	606013.139	I	2	19.0	19.00	Poor	Bolts stripped; poor fitting	2 bolts
MRC-MW20A	1472385.328	605631.901	I	2	25.0	24.07	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW21A	1472682.591	605490.963	I	2	16.0	15.35	Poor	Missing two bolts	2 bolts
MRC-MW22A	1472840.741	605466.208	I	2	40.0	39.73	Average	Bolts do not thread completely	2 bolts
MRC-MW22B	1472903.686	605487.609	I	2	37.0	36.71	Average	Missing washers (rubber and metal) and 1 bolt housing	2 washer sets
MRC-MW26A	1473441.38	605717.91	I	2	23.0	22.52	Average	Broken bolt housing; washers missing; flush mount cover rubber O-ring needed	2 washer sets and flush mount cover O-ring
MRC-MW29A	1473864.798	605934.82	I	2	15.0	14.79	Poor	Cracked well cap and stripped bolts	2 bolts and new compression plug
MRC-MW30A	1473663.575	605551.844	E	2	14.0	14.00	Good	Well pad crumbling around casing	New well pad
MRC-MW31A	1473876.501	605634.114	E	2	14.0	13.99	Poor	Bolts are stripped	2 bolts
MRC-MW33A	1473899.215	605444.467	E	2	14.0	13.51	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW34A	1474131.143	605533.404	E	2	14.0	14.00	Poor	Bolts do not thread	2 bolts
MRC-MW34C	1474067.026	605519.899	E	2	55.0	54.68	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW36A	1474116.347	605204.225	E	2	18.5	18.18	Good	Missing washers (rubber and metal)	3 washer sets
MRC-MW37B	1474319.262	605175.916	F	2	31.0	30.20	Average	Missing bolts and washer sets	2 washer and bolt sets
MRC-MW38A	1474485.51	605394.017	D	2	14.0	14.00	Average	Missing 2 bolts and washer sets	2 washer and bolt sets
MRC-MW41A	1471881.419	606147.293	I	2	16.0	16.00	Poor	Missing washers (rubber and metal)	2 washer sets
MRC-MW42A	1473154.463	605764.049	I	2	19.0	18.61	Poor	Well pad crumbling around casing	New well pad
MRC-MW43A	1473528.292	605174.296	E	2	13.5	12.87	Good	Missing washers (rubber and metal)	2 washer sets
MRC-MW50A	1471971.446	606313.404	I	2	26.0	25.28	Poor	Well pad cracked in multiple locations; well cap lock rusted	Sikaflex cracks and new lock
MRC-MW53A	1471800.825	605971.746	H	2	13.0	13.00	Good	Well cap lock rusted	New lock
MRC-MW53B	1471795.644	605975.227	H	2	49.0	48.69	Poor	Missing flush mount cover; rusted lock	New flush mount cover and new lock

TD = Total Depth
TOC = Top of Casing
TT = Tetra Tech

Table 2: Monitoring Well Repairs—June 2018
Middle River Complex

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record	Measured TD (from TOC)	Rating	Initial Field Observation—April 2018	Repair/Replacement Activity—June 2018
MRC-MW54A	1471842.233	605758.031	G	2	14.0	12.20	Poor	Buried; missing 2 metal and 2 rubber washers; 2.13' between TT TD and measured TD; soft/silted bottom	2 washer sets and well redevelopment
MRC-MW55A	1472872.9	606094.42	I	2	22.0	21.84	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW56A	1472896.269	605933.191	I	2	12.5	11.74	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW58A	1472728.795	605736.028	I	2	18.0	17.91	Poor	No bolts	2 bolts
MRC-MW64A	1472111.387	605979.506	I	2	16.0	16.14	Average	Rusted lock; cracks in well pad	Sikaflex cracks; new bolts and lock
MRC-MW65A	1473054.409	604738.829	F	2	18.0	17.47	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW66A	1473171.001	604719.608	F	2	19.0	18.07	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW67A	1472115.893	606590.647	I	2	37.0	36.09	Average	Missing 2 rubber washers; rusted manway	2 rubber washers
MRC-MW68A	1472208.845	606628.642	I	2	38.0	38.00	Poor	Deep well pad cracks; 6.81' difference between TT TD and measured TD; soft/silted bottom	Sikaflex well pad cracks, no well redevelopment needed, tubing found fallen into well. Tubing removed and well regauged.
MRC-MW69A	1471930.906	606075.749	I	2	17.0	16.31	Poor	Missing 2 rubber and 1 metal washers; buckled manway; pad cracked	2 washer sets; new manway and well pad
MRC-MW69B	1471939.199	606063.131	I	2	14.0	13.20	Average	Missing 1 rubber washer	1 rubber washer
MRC-MW70A	1472643.2	605068.244	G	3	14.0	13.87	Average	Missing 2 rubber and 2 metal washers; 4.65' difference between TT TD and measured TD; soft/silted bottom	2 washer sets; well redevelopment
MRC-MW70B	1472647.785	605058.755	G	3	30.0	29.86	Good	2.62' difference between TT TD and measured TD; soft/silted bottom	Well redevelopment
MRC-MW71A	1472414.518	605230.001	G	2	14.0	13.03	Poor	Poor well pad; gravel and surface water runoff material in manway	New well pad
MRC-MW71B	1472450.169	605190.212	G	2	30.0	30.00	Good	Well pad needs patching	Sikaflex cracks
MRC-MW72B	1474225.419	605412.56	E	2	35.0	33.64	Poor	1.36' difference between TT TD and measured TD; soft/silted bottom; missing bolt housing	Well redevelopment
MRC-MW73A	1474302.29	605348.533	E	2	17.0	15.46	Good	1.54' difference between TT TD and measured TD; soft/silted bottom	Well redevelopment
MRC-MW74A	1474202.457	605307.163	E	3	18.0	17.77	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW77A	1473440.469	606011.029	I	2	17.0	15.90	Good	1.36' difference between TT TD and measured TD; soft/silted bottom	Well redevelopment

TD = Total Depth
TOC = Top of Casing
TT = Tetra Tech
TD differing by greater than or equal to 1.5 feet

Table 2: Monitoring Well Repairs—June 2018
Middle River Complex

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record	Measured TD (from TOC)	Rating	Initial Field Observation—April 2018	Repair/Replacement Activity—June 2018
MRC-MW78B	1473316.301	605849.753	I	4	34.0	33.71	Poor	Missing bolts and washers; missing manway cover rubber O-ring	3 washer and bolt sets; new O-ring
MRC-MW83A	1473490.53	607277.689	I	2	35.0	34.56	Average	Missing 1 bolt and washers	1 bolt and 1 washer set
MRC-MW86A	1473304.304	606123.065	I	2	16.0	13.00	Poor	3.39' difference between TT TD and measured TD; soft/silted in bottom	Well redevelopment
MRC-MW87A	1473238.641	605656.422	I	2	16.0	14.47	Good	1.74' difference between TT TD and measure TD; soft/silted in bottom	Well redevelopment
MRC-MW90B	1472025.307	605870.732	I	2	40.0	39.09	Average	Bolts stripped; missing washers; well cap lock rusted	2 bolt; 2 washer sets; and new lock
MRC-MW91A	1472642.085	605998.952	I	2	20.0	18.25	Average	Missing washers and flush mount cover O-ring. 2.34' difference between TT TD and measured TD	2 washers sets; flush mount cover O-ring; well redevelopment
MRC-MW91B	1472642.008	605998.809	I	2	70.0	69.12	Average	Missing washer (rubber and metal)	1 washer set
MRC-MW93A	1473031.196	606851.435	I	2	14.0	13.20	Average	No TOC reference point; added to mark N; missing rubber washer; missing flush mount cover O-ring.	1 rubber washer and flush mount cover O-ring
MRC-MW93B	1473031.364	606851.394	I	2	75.0	74.81	Average	Missing rubber washers & flush mount O-ring; 9.75' difference between TT TD and measured TD	2 rubber washers; flush mount cover O-ring; no well redevelopment needed, tubing found fallen into well. Tubing removed and well regauged.
MRC-MW94B	1473252.329	606834.999	I	2	52.0	51.00	Average	No rubber washers	2 rubber washers
MRC-MW95B	1473161.721	606594.2	I	2	55.0	54.51	Poor	Missing bolts, washers, and bolt housing	2 bolts and 2 washers sets
MRC-MW96A	1472040.273	606168.256	I	2	20.0	19.56	Poor	Missing washers (rubber and metal), flush mount cover O-ring, and bolt housing	2 washer sets and flush mount cover O-ring
MRC-MW96B	1472040.22	606168.025	I	2	49.0	49.00	Average	Missing washers (rubber and metal)	2 washer sets
MRC-MW98B	1472661.04	605448.6	I	2	37.0	36.84	Average	Missing 2 rubber washers	2 rubber washers
MRC-PZ02A	1472647.359	605065.862	G	2	15.0	13.52	Average	Missing 1 metal and 1 rubber washer; 1.48' difference between TT TD and measure TD	1 set of washers and well redevelopment
MRC-PZ02B	1472633.427	605047.433	G	2	30.0	29.27	Average	Missing 2 metal and 2 rubber washers	2 washer sets
MRC-SEMW-3I	1474197.49	605473.707	E	1	30.0	29.36	Poor	Missing bolt and washer sets	New bolts and washer sets
MRC-SWMW-1I	1472605.98	605136.802	G	2	30.0	30.00	Average	Missing 2 rubber washers and flush mount cover O-ring	2 rubber washers and flush mount cover O-ring
MRC-SWMW-2I	1472588.39	605121.527	G	2	30.0	30.00	Average	Missing washers (rubber and metal)	2 washer sets

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TD differing by greater than or equal to 1.5 feet

Table 2: Monitoring Well Repairs—June 2018
Middle River Complex

Well ID	Easting	Northing	Block	Diameter (in)	TD of Record	Measured TD (from TOC)	Rating	Initial Field Observation—April 2018	Repair/Replacement Activity—June 2018
MRC-SWMW-3I	1472536.69	605077.42	G	1	17.0	16.38	Poor	Missing 2 bolts and washer sets	2 bolts and 2 washer sets
MRC-SWMW-4I	1472538.32	605066.043	G	1	35.0	34.25	Average	Missing 1 metal washer	1 metal washer
MRC-SWMW-5I	1472561.35	604890.065	G	2	30.0	30.00	Average	Well buried; missing 1 bolt and full set of washers; needs new compression cap	2 washer sets; 1 bolt; and compression plug

TD = Total Depth
TOC = Top of Casing

Table 3: Location of Missing Monitoring Wells

Well ID	Status	Resolution
EW-1	Located by Tetra Tech	Sampled in June 2018 by AECOM
EW-2	Located by Tetra Tech	Sampled in June 2018 by AECOM
MRC-MW09A	Located by Tetra Tech, buried by construction; sheared 1' below grade	Abandoned by Tetra Tech
MRC-MW107B/C	Located by Tetra Tech	Sampled in June 2018 by AECOM
MRC-MW16A	Located by Tetra Tech	Sampled in June 2018 by AECOM
MRC-MW23A	Located by Tetra Tech; enclosed within 16-inch protective vault	Gauged in June 2018 by AECOM
MW-11A	Located as damaged by AECOM ; restored by Tetra Tech	Sampled in June 2018 by AECOM

APPENDICES

APPENDIX A
Monitoring Well Repair Photo Log

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-MW08A	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Average		
Comment	Pad not squared, tubing discolored red-brown		







Legend

Monitoring Well

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FIGURE 1

Monitoring Well Repair – June 2018
MRC-MW08A

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-MW106B/C	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Poor		
Comment	Cracked concrete pad, bent bolt. About 35 feet of tubing removed from well		







Legend

Monitoring Well

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FIGURE 2

Monitoring Well Repair - June 2018
MRC-MW106B/C

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-MW10A	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Poor		
Comment	Manhole cracked and rusted out		







Legend

Monitoring Well

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FIGURE 3

Monitoring Well Repair - June 2018
MRC-MW10A

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-MW30A	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Good		
Comment			







Legend

Monitoring Well

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FIGURE 4

Monitoring Well Repair– June 2018
MRC-MW30A

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-MW42A	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Poor		
Comment	No threads, bad corrosion		







Legend

Monitoring Well

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FIGURE 5

Monitoring Well Repairs– June 2018
MRC-MW42A

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-MW71A	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Poor		
Comment			







Legend

Monitoring Well

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FIGURE 6

Monitoring Well Repairs – June 2018
MRC-MW71A

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-MW71B	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Good		
Comment			







Legend

Monitoring Well

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FIGURE 7

Monitoring Well Repairs – June 2018
MRC-MW71B

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Path: M:\EnvDataViz\LockheadMartin\MiddleRiverComplex\mxd\LM_MRC_photolog201804.mxd Date Saved: 5/2/2018 8:38:29 AM



LocationID	MRC-SEMW-1I	**created_user**	Lance.Greene@aecom.com
LocationType	Monitoring Well	**created_date**	3/30/2018 5:22:32 PM
Condition	Poor		
Comment	No cover, well exposed		







Legend

Monitoring Well

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FIGURE 8

Monitoring Well Repairs – June 2018
MRC-SEMW-1I

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	7/20/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

APPENDIX B
Daily Field Reports

Daily Report
June 25, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 80's

Hours Worked on Site: 0730-1730

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, David Brightbill, Matt Ginalick, Antonio Zarrelli, and Victoria Kirkpatrick

Revisions to previous report: None

Daily Summary:

Beginning of the surface water sampling (SWS) program, groundwater sampling (GWS) program, and Monitoring well (MW) repair program.

The following locations were sampled today:

1. MRC-SW5A1
2. MRC-SW5A2
3. MRC-SW5B
4. MRC-SW13A
5. MRC-SW16A
6. MRC-SW15A
7. MRC-SW8A
8. MRC-SW8B
9. MRC-SW6A
10. MRC-SW6B
11. MRC-SW9A
12. MRC-SW9B
13. MRC-SW7A
14. MRC-SW7B
15. MRC-SW1A
16. MRC-SW2A
17. MRC-MW11A
18. MRC-MW16A

The following MW locations were prepped today for new pads (dug out/removed existing pad and manway and installed new manway in pea gravel). Pea gravel was added to ensure proper well drainage as we noted that this was an issue in many of the wells. Manways installed were 9" diameter with 12" skirts.

1. MRC-MW08A
2. MRC-MW106B/C
3. MRC-MW10A
4. MRC-MW111A
5. MRC-MW71A
6. MRC-SEMW-1I

The following locations were repaired today (Sikaflex sealant applied):

1. MRC-MW03A
2. MRC-MW12A
3. MRC-MW50A
4. MRC-MW68A

Samples submitted to ALS Environmental on 6/25/18 via courier.

Safety Activities: Morning safety briefing and afternoon debrief
Issues to be Resolved: None
Impacts to Schedule: None
Planned Activities for 06/26/18: Continuation of GWS, SWS, and MW Repair programs
Attachments: None

AECOM

Daily Report
June 26, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 80's, Sunny

Hours Worked on Site: 0700-1715

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, David Brightbill, Matt Ginalick, Antonio Zarrelli, and Victoria Kirkpatrick

Revisions to previous report: None

Daily Summary:

Completion of the surface water sampling (SWS) program, completion of the groundwater sampling (GWS) program, and continuation of the Monitoring well (MW) repair program.

The following locations were sampled today:

1. MRC-MW107B/C
2. EW-1
3. EW-2

Please note that purge water from EW-1 and EW-2 were segregated as they are part of the F001 plume. A drum tracking sheet will be provided to the team this week. Purge water from MW107B/C was very turbid and full of debris. It appears that Tetra Tech located the well, put a manway on top of the existing manway and attached a non-flush PVC extension (surface water runoff was observed leaking down into well casing at the PVC joint), and finished the location with a pad (see attached photos).

The following MW location pads were completed today:

1. MRC-MW08A
2. MRC-MW106B/C
3. MRC-MW10A
4. MRC-MW111A
5. MRC-MW71A
6. MRC-SEMW-1I

Please note that we built pad frames out of 2x4s for the above list, used high strength Sakrete, and finished the surface completion with an edged, broom finish (see attached photo of an example).

Samples submitted to ALS Environmental on 6/26/18 via courier.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved: None

Impacts to Schedule: None

Planned Activities for 06/267/18: Continuation of MW Repair program

Attachments: Photos

AECOM







June 26, 2018
MRC-MW107B/C

Top Left - Manway chamber with PVC casing, casing compression plug and well lock

Top Right - PVC casing with casing compression plug removed

Bottom - Inside PVC casing

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Appendix B

Monitoring Well Repair - DFR 6/26/2018

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	8/8/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD





June 26, 2018

Top - MRC-MW71A. 2-ft x 2-ft frame used to shape new concrete well pad; pea-gravel base

Bottom - MRC-MW106B/C. Completed and textured concrete well pad

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Appendix B

Monitoring Well Repair - DFR 6/26/2018

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	8/8/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Daily Report
June 27, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 80's, Cloudy, intermittent heavy rain all day

Hours Worked on Site: 0700-1730

Personnel on Site (All AECOM):

Holly Brown and Zachary Neigh

Revisions to previous report: None

Daily Summary:

Continuation of the Monitoring well (MW) repair program. Redevelopment was conducted with a mega whale pump and a 2" or 4" custom designed surge block connected to PVC. MWs were surged with both the whale pump and the surge block along the entire length of the screen.

Redevelopment was initiated or completed today on the following locations:

1. MRC-MW72B - Redevelopment complete; approximately 50 gallons of sediment laden purge water removed. Very hard well bottom and GW was purging clear at the end of development. Initial measured DTB = 33.64 ft. from TOC, final DTB = 34 ft. from TOC. Tetra Tech (TT) total depth (TD) is listed as 35' but I am certain that this is an error and the actual installed depth is 34' given the conditions measured after development (clear water and very hard bottom). Please note that purge water from MRC-MW72B was segregated as hazardous F001 waste. Purge water was very turbid.
2. MRC-MW70A - Redevelopment initiated; approximately 40 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured DTB = 9.35 ft. from TOC, TT TD = 14.0'. Extremely thick silt and clay (see attached photo) accumulation present at the bottom of the well and numerous silt bridges present in the screened interval. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was extremely turbid.
3. MRC-MW70B - Redevelopment initiated; approximately 40 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured DTB = 27.32 ft. from TOC, TT TD = 30.0'. Extremely thick silt and clay accumulation present at the bottom of the well and numerous silt bridges present in the screened interval. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was extremely turbid.

A drum tracking sheet will be provided to the team this week.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved: None

Impacts to Schedule: None

Planned Activities for 06/28/18: Continuation of MW Repair program

Attachments: Photo

AECOM



June 27, 2018
MRC-MW70A

Thick silty to clayey sediment associated with sediment accumulation at the bottom of well and numerous silt bridges present in the screened interval

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Appendix B

Monitoring Well Repair - DFR 6/27/2018

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	8/8/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Daily Report
June 28, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 90's, Sunny

Hours Worked on Site: 0700-1730

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, Matt Ginalick, and Antonio Zarrelli

Revisions to previous report: Revision to daily report from 6/26/18. All drums (9 total) from the April sampling event were removed from the site via Clean Harbors. Manifests were signed by Mike Musheno. I will provide the team with copies once I am back in the office and have access to a scanner.

Daily Summary:

Continuation of the Monitoring well (MW) repair program. Redevelopment was conducted with a mega whale pump and a 2" or 4" custom designed surge block connected to PVC. MWs were surged with both the whale pump and the surge block along the entire length of the screen.

Redevelopment was initiated, continued, or completed today on the following locations:

1. MRC-MW70A - Redevelopment continued; approximately 30 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured depth to bottom (DTB) = 9.35 ft. from TOC, TT TD = 14.0'. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was turbid. Measured DTB at the end of the day = 12.86'
2. MRC-MW70B - Redevelopment continued; approximately 55 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured DTB = 27.32 ft. from TOC, TT TD = 30.0'. Redevelopment will be continued on this location tomorrow, well ran dry once. See attached photo of purge water. Measured DTB at the end of the day = 29.86'.
3. MRC-MW73A - Redevelopment initiated and completed; approximately 20 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 15.46 ft. from TOC, TT TD = 17.0'. Measured DTB at the end of the day = 15.98', hard bottom. Fairly certain that total well depth is 16.0', not 17.0' as the bottom was very hard. Well ran dry twice.
4. MRC-MW12A - Redevelopment initiated (see attached photo); approximately 20 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt. Initial measured depth to bottom (DTB) = 12.86 ft. from TOC, TT TD = 14.0'. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was turbid. Measured DTB at the end of the day = 12.96'
5. MRC-MW91A - Redevelopment initiated; approximately 6 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 17.66 ft. from TOC, TT TD = 20.0'. Measured DTB at the end of the day = 18.0', semi-hard bottom. Redevelopment will be continued on this location tomorrow, well ran dry twice.
6. MRC-MW86A - Redevelopment initiated; approximately 18 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 12.61 ft. from TOC, TT TD = 16.0'. Measured DTB at the end of the day = 12.8', hard bottom. Redevelopment will be continued on this location tomorrow, well ran dry twice.
7. MRC-MW87A - Redevelopment initiated; approximately 3 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 14.26 ft. from TOC, TT TD = 16.0'. Measured DTB at the end of the day = 14.34', soft bottom. Redevelopment will be continued on this location tomorrow, well ran dry twice.
8. MRC-MW77A - Redevelopment initiated and completed; approximately 20 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 15.64 ft. from TOC, TT TD = 17.0'. Measured DTB at the end of the day = 15.90', hard bottom. Fairly certain that total well depth is

16.0', not 17.0' as the bottom was very hard. Well ran dry once.

9. MRC-NMW-1I - Redevelopment initiated (see attached photos); approximately 25 gallons of sediment laden purge water removed before a call was placed to Holly, informing her that it did not seem like this was a typical MW. Upon inspection, this appears to be an injection well. Redevelopment was stopped at this time.

The following MW locations were prepped today for new pads (dug out/removed existing pad and manway, new manway installed, pea gravel added). Pea gravel was added to ensure proper well drainage as we noted that this was an issue in many of the wells. All of the existing manways removed were cemented in place for with concrete aggregate which would be why they were holding SW runoff (see attached photo). Manways installed were 9" diameter with 12" skirts.

1. MRC-MW30A
2. MRC-MW42A
3. MRC-MW71B

A drum tracking sheet will be provided to the team this week.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved: MRC-NMW-1I appears to be an active injection well (see attached photos). It has dedicated tubing plumbed into the side of the well casing and white material (baking soda like consistency) is present inside of the well. Please confirm that this is an active injection well and should not be considered a monitoring well or part of GW monitoring program. This well was not redeveloped.

Impacts to Schedule: None

Planned Activities for 06/29/18: Continuation of MW Repair program

Attachments: Photos

AECOM





June 28, 2018
MRC-NMW1I

Top - Locality surrounding location of MRC-NMW1I

Bottom - PVC casing with labeled well cap within protective manway chamber

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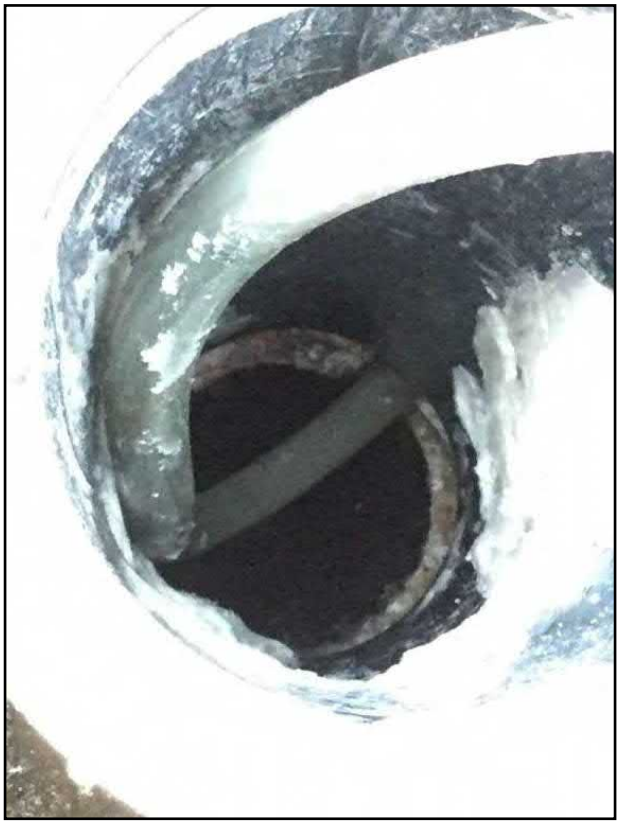
Appendix B

Monitoring Well Repair - DFR 6/28/2018

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	8/8/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD









June 28, 2018
MRC-NMW1I

Top Left - Sodium bicarbonate accumulation caked to side of well casing
Top Right - Sampling tubing emplaced within well for purging
Bottom Left - Purge set-up and sediment-laden purge water accumulation in 5-gallon buckets
Bottom Right - Well label found on top of well cap

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Appendix B

Monitoring Well Repair - DFR 6/28/2018

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	8/8/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD





June 28, 2018

Top - Purge water from MRC-MW70A, delivered to USDOT-approved 55-gallon steel drum

Bottom - Replaced intact manway; all manways removed during current repair event were cemented in place with concrete aggregate that may be contributing to surface water retention

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Appendix B

Monitoring Well Repair - DFR 6/28/2018

DRAWN BY:	REVIEWED BY:	APPROVED BY:	DATE:	PROJECT NO.:
Lance.Greene	HAB	--	8/8/2018	60555202

LOCKHEED MARTIN CORPORATION – MIDDLE RIVER COMPLEX
MIDDLE RIVER, MD

Daily Report
June 29, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 90's, Sunny

Hours Worked on Site: 0700-1700

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, Matt Ginalick, Victoria Kirkpatrick, and Antonio Zarrelli

Revisions to previous report: None

Daily Summary:

Completion of the Monitoring well (MW) repair program. Redevelopment was conducted with a mega whale pump and a 2" or 4" custom designed surge block connected to PVC. MWs were surged with both the whale pump and the surge block along the entire length of the screen.

Redevelopment was initiated, continued, and/or completed today on the following locations:

1. MRC-MW70A
2. MRC-MW70B
3. MRC-MW12A
4. MRC-MW30A
5. MRC-MW68A
6. MRC-MW93B
7. MRC-MW54A
8. MRC-MW91A
9. MRC-MW87A
10. MRC-MW86A
11. MRC-MW103A

The following MW location pads were completed today:

1. MRC-MW30A
2. MRC-MW42A
3. MRC-MW71B

Please note that we built pad frames (2' x 2') for the above list, used high strength Sakrete, and finished the surface completion with an edged, broom finish.

All other well repairs (bolts, washers, and O-rings) were made today. Upon closer inspection, MRC-MW15A, MRC-MW26A, and MRC-SWMW-1I did not have cracked lids, flush mount covers were not replaced. MRC-SEMW-3I had a flush mount cover right next to the well so we secured it in place to the manway with new bolts.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved:

1. MRC-NMW-1I appears to be an active injection well. It has dedicated tubing plumbed into the side of the well casing and white material (baking soda like consistency) is present inside of the well. Please confirm that this is an active injection well and should not be considered a monitoring well or part of

GW monitoring program. This well was not redeveloped.

2. There are 2 locations (MRC-MW29A and MRC-MW53B) where flush mount lids could not be replaced. Due to there being multiple types of manways onsite, the manufacturers of the lids needed for these two locations did not just sell lid replacements. We could purchase manways for these locations but, upon further inspection, it appears that the entire manway on these locations are partially rusted and/or cemented in and may require complete pad and manway replacement in 2019, pending LMC approval. Overall, the compression well caps and inner well casing appear to be in good condition for these locations.

AECOM

APPENDIX B
Daily Field Reports and Low-Flow Sampling Forms

Daily Report
April 2, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 50's, periods of rain

Hours Worked on Site: 0700-1730

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: N/A

Daily Summary:

Site-wide gauging of monitoring wells.

Dark Head Cove Outfall009 observed to have a sheen emanating from it. Further investigation by LMCPI occurring tomorrow.

Safety Activities: Morning safety briefing and evening debrief

Issues to be Resolved:

1. MRC-STAFF01 & 02 are destroyed. In the interim, AECOM will make a fix mark on the bulkhead to take DTW measurements from both the Cow Pen Creek and Dark Head Cove sides. Tide charts will be noted.
2. MRC-MW93A/B, MRC-MW24A, and MRC-MW94B have dumpsters over them. Holly Brown continuing to work with personnel onsite to try and get them moved.
3. MRC-MW67A is rusted shut. Holly Brown will attempt to loosen the lid with a sledge hammer today.
4. MRC-MW96A/B and MRC-MW41A had vehicles parked on them the entire day. We will try and gauge these locations today.
5. Cannot locate MRC-MW54A, MRC-MW09A, MRC-MW16A, MRC-MW131B, MRC-MW23A, MRC-MW61S, and MRC-MW122A. It appears that recent onsite construction activities may have destroyed these wells. There is recent new grading in the areas where the above wells are. Further investigation by Holly Brown will occur today.

Impacts to Schedule: None

Planned Activities for 04/03/18: Continue groundwater gauging of site monitoring wells.

Attachments: Gauging tracking table and updated gauging map

Daily Report
April 3, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 40's - 50's, periods of rain

Hours Worked on Site: 0700-1700

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: N/A

Daily Summary:

Site-wide gauging of monitoring wells.

Dark Head Cove Outfall009 observed to have no sheen emanating from it. Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing and evening debrief

Issues to be Resolved:

1. MRC-MW93A/B, MRC-MW24A, and MRC-MW94B have dumpsters over them. Holly Brown continuing to work with personnel onsite to try and get them moved. I have emailed and left voicemails for Terry Miller (LM) and Dave Brown (GE) who are facilities managers for the site in an effort to get the dumpsters moved so we can access these locations. In addition, I have spoken with Chris Keller (LM), Mike Musheno (LM), and Glen Harriel (LM) about additional POCs I may contact in regards to trying to assist with temporary dumpster relocation.
2. MRC-MW67A is rusted shut. Holly Brown spoke with a pipe fitter onsite (personal POC) and I am going to try and pry open the lid tomorrow with a small crow bar. Sledge hammer did not work today.
3. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW11A, MRC-MW12A, MRC-MW54A, MRC-MW09A, MRC-MW16A, MRC-MW61S, and MRC-MW122A. It appears that recent onsite construction activities may have destroyed these wells. There is recent new grading in the areas where the above wells are. We dug down in many areas and were able to find other wells but nothing on the list above. MRC-MW23A is just a concrete well pad at that location, no monitoring well, casing, manway, etc. are present.

Impacts to Schedule: None

Planned Activities for 04/04/18: Complete groundwater gauging of site monitoring wells and begin groundwater sampling activities.

Attachments: Gauging tracking table

Daily Report
April 4, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 50's, periods of rain, sustained winds 40 mph with gusts up to 60 mph

Hours Worked on Site: 0700-1915

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: Bulkhead inspected at 0830, 1400, and 1700 on 4/3/18. No sheen present.

Daily Summary:

Site-wide gauging of monitoring wells. Remaining wells to be gauged cannot be located or are under dumpsters. Began groundwater sampling.

The following locations were sampled today:

1. MRC-MW121A
2. MRC-MW121B
3. MRC-MW71B
4. MRC-MW14B
5. MRC-MW48A
6. MRC-MW43A
7. MRC-MW123A

Samples will be submitted to ALS Environmental on 4/5/18 via courier.

Dark Head Cove Outfall009 observed to have no sheen emanating from it at 1100 (high tide) and 1800 (low tide). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, and evening debrief

Issues to be Resolved:

1. MRC-MW93A/B, MRC-MW24A, and MRC-MW94B have dumpsters over them. Holly Brown continuing to work with personnel onsite to try and get them moved. Terry Miller (LM), Dave Brown (GE), Chris Keller (LM), Mike Musheno (LM), and Glen Harriel (LM) have been contacted and an inquiry made in regards to additional POCs that I may contact in regards to trying to assist with temporary dumpster relocation.
2. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, MRC-MW61S, and MRC-MW122A. It appears that recent onsite construction activities may have destroyed these wells. There is recent new grading in the areas where the above wells are. We dug down to 1' bgs within a 16' diameter circle around the GPS location and were not able to locate the locations listed above.
3. MRC-MW11A and MRC-MW23A are destroyed.

Impacts to Schedule: None

Planned Activities for 04/05/18: Complete groundwater gauging of site monitoring wells and continue groundwater sampling activities.

Attachments: Gauging tracking table

Daily Report
April 5, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 40's, winds 15-20 mph

Hours Worked on Site: 0700-1915

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: None

Daily Summary:

Site-wide groundwater sampling. Remaining wells to be gauged cannot be located or are under dumpsters. Holly Brown received a Schonstedt this evening and will be sweeping areas for wells that we could not locate on Friday 4/6 or over the weekend.

The following locations were sampled today:

1. MRC-MW70A
2. MRC-MW70B
3. MRC-MW63A
4. MRC-SWMW-4S
5. MRC-SWMW-4I
6. MRC-MW76B
7. MRC-MW76A
8. MRC-MW60A
9. MRC-MW60B
10. MRC-MW110A
11. MRC-MW110B
12. MRC-MW11B
13. MRC-MW53A
14. MRC-MW53B
15. MRC-MW44A
16. MRC-MW62A
17. MRC-MW62C
18. MRC-MW125A
19. MRC-MW125B

Samples submitted to ALS Environmental on 4/5/18 via courier.

Dark Head Cove Outfall009 observed to have no sheen emanating from it at 12pm (high tide) and 1900 (low tide). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, and evening debrief

Issues to be Resolved:

1. MRC-MW24A has a dumpster over it. Holly Brown continuing to work with personnel onsite to try and get it moved.
2. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MW23A. Holly Brown to investigate remaining of missing wells with a Schonstedt.
3. MRC-MW11A is destroyed.

Impacts to Schedule: None

Planned Activities for 04/05/18: Complete groundwater gauging of site monitoring wells and continue

groundwater sampling activities.
Attachments: Gauging tracking table

Daily Report
April 6, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 40's – 60's

Hours Worked on Site: 0700-2015

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: None

Daily Summary:

Site-wide groundwater sampling.

The following locations were sampled today:

1. MRC-MW106B/C
2. MRC-MW21A
3. MRC-MW21B
4. MRC-MW20A
5. MRC-MW81A
6. MRC-MW81B
7. MRC-MW78B
8. MRC-MW92C
9. MRC-MW126B
10. MRC-MW126A
11. MRC-MW113A
12. MRC-MW103A
13. MRC-MW103B
14. MRC-MW90B
15. MRC-MW120A
16. MRC-MW120B
17. MRC-MW119A
18. MRC-MW119B

Samples submitted to ALS Environmental on 4/6/18 via courier.

Dark Head Cove Outfall009 observed to have no sheen emanating from it at 1245 (high tide) and 2000 (low tide). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, and evening debrief

Issues to be Resolved:

1. MRC-MW24A has a dumpster over it. Holly Brown continuing to work with personnel onsite to try and get it moved.
2. Cannot locate MRC-MW107B/C, MRC-MW09A, and MRC-MW16A. Holly Brown to investigate remaining wells with a Schonstedt this week.
3. Cannot locate EW-1, EW-2, and MRC-MW23A with a Schonstedt. Holly Brown spent many hours digging holes and could not locate these locations (see attached photos).
4. MRC-MW11A is destroyed.

Impacts to Schedule: None

Planned Activities for 04/09/18: Complete groundwater gauging of site monitoring wells and continue groundwater sampling activities.

Daily Report
April 7, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 50's – 60's

Hours Worked on Site: 1700 - 1830

AECOM Personnel on Site:

Holly Brown

Revisions to previous report: None

Daily Summary:

Located and coned off monitoring wells to be sampled Monday morning that are in parking spots or high traffic areas to ensure access.

Safety Activities: Safety briefing and stretching

Issues to be Resolved:

1. MRC-MW24A has a dumpster over it. Holly Brown continuing to work with personnel onsite to try and get it moved.
2. Cannot locate MRC-MW107B/C, MRC-MW09A, and MRC-MW16A. Holly Brown to investigate remaining wells with a Schonstedt this coming week.
3. Cannot locate EW-1, EW-2, and MRC-MW23A with a Schonstedt.
4. MRC-MW11A is destroyed.

Impacts to Schedule: None

Planned Activities for 04/09/18: Complete groundwater gauging of site monitoring wells and continue groundwater sampling activities.

Attachments: Gauging tracking table and photos

Daily Report
April 9, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 30's – 40's

Hours Worked on Site: 0700-1930

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: None

Daily Summary:

Site-wide groundwater sampling.

The following locations were sampled today:

1. MRC-MW87A
2. MRC-MW87B
3. MRC-MW25A
4. MRC-MW95A
5. MRC-MW41A
6. MRC-MW69A
7. MRC-MW69B
8. MRC-MW64A
9. MRC-MW117B
10. MRC-MW114A
11. MRC-MW102A
12. MRC-MW102B
13. MRC-MW101A
14. MRC-MW101B
15. MRC-MW79B
16. MRC-MW12A
17. MRC-MW12B
18. MRC-MW15A
19. MRC-MW22B

Samples submitted to ALS Environmental on 4/9/18 via courier. Sample tracking table to come, QCing the table against submitted laboratory COCs.

Dark Head Cove Outfall009 observed to have no product sheen emanating from it at 0800 (low tide) and 1800 (high tide at 1600 but contractors were doing work along the bulkhead and Holly Brown did not want to interfere). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, and evening debrief

Issues to be Resolved:

1. MRC-MW24A has a dumpster over it. Holly Brown continuing to work with personnel onsite to try and get it moved.
2. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt on 4/6/18. Holly Brown could not locate MRC-MW107B/C, MRC-MW09A, MRC-MW16A today with a Schonstedt on 4/9/18 (see attached photos).
3. MRC-MW11A is destroyed.
4. Installation of tidal gauge(s) prior to SW sampling?
5. MRC-MW119B had <1' of water in it and went dry immediately purging at 100mL/min. Well was left to recharge but field staff were only able to grab 1 vial for VOC analysis before it went dry again. This

well calls for VOCs (2-40mL VOAs), 1,4-Dioxane (2-1L Ambers) and hexavalent chromium (1-250 mL plastic). Should we try and get additional GW from it tomorrow to at least get 2 vials for VOC analysis?
Impacts to Schedule: None
Planned Activities for 04/09/18: Complete groundwater gauging of site monitoring wells and continue groundwater sampling activities.
Attachments: Gauging tracking table and photos

Daily Report
April 10, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 40's – 60's

Hours Worked on Site: 0700-1815

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: None

Daily Summary:

Site-wide groundwater sampling.

The following locations were sampled today:

1. MRC-MW10A
2. MRC-MW12C
3. MRC-MW13A
4. MRC-MW32A
5. MRC-MW127A
6. MRC-MW127B
7. MRC-MW128A
8. MRC-MW33A
9. MRC-MW115A
10. MRC-MW27A
11. MRC-MW27B
12. MRC-MW27C
13. MRC-MW17A
14. MRC-MW50A
15. MRC-MW109A
16. MRC-MW109B
17. MRC-MW118A
18. MRC-MW118B
19. MRC-MW122A

Samples submitted to ALS Environmental on 4/10/18 via courier.

Dark Head Cove Outfall009 observed to have no product sheen emanating from it at 1000 (low tide) and 1700 (high tide). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, safety observations/safety conversations/unsafe conditions discussed during evening debrief and entered into Industry Safe.

Issues to be Resolved:

1. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt.
2. MRC-MW11A is destroyed.
3. Installation of tidal gauge(s) prior to SW sampling?

Impacts to Schedule: None

Planned Activities for 04/11/18: Complete groundwater gauging of site monitoring wells and continue groundwater sampling activities.

Attachments: Gauging tracking table

Daily Report
April 11, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 40's – 60's

Hours Worked on Site: 0630-1915

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: None

Daily Summary:

Site-wide groundwater sampling.

The following locations were sampled today:

1. MRC-MW29A
2. MRC-MW58A
3. MRC-MW18A
4. MRC-SWMW-5I
5. MRC-MW129A
6. MRC-MW129B
7. MRC-MW128B
8. MRC-MW130A
9. MRC-MW130B
10. MRC-MW111B
11. MRC-MW100A
12. MRC-MW100B
13. MRC-MW34B
14. MRC-MW34C
15. MRC-MW38A
16. MRC-MW131B

Samples submitted to ALS Environmental on 4/11/18 via courier.

Dark Head Cove Outfall009 observed to have no product sheen emanating from it at 1100 (low tide) and 1730 (high tide). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, safety observations/safety conversations/unsafe conditions discussed during evening debrief and entered into Industry Safe.

Issues to be Resolved:

1. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt.
2. MRC-MW11A is destroyed.
3. Installation of tidal gauge(s) prior to SW sampling?

Impacts to Schedule: None

Planned Activities for 04/12/18: Continue groundwater sampling activities.

Attachments: Gauging tracking table

Daily Report
April 12, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 40's – 70's, high winds in the afternoon, gusts up to 30 mph

Hours Worked on Site: 0630-1815

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: None

Daily Summary:

Site-wide groundwater sampling.

The following locations were sampled today:

1. MRC-MW96A
2. MRC-MW96B
3. MRC-MW104A
4. MRC-MW104B
5. MRC-MW122A (additional sample volume collected from well that ran dry)
6. MRC-MW119A (additional sample volume collected from well that ran dry)
7. MRC-MW73A
8. MRC-MW73B
9. MRC-MW124A
10. MRC-MW124B
11. MRC-MW34A
12. MRC-MW93A
13. MRC-MW07A
14. MRC-SWMW-1I
15. MRC- SWMW-2I
16. MRC- SWMW-3I
17. MRC-MW111A
18. MRC-MW111B
19. MRC-MW98A
20. MRC-MW98B
21. MRC-MW38B
22. MRC-MW02A

Samples submitted to ALS Environmental on 4/12/18 via courier.

Dark Head Cove Outfall009 observed to have no product sheen emanating from it at 1130 (low tide) and 1800 (high tide). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, safety observations/safety conversations/unsafe conditions discussed during evening debrief. In regards to the near miss reported on 4/10/18:

A field staff member noted that she tripped (no fall) over a peristaltic pump cord that was connected from her truck battery to her sampling location over the monitoring well. She took active measures to report the near miss to our local safety rep in the Germantown, MD office and onsite SSHO. Corrective measures were instituted by Holly Brown and a stop work situation was enforced for the entire sampling team. A team wide discussion was had on how to best position the pumps to reduce the potential for trips over equipment cords in addition to optimizing the sampling setup to keep the minimal amount of cords exposed in the active sampling work area (see attached photos).

Issues to be Resolved:

1. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt. These wells will not be gauged or sampled.
2. MRC-MW11A is destroyed. This well will not be gauged or sampled.
3. Installation of staff gauges for Cow Pen Creek and Dark Head Cove.

Impacts to Schedule: None

Planned Activities for 04/13/18: Completion of the groundwater sampling portion of the program. F001 purge groundwater will be generated tomorrow and stored in our hazardous containment area.

Attachments: Industry Safe near miss report, email acknowledgement from Patrick McCullough, photos of sampling setup optimization to reduce slips, trips, and falls.

Daily Report
April 13, 2018
Annual Gauging and Groundwater Sampling
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 50's – 80's, sunny

Hours Worked on Site: 0700-1700

AECOM Personnel on Site:

Holly Brown, Antonio Zarrelli, Adam Dec, Victoria Kirkpatrick, Zachary Neigh

Revisions to previous report: None

Daily Summary:

Completion of site-wide groundwater sampling.

The following locations were sampled today:

1. MRC-MW101A
2. MRC-MW122A
3. MRC-MW74B
4. MRC-SEMW-7I
5. MRC-MW74A
6. MRC-MW74C
7. MRC-MW122A
8. MRC-MW37C
9. MRC-MW72B
10. MRC-MW37B
11. MRC-SEMW-8I
12. MRC-SEMW-9I
13. MRC-SEMW-9S
14. MRC-MW37A
15. MRC-SEMW-8S

Samples submitted to ALS Environmental on 4/13/18 via courier.

Dark Head Cove Outfall009 observed to have no product sheen emanating from it at 0700 (high tide) and 1300 (low tide). Holly Brown will continue to inspect the area daily during both high and low tide.

Safety Activities: Morning safety briefing, stretching, safety observations/safety conversations/unsafe conditions discussed during evening debrief.

Issues to be Resolved:

1. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt. These wells will not be gauged or sampled.
2. MRC-MW11A is destroyed. This well will not be gauged or sampled.
3. Installation of staff gauges for Cow Pen Creek and Dark Head Cove.

Impacts to Schedule: None

Planned Activities for 04/16/18: Begin surface water sampling in Cow Pen Creek and Dark Head Cove

Attachments: Drum tracking table

Daily Report
April 16, 2018
Surface Water Sampling - April 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 40's – 50's, heavy rain

Hours Worked on Site: 1030-1745

AECOM Personnel on Site:

Holly Brown, Zachary Neigh, David Brightbill

Revisions to previous report: None

Daily Summary:

Beginning of surface water sampling program.

The following locations were sampled today:

1. MRC-SW17A
2. MRC-SW1A
3. MRC-SW2A

Samples submitted to ALS Environmental on 4/16/18 via courier.

Dark Head Cove Outfall009 observed to have no product sheen emanating from it at 1515 (low tide). We were not present onsite to observe high tide.

Safety Activities: Morning safety briefing and evening debrief

Issues to be Resolved:

1. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt. These wells will not be gauged or sampled.
2. MRC-MW11A is destroyed. This well will not be gauged or sampled.
3. Installation of staff gauges for Cow Pen Creek and Dark Head Cove.

Impacts to Schedule: None

Planned Activities for 04/17/18: Complete surface water sampling in Dark Head Cove

Attachments: None

Daily Report
April 17, 2018
Surface Water Sampling - April 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 30's – 40's, moderately windy (10-30 mph)

Hours Worked on Site: 0645-1530

AECOM Personnel on Site:

Holly Brown, Zachary Neigh, David Brightbill

Revisions to previous report: Wilson Point Park staff gauge reading of 2.9' upon departure (1530) and 2.8' upon return (1700) on 4/16. Please note that low tide was 1515 on 4/16 but due to the heavy rains overnight and in the morning in the area, the water level was significantly higher than normal during low tide.

Daily Summary:

Continuation of surface water sampling program. Staff gauge at Wilson Point Park boat ramp used to gauge water level. Staff gauge reading of 1.8' upon departure (0830) and 1.4' upon return (1500).

The following locations were sampled today:

1. MRC-SW5A1
2. MRC-SW5A2
3. MRC-SW5B
4. MRC-SW13A
5. MRC-SW15A
6. MRC-SW16A
7. MRC-SW8A
8. MRC-SW8B
9. MRC-SW6A
10. MRC-SW6B
11. MRC-SW9A
12. MRC-SW9B
13. MRC-SW7A
14. MRC-SW7B

Samples submitted to ALS Environmental on 4/17/18 via courier.

Dark Head Cove Outfall009 observed to have no product sheen emanating from it at 0930 (high tide) and 1530 (low tide).

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved:

1. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt. These wells will not be gauged or sampled.
2. MRC-MW11A is destroyed. This well will not be gauged or sampled.
3. Installation of staff gauges for Cow Pen Creek and Dark Head Cove.

Impacts to Schedule: None

Planned Activities for 04/18/18: Equipment rental pickup, unused bottleware and cooler pickup, drum inspections

Attachments: Drum Tracking Table

Daily Report
April 18, 2018
Annual Gauging, Groundwater Sampling, Surface Water Sampling Monitoring - April 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 50's – 60's

Hours Worked on Site: 1330 – 1530

AECOM Personnel on Site:

Holly Brown

Revisions to previous report: None

Daily Summary:

Completion of sampling program. Drum inspection, empty cooler and bottleware equipment pickup by ALS courier, and rental equipment picked up by Pine. Site demobilization (photos attached of final site appearance).

Safety Activities: Afternoon safety briefing

Issues to be Resolved:

1. Cannot locate EW-1, EW-2, MRC-MW107B/C, MRC-MW09A, MRC-MW16A, and MRC-MW23A with a Schonstedt. These wells will not be gauged or sampled.
2. MRC-MW11A is destroyed. This well will not be gauged or sampled.
3. Installation of staff gauges for Cow Pen Creek and Dark Head Cove.

Impacts to Schedule: N/A, sampling program for April 208 is complete.

Planned Activities for the week of 4/23/18: Drum Inspection

Attachments: Drum Tracking Table, Sample Tracking Table, site photos

Daily Report
June 25, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 80's

Hours Worked on Site: 0730-1730

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, David Brightbill, Matt Ginalick, Antonio Zarrelli, and Victoria Kirkpatrick

Revisions to previous report: None

Daily Summary:

Beginning of the surface water sampling (SWS) program, groundwater sampling (GWS) program, and Monitoring well (MW) repair program.

The following locations were sampled today:

1. MRC-SW5A1
2. MRC-SW5A2
3. MRC-SW5B
4. MRC-SW13A
5. MRC-SW16A
6. MRC-SW15A
7. MRC-SW8A
8. MRC-SW8B
9. MRC-SW6A
10. MRC-SW6B
11. MRC-SW9A
12. MRC-SW9B
13. MRC-SW7A
14. MRC-SW7B
15. MRC-SW1A
16. MRC-SW2A
17. MRC-MW11A
18. MRC-MW16A

The following MW locations were prepped today for new pads (dug out/removed existing pad and manway and installed new manway in pea gravel). Pea gravel was added to ensure proper well drainage as we noted that this was an issue in many of the wells. Manways installed were 9" diameter with 12" skirts.

1. MRC-MW08A
2. MRC-MW106B/C
3. MRC-MW10A
4. MRC-MW111A
5. MRC-MW71A
6. MRC-SEMW-1I

The following locations were repaired today (Sikaflex sealant applied):

1. MRC-MW03A
2. MRC-MW12A
3. MRC-MW50A
4. MRC-MW68A

Samples submitted to ALS Environmental on 6/25/18 via courier.

Safety Activities: Morning safety briefing and afternoon debrief
Issues to be Resolved: None
Impacts to Schedule: None
Planned Activities for 06/26/18: Continuation of GWS, SWS, and MW Repair programs
Attachments: None

Daily Report
June 26, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 80's, Sunny

Hours Worked on Site: 0700-1715

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, David Brightbill, Matt Ginalick, Antonio Zarrelli, and Victoria Kirkpatrick

Revisions to previous report: None

Daily Summary:

Completion of the surface water sampling (SWS) program, completion of the groundwater sampling (GWS) program, and continuation of the Monitoring well (MW) repair program.

The following locations were sampled today:

1. MRC-MW107B/C
2. EW-1
3. EW-2

Please note that purge water from EW-1 and EW-2 were segregated as they are part of the F001 plume. A drum tracking sheet will be provided to the team this week. Purge water from MW107B/C was very turbid and full of debris. It appears that Tetra Tech located the well, put a manway on top of the existing manway and attached a non-flush PVC extension (surface water runoff was observed leaking down into well casing at the PVC joint), and finished the location with a pad (see attached photos).

The following MW location pads were completed today:

1. MRC-MW08A
2. MRC-MW106B/C
3. MRC-MW10A
4. MRC-MW111A
5. MRC-MW71A
6. MRC-SEMW-1I

Please note that we built pad frames out of 2x4s for the above list, used high strength Sakrete, and finished the surface completion with an edged, broom finish (see attached photo of an example).

Samples submitted to ALS Environmental on 6/26/18 via courier.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved: None

Impacts to Schedule: None

Planned Activities for 06/267/18: Continuation of MW Repair program

Attachments: Photos

Daily Report
June 27, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 80's, Cloudy, intermittent heavy rain all day

Hours Worked on Site: 0700-1730

Personnel on Site (All AECOM):

Holly Brown and Zachary Neigh

Revisions to previous report: None

Daily Summary:

Continuation of the Monitoring well (MW) repair program. Redevelopment was conducted with a mega whale pump and a 2" or 4" custom designed surge block connected to PVC. MWs were surged with both the whale pump and the surge block along the entire length of the screen.

Redevelopment was initiated or completed today on the following locations:

1. MRC-MW72B - Redevelopment complete; approximately 50 gallons of sediment laden purge water removed. Very hard well bottom and GW was purging clear at the end of development. Initial measured DTB = 33.64 ft. from TOC, final DTB = 34 ft. from TOC. Tetra Tech (TT) total depth (TD) is listed as 35' but I am certain that this is an error and the actual installed depth is 34' given the conditions measured after development (clear water and very hard bottom). Please note that purge water from MRC-MW72B was segregated as hazardous F001 waste. Purge water was very turbid.
2. MRC-MW70A - Redevelopment initiated; approximately 40 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured DTB = 9.35 ft. from TOC, TT TD = 14.0'. Extremely thick silt and clay (see attached photo) accumulation present at the bottom of the well and numerous silt bridges present in the screened interval. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was extremely turbid.
3. MRC-MW70B - Redevelopment initiated; approximately 40 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured DTB = 27.32 ft. from TOC, TT TD = 30.0'. Extremely thick silt and clay accumulation present at the bottom of the well and numerous silt bridges present in the screened interval. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was extremely turbid.

A drum tracking sheet will be provided to the team this week.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved: None

Impacts to Schedule: None

Planned Activities for 06/28/18: Continuation of MW Repair program

Attachments: Photo

Daily Report
June 28, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 90's, Sunny

Hours Worked on Site: 0700-1730

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, Matt Ginalick, and Antonio Zarrelli

Revisions to previous report: Revision to daily report from 6/26/18. All drums (9 total) from the April sampling event were removed from the site via Clean Harbors. Manifests were signed by Mike Musheno. I will provide the team with copies once I am back in the office and have access to a scanner.

Daily Summary:

Continuation of the Monitoring well (MW) repair program. Redevelopment was conducted with a mega whale pump and a 2" or 4" custom designed surge block connected to PVC. MWs were surged with both the whale pump and the surge block along the entire length of the screen.

Redevelopment was initiated, continued, or completed today on the following locations:

1. MRC-MW70A - Redevelopment continued; approximately 30 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured depth to bottom (DTB) = 9.35 ft. from TOC, TT TD = 14.0'. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was turbid. Measured DTB at the end of the day = 12.86'
2. MRC-MW70B - Redevelopment continued; approximately 55 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt and clay. Initial measured DTB = 27.32 ft. from TOC, TT TD = 30.0'. Redevelopment will be continued on this location tomorrow, well ran dry once. See attached photo of purge water. Measured DTB at the end of the day = 29.86'.
3. MRC-MW73A - Redevelopment initiated and completed; approximately 20 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 15.46 ft. from TOC, TT TD = 17.0'. Measured DTB at the end of the day = 15.98', hard bottom. Fairly certain that total well depth is 16.0', not 17.0' as the bottom was very hard. Well ran dry twice.
4. MRC-MW12A - Redevelopment initiated (see attached photo); approximately 20 gallons of sediment laden purge water removed. Soft well bottom, probe and whale pump coated in thick silt. Initial measured depth to bottom (DTB) = 12.86 ft. from TOC, TT TD = 14.0'. Redevelopment will be continued on this location tomorrow, well ran dry twice. Purge water was turbid. Measured DTB at the end of the day = 12.96'
5. MRC-MW91A - Redevelopment initiated; approximately 6 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 17.66 ft. from TOC, TT TD = 20.0'. Measured DTB at the end of the day = 18.0', semi-hard bottom. Redevelopment will be continued on this location tomorrow, well ran dry twice.
6. MRC-MW86A - Redevelopment initiated; approximately 18 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 12.61 ft. from TOC, TT TD = 16.0'. Measured DTB at the end of the day = 12.8', hard bottom. Redevelopment will be continued on this location tomorrow, well ran dry twice.
7. MRC-MW87A - Redevelopment initiated; approximately 3 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 14.26 ft. from TOC, TT TD = 16.0'. Measured DTB at the end of the day = 14.34', soft bottom. Redevelopment will be continued on this location tomorrow, well ran dry twice.
8. MRC-MW77A - Redevelopment initiated and completed; approximately 20 gallons of sediment laden purge water removed. Initial measured depth to bottom (DTB) = 15.64 ft. from TOC, TT TD = 17.0'. Measured DTB at the end of the day = 15.90', hard bottom. Fairly certain that total well depth is

16.0', not 17.0' as the bottom was very hard. Well ran dry once.

9. MRC-NMW-1I - Redevelopment initiated (see attached photos); approximately 25 gallons of sediment laden purge water removed before a call was placed to Holly, informing her that it did not seem like this was a typical MW. Upon inspection, this appears to be an injection well. Redevelopment was stopped at this time.

The following MW locations were prepped today for new pads (dug out/removed existing pad and manway, new manway installed, pea gravel added). Pea gravel was added to ensure proper well drainage as we noted that this was an issue in many of the wells. All of the existing manways removed were cemented in place for with concrete aggregate which would be why they were holding SW runoff (see attached photo). Manways installed were 9" diameter with 12" skirts.

1. MRC-MW30A
2. MRC-MW42A
3. MRC-MW71B

A drum tracking sheet will be provided to the team this week.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved: MRC-NMW-1I appears to be an active injection well (see attached photos). It has dedicated tubing plumbed into the side of the well casing and white material (baking soda like consistency) is present inside of the well. Please confirm that this is an active injection well and should not be considered a monitoring well or part of GW monitoring program. This well was not redeveloped.

Impacts to Schedule: None

Planned Activities for 06/29/18: Continuation of MW Repair program

Attachments: Photos

Daily Report
June 29, 2018
Surface Water Sampling, Monitoring Well Repairs, and Groundwater Sampling - June 2018 Event
Lockheed Martin Corporation – Middle River Complex, Middle River, MD

Weather: 90's, Sunny

Hours Worked on Site: 0700-1700

Personnel on Site (All AECOM):

Holly Brown, Zachary Neigh, Matt Ginalick, Victoria Kirkpatrick, and Antonio Zarrelli

Revisions to previous report: None

Daily Summary:

Completion of the Monitoring well (MW) repair program. Redevelopment was conducted with a mega whale pump and a 2" or 4" custom designed surge block connected to PVC. MWs were surged with both the whale pump and the surge block along the entire length of the screen.

Redevelopment was initiated, continued, and/or completed today on the following locations:

1. MRC-MW70A
2. MRC-MW70B
3. MRC-MW12A
4. MRC-MW30A
5. MRC-MW68A
6. MRC-MW93B
7. MRC-MW54A
8. MRC-MW91A
9. MRC-MW87A
10. MRC-MW86A
11. MRC-MW103A

The following MW location pads were completed today:

1. MRC-MW30A
2. MRC-MW42A
3. MRC-MW71B

Please note that we built pad frames (2' x 2') for the above list, used high strength Sakrete, and finished the surface completion with an edged, broom finish.

All other well repairs (bolts, washers, and O-rings) were made today. Upon closer inspection, MRC-MW15A, MRC-MW26A, and MRC-SWMW-1I did not have cracked lids, flush mount covers were not replaced. MRC-SEMW-3I had a flush mount cover right next to the well so we secured it in place to the manway with new bolts.

Safety Activities: Morning safety briefing and afternoon debrief

Issues to be Resolved:

1. MRC-NMW-1I appears to be an active injection well. It has dedicated tubing plumbed into the side of the well casing and white material (baking soda like consistency) is present inside of the well. Please confirm that this is an active injection well and should not be considered a monitoring well or part of

GW monitoring program. This well was not redeveloped.

2. There are 2 locations (MRC-MW29A and MRC-MW53B) where flush mount lids could not be replaced. Due to there being multiple types of manways onsite, the manufacturers of the lids needed for these two locations did not just sell lid replacements. We could purchase manways for these locations but, upon further inspection, it appears that the entire manway on these locations are partially rusted and/or cemented in and may require complete pad and manway replacement in 2019, pending LMC approval. Overall, the compression well caps and inner well casing appear to be in good condition for these locations.

LMC MRC Drum Tracking Table
Aprl 2018 GWS Event

Drum ID	Contents	Label Type	Sampled	Accumulation Date	Weekly Inspection	Condition	Contents
DM-1	Purged GW	Non-Hazardous Waste	4/17/2018	4/4/2018	4/11/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW63A, 43A, 123A, 48A, 121A, 121B, 71B 14B, 70A, 70B, 44A, 62A, 62C, 125A, 125B, MRC-SWMW-4S, 4I
DM-2	Purged GW	Non-Hazardous Waste	4/17/2018	4/5/2018	4/12/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW70A, 70B, 63A, 76B, 76A, 60A, 60B, 110B, 11B, 53A, 53B, 44A, 62A, 62C, 125A, 125B
DM-3	Purged GW	Non-Hazardous Waste	4/17/2018	4/6/2018	4/13/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW90B, 120A, 120B, 119A, 119B, 126A, 126B, 113A, 103A, 103B, 106 B/C, 20A, 81A, 81B, 78B, 92C, 21A, 21B
DM-4	Purged GW	Non-Hazardous Waste	4/17/2018	4/6/2018	4/13/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW81A, 81B, 106 B/C, 21A, 21B, 20A, 87A, 87B, 25A, 95A, 41A, 69A, 69B, 64A, 117B, 114A, 102A, 102B, 101A
DM-5	Purged GW	Non-Hazardous Waste	4/17/2018	4/10/2018	4/17/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW10A, 12C, 13A, 32A, 115A, 27A, 27B, 27C, 127A, 127B, 101B, 73B, 12A, 12B
DM-6	Purged GW	Non-Hazardous Waste	4/17/2018	4/10/2018	4/17/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW128A, 32A, 17A, 50A, 109A, 109B, 118A, 118B, 122A, 22B, 15A
DM-7	Purged GW	Non-Hazardous Waste	4/17/2018	4/11/2018	4/18/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW93A, 29A, 58A, 18A, 131B, 34A, 34B, 38A, 129A, 129B, 128B, 130A, 130B, MRC-SWMW-5I
DM-8	Purged GW	Non-Hazardous Waste	4/17/2018	4/12/2018	4/18/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-SWMW-1I, 2I, 3I, MRC-MW93A, 73B, 124A, 124B, 34A, 96A, 96B, 104A, 104B, 122A, 119A
DM-9	F001 Purged GW	Hazardous Waste	NA	4/13/2018	4/18/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18, 6/25/18	A	MRC-MW72B, 74A, 74C, 74B, 37A, MRC-SEMW-7I, 8I, 8S, 9S, 9I

NA = Not Applicable

Appendix B – April 2018 Groundwater Sampling Summary
Lockheed Martin Corporation, Middle River Complex, Middle River Maryland

Well ID	Well Purged Dry	Number of Purges	Stabilization of Parameters	90 Minute Interval Reached	3 Well Casing Volumes Removed
MRC-EW1			X		
MRC-EW2			X		
MRC-MW02A				X	
MRC-MW07A			X		
MRC-MW10A				X	
MRC-MW11A			X		
MRC-MW12A				X	
MRC-MW12B				X	
MRC-MW12C				X	
MRC-MW13A				X	
MRC-MW14B				X	
MRC-MW15A				X	
MRC-MW16A			X		
MRC-MW17A				X	
MRC-MW18A			X		
MRC-MW20A				X	
MRC-MW21A				X	
MRC-MW21B				X	
MRC-MW22B				X	
MRC-MW25A				X	
MRC-MW27A			X		
MRC-MW27B			X		
MRC-MW27C				X	
MRC-MW29A			X		
MRC-MW32A				X	
MRC-MW33A			X		X
MRC-MW34A			X		
MRC-MW34B			X		
MRC-MW34C				X	
MRC-MW37A	X	1			
MRC-MW37B			X		
MRC-MW37C				X	
MRC-MW38A				X	
MRC-MW38B			X		
MRC-MW41A			X		
MRC-MW43A			X		
MRC-MW44A			X		
MRC-MW48A				X	
MRC-MW50A			X		
MRC-MW53A				X	
MRC-MW53B			X		
MRC-MW58A				X	
MRC-MW60A					X
MRC-MW60B			X		

Well ID	Well Purged Dry	Number of Purges	Stabilization of Parameters	90 Minute Interval Reached	3 Well Casing Volumes Removed
MRC-MW62A			X		
MRC-MW62C				X	
MRC-MW63A				X	
MRC-MW64A			X		
MRC-MW69A			X		
MRC-MW69B			X		
MRC-MW70A				X	
MRC-MW70B				X	
MRC-MW71B				X	
MRC-MW72B			X		
MRC-MW73A			X		
MRC-MW73B			X		
MRC-MW74A			X		
MRC-MW74B			X		
MRC-MW74C				X	
MRC-MW76A			X		
MRC-MW76B				X	
MRC-MW78B				X	
MRC-MW79B			X		
MRC-MW81A			X		
MRC-MW81B				X	
MRC-MW87A	X	1			
MRC-MW87B				X	
MRC-MW90B				X	
MRC-MW92C				X	
MRC-MW93A	X	1			
MRC-MW95B				X	
MRC-MW96A			X		
MRC-MW96B			X		
MRC-MW98A	X	1			
MRC-MW98B				X	
MRC-MW100A			X		
MRC-MW100B				X	
MRC-MW101A	X	2			
MRC-MW101B			X		
MRC-MW102A	X	1			
MRC-MW102B			X		
MRC-MW103A					X
MRC-MW103B				X	
MRC-MW104A				X	
MRC-MW104B			X		
MRC-MW106B/C				X	
MRC-MW107B/C				X	
MRC-MW109A	X	1			

Well ID	Well Purged Dry	Number of Purges	Stabilization of Parameters	90 Minute Interval Reached	3 Well Casing Volumes Removed
MRC-MW109B			X		
MRC-MW110A			X		
MRC-MW110B				X	
MRC-MW111A	X	1			
MRC-MW111B			X		
MRC-MW113A			X		
MRC-MW114A			X		
MRC-MW115A			X		
MRC-MW117B				X	
MRC-MW118A			X		
MRC-MW118B				X	
MRC-MW119A	X	1		X	
MRC-MW119B				X	
MRC-MW120A	X	1			
MRC-MW120B				X	
MRC-MW121A	X	1		X	
MRC-MW121B				X	
MRC-MW122A	X	1			
MRC-MW123A			X		
MRC-MW124A			X		
MRC-MW124B			X		
MRC-MW125A			X		
MRC-MW125B			X		
MRC-MW126A					X
MRC-MW126B			X		
MRC-MW127A			X		
MRC-MW127B			X		
MRC-MW128A			X		
MRC-MW128B	X	1	X		
MRC-MW129A			X		
MRC-MW129B			X		
MRC-MW130A			X		
MRC-MW130B			X		
MRC-MW131B				X	
MRC-SEMW-7I			X		
MRC-SEMW-8S			X		
MRC-SEMW-8I			X		
MRC-SEMW-9S			X		
MRC-SEMW-9I			X		
MRC-SWMW-1I				X	
MRC-SWMW-2I				X	
MRC-SWMW-3I				X	
MRC-SWMW-4S			X		
MRC-SWMW-4I			X		

Well ID	Well Purged Dry	Number of Purges	Stabilization of Parameters	90 Minute Interval Reached	3 Well Casing Volumes Removed
MRC-SWMW-5I				X	

Appendix B – 2018 Final Groundwater Geochemical Parameters
Lockheed Martin Corporation, Middle River Complex, Middle River Maryland

WELL ID	T (Celsius)	pH	SC (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)
MRC-MW121B	15.98	5.56	0.141	65.2	0	-48
MRC-MW14B	13.21	6.77	0.663	130	3.03	-54
MRC-MW44A	13.74	6.64	0.841	0	0.59	-68
MRC-MW70A	10.38	7.03	1.01	38.9	0.59	-64
MRC-MW110A	13.85	5.1	8.31	7.8	0	151
MRC-MW62A	14.51	6.59	0.759	0.8	0.7	-12
MRC-MW70B	13.89	7.17	0.462	64.7	2.24	-109
MRC-MW62C	13.01	6.25	0.194	34	3.79	1
MRC-MW110B	17.04	6.03	1.44	37.2	1.91	47
MRC-MW53A	13.88	7.05	5.51	18.3	3.58	23
MRC-MW53B	16.67	4.51	2.25	3.2	0	237
MRC-MW43A	14.25	4.94	0.173	100	0.81	133
MRC-MW123A	15.13	5.7	0.842	12.4	0.49	36
MRC-MW121A	16.16	5.85	2.19	85.5	0.48	45
MRC-MW71B	14.87	5.87	0.446	60	2.81	164
MRC-MW48A	16.61	5.94	0.523	13.7	0.14	22
MRC-MW76B	15.32	5.81	0.324	39.9	0.52	76
MRC-MW76A	14.48	5.39	0.941	8	1.27	151
MRC-SWMW-4S	11.7	5.14	0.781	11.9	0.96	244
MRC-MW60A	15.53	6.01	0.377	36.1	0.04	-5
MRC-MW103A	15.98	4.32	0.087	13.1	2.18	303
MRC-SWMW-4I	13.91	6.9	0.575	3.6	0.47	-62
MRC-MW60B	17.54	5.89	0.325	0	0.11	60
MRC-MW63A	10.4	5.94	1.86	15.9	0.91	97
MRC-MW103B	17.62	5.38	0.041	29.7	3.95	186
MRC-MW81A	12.02	6.98	1.65	8.5	0.2	-147
MRC-MW90B	15.49	11.01	1.2	19.7	0	-49
MRC-MW126B	16.83	6.39	0.179	19.5	0.61	-36
MRC-MW106B/C	13.9	6.91	0.156	96.4	6.84	6
MRC-MW81B	16.34	6.45	0.857	2.8	0.1	6
MRC-MW126A	14.41	6.71	0.344	17	0.6	-14
MRC-MW21A	15.79	7.45	0.549	148	0	-72
MRC-MW125A	15.09	5.42	0.293	2.1	1.13	170
MRC-MW120B	18.38	4.87	0.386	107	0	172
MRC-MW120A	14.52	6.83	4.2	13.3	0.61	-155
MRC-MW125B	18.93	5.48	0.177	8.7	1	200
MRC-MW78B	18.35	7.02	4.02	36.7	0.56	-108
MRC-MW21B	19.41	6.19	0.206	140	0	53
MRC-MW113A	14.93	3.66	0.563	1	0.59	417
MRC-MW20A	18.57	5.12	0.162	36.3	1.82	295
MRC-MW119B	17.91	4.39	1.49	15.7	0	251
MRC-MW119A	26.58	6.07	3.72	68.2	1.62	2

WELL ID	T (Celsius)	pH	SC (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)
MRC-MW92C	19.61	6.47	0.427	51.8	1.17	99
MRC-MW114A	12.99	4.6	0.073	9.8	0.71	266
MRC-MW41A	11.25	6.29	3.81	9.1	0	-96
MRC-MW87A	12.27	6.22	-50	192	1.1	-50
MRC-MW12A	8.01	6.4	0.394	25.8	0	-32
MRC-MW102A	15.69	6.39	1.16	2.1	0.68	-56
MRC-MW69A	13.33	5.99	1.76	7.4	0	-22
MRC-MW102B	17.04	4.63	0.141	0.4	0.86	222
MRC-MW87B	16.08	6.44	6.25	80.1	0.42	-31
MRC-MW69B	15.47	5.33	0.274	4.6	0	199
MRC-MW12B	12.45	6.83	0.233	85.3	0.79	-89
MRC-MW101A	14.57	5.32	0.494	5.9	2.74	131
MRC-MW117B	16.82	6.38	0.257	16.4	0	-101
MRC-MW25A	14.2	6.16	2.96	21.8	0.01	32
MRC-MW15A	9.18	6.23	1.36	146	0.17	93
MRC-MW122A	13.17	5.94	0.511	137	7.72	31
MRC-MW101B	15.19	5	0.211	7.1	0.53	174
MRC-MW64A	11.61	6.44	4.15	2.7	0	-123
MRC-MW79B	16.73	5.05	0.256	7.7	0.53	196
MRC-MW95B	13.89	5.93	0.116	23.6	2.65	175
MRC-MW22B	11.63	5.68	0.14	21.5	8.94	181
MRC-MW50A	13.79	5.35	5.82	6	0.55	214
MRC-MW127B	15.58	4.92	0.438	8.6	0.84	208
MRC-MW10A	10.37	6.74	0.418	65	0	-67
MRC-MW115A	14.56	6.78	0.808	0	0.7	156
MRC-MW127A	13.64	5.76	0.438	5.1	1.8	162
MRC-MW17A	12.87	6.23	3.25	16.3	0	-96
MRC-MW128A	16.32	4.97	0.55	8.9	0.75	235
MRC-MW27C	17.74	5.33	0.079	70.2	3.94	209
MRC-MW109B	17.75	6.02	3.6	5.1	0	73
MRC-MW12C	14.25	4.67	0.016	1000	5.23	353
MRC-MW109A	16.46	6.55	1.14	1000	1.39	-141
MRC-MW27A	14.84	6.1	2.94	0	0	-17
MRC-MW118A	15.19	6.33	1.92	2.7	1.62	93
MRC-MW13A	14.77	7.26	0.688	108	0.01	-87
MRC-MW27B	16.34	5.12	0.387	166	2.43	295
MRC-MW33A	15.95	4.56	0.124	8.4	1.7	272
MRC-MW128B	17.87	6.06	0.579	113	1.43	54
MRC-MW118B	19.36	5.81	0.182	145	2.94	-19
MRC-MW32A	14.66	4.94	0.16	32.9	3.16	283
MRC-MW100A	16.01	6.6	0.478	6.4	1.06	204
MRC-MW131B	11.78	6.01	1.12	15.3	0	-62

WELL ID	T (Celsius)	pH	SC (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)
MRC-SWMW-5I	10.95	6.58	0.509	21.1	0	-48
MRC-MW129A	15.21	6.45	0.587	9.7	0.65	51
MRC-MW100B	18.85	5.64	0.357	41.1	0.06	101
MRC-MW93A	11.66	3.85	5.14	337	3.05	341
MRC-MW34B	16.6	4.57	0.668	8.4	0	248
MRC-MW129B	17.11	5.28	0.057	9.4	1.08	160
MRC-MW29A	14.1	4.48	0.668	0	0.31	297
MRC-MW111B	16.94	6.13	0.357	2	0.15	4
MRC-MW111A	12.23	6.6	0.595	0	0	-75
MRC-MW130A	15.96	6.04	0.474	9.6	1.69	137
MRC-MW58A	16.29	6.5	0.79	14.4	0.35	41
MRC-MW34C	16.46	5.49	0.046	22.8	0	175
MRC-MW18A	16.27	7.4	2.21	2	0.62	56
MRC-MW130B	16.52	6.89	0.395	3.9	0.63	-99
MRC-MW38A	12.45	4.63	0.157	9.1	0.18	246
MRC-MW96A	11.68	3.77	1.21	0	0	363
MRC-MW73A	13.71	6.41	1.16	3.2	4.05	140
MRC-MW98A	13.92	7.06	0.861	48.2	4.11	59
MRC-MW73B	16.85	4.73	0.136	6.8	1.45	265
MRC-MW96B	17.21	4.29	3.78	6	0	310
MRC-MW111B	16.09	5.09	0.806	0	0.08	173
MRC-MW124A	16.43	5.6	0.618	5.8	0.47	37
MRC-MW02A	17.39	6.12	5.65	13.1	1.27	171
MRC-MW104A	21.78	5.82	1.4	11.9	3.65	194
MRC-MW38B	14.33	4.85	0.057	8.6	3.6	345
MRC-MW07A	20.95	5.62	2.03	5.4	2.8	200
MRC-MW104B	15.56	5.16	2.22	1.9	0	256
MRC-MW34A	17.33	5.71	0.155	0.8	5.28	139
MRC-MW124B	20.87	6.31	0.495	5.3	0.5	-20
MRC-MW37B	16.77	4.95	0.21	9.2	2.21	227
MRC-MW74A	13.83	6.74	0.732	9.8	2.61	186
MRC-MW72B	16.76	5.11	0.049	7.5	1.28	261
MRC-MW74B	16.34	6.1	0.243	9.6	2.51	245
MRC-MW74C	18.03	5.73	0.05	35.9	1.19	145
MRC-MW37C	19.2	6.29	0.084	11.3	5.61	146
MRC-SEMW-7I	19.52	4.63	0.124	0	1.84	261
MRC-SEMW-8S	16.12	4.54	1.5	9.2	1.44	249
MRC-SEMW-9I	16.77	4.62	0.242	9	0.96	290
MRC-SEMW-9S	19.62	5.5	0.509	9.8	1.42	203
MRC-SEMW-8I	18.03	6.78	0.449	0.9	0.35	-101
MRC-MW37A	18.88	6.18	702	196	4.18	242
MRC-SWMW-3I	10.09	6.26	0.931	9.8	0	11

WELL ID	T (Celsius)	pH	SC (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)
MRC-SWMW-2I	14.75	6.92	0.449	16.8	0.17	-83
MRC-SWMW-1I	18.84	6.84	0.488	32.5	0.2	-74
MRC-MW11A	26.05	6.72	0.9	6.3	0.73	-91
MRC-MW16A	27.67	4.25	1.31	3.3	0.39	320
MRC-EW2	19.1	4.64	0.267	0.2	1.31	376
MRC-EW1	19.76	7.12	0.648	16.2	0.22	-100
MRC-MW107B/C	21.6	6.66	0.503	123	4.25	-13

Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW14B
Screen Interval: 20'-25'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/4/2018
Pump Method:

Sampled for

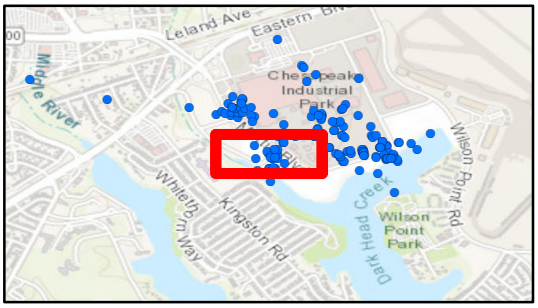
VOCs: No
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

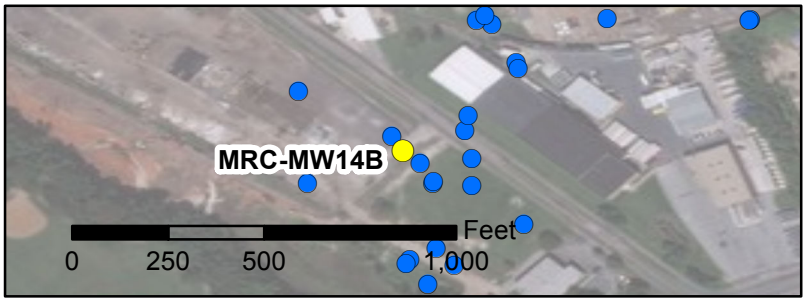
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:45	5.66	150	0.1	14.26	6.93	0.691	465	2.75	-57	
16:50	5.68	150	0.35	13.88	6.89	0.672	375	6.91	-61	
16:55	5.67	150	0.6	14.02	6.88	0.671	455	6.64	-61	
17:00	5.71	150	0.8	14.05	6.87	0.67	336	6.12	-60	
17:05	5.73	150	1	14.04	6.86	0.673	303	5.29	-60	
17:10	5.75	150	1.2	13.91	6.84	0.671	290	5.01	-59	
17:15	5.76	150	1.5	14.06	6.83	0.669	275	5.38	-59	
17:20	5.77	150	1.75	14.02	6.82	0.673	280	4.82	-58	
17:25	5.77	150	2	13.8	6.81	0.668	230	4.16	-57	
17:30	5.78	150	2.25	13.8	6.81	0.672	255	4.08	-57	
17:35	5.72	150	2.5	13.66	6.79	0.672	183	3.71	-56	
17:40	5.68	150	2.7	13.43	6.79	0.677	163	3.48	-56	
17:45	5.65	150	2.9	13.47	6.78	0.677	140	3.49	-55	
17:50	5.61	150	3.1	13.4	6.78	0.672	146	3.17	-55	
17:55	5.6	150	3.25	13.32	6.77	0.675	132	3.11	-55	
18:00	5.56	150	3.5	13.21	6.77	0.663	130	3.03	-54	

Sample Collection Information

Arrived at 1630, Fe = 3.0





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW44A
Screen Interval: 3'-13'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

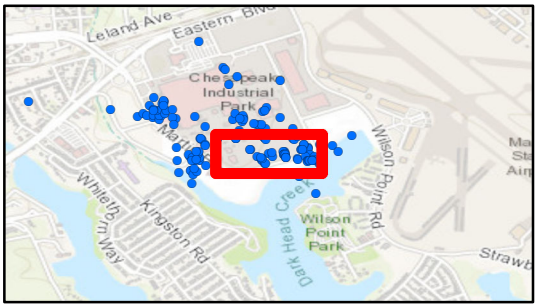
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

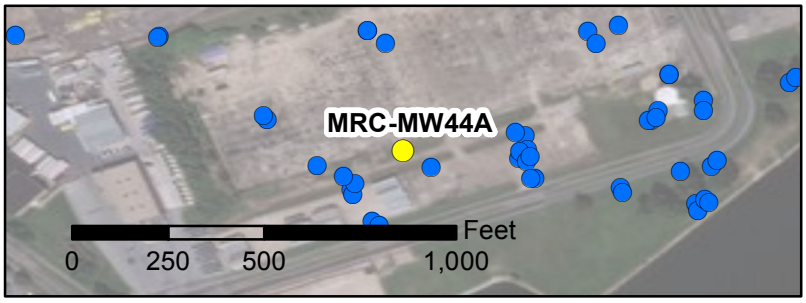
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:20	2.45	200	0.1	12.6	6.32	0.652	19.8	2.22	21	
08:25	2.4	175	0.5	12.74	6.41	0.0669	7.5	1.36	-17	
08:30	2.38	150	0.75	12.97	6.42	0.688	3.5	1.09	-29	
08:35	2.26	150	1	13.09	6.47	0.72	1	0.93	-39	
08:40	2.07	100	1.25	13.2	6.51	0.735	2.2	0.84	-45	
08:45	2.13	150	1.75	13.26	6.51	0.755	0.9	0.76	-49	
08:50	2.18	150	2	13.39	6.55	0.767	2.1	0.71	-58	
08:55	2.27	150	2.5	13.51	6.59	0.78	2.9	0.66	-60	
09:00	2.24	150	2.75	13.55	6.6	0.805	6.5	0.64	-61	
09:05	2.24	150	3	13.66	6.61	0.829	2.7	0.62	-64	
09:10	2.27	150	3.5	13.74	6.64	0.841	0	0.59	-68	

Sample Collection Information

Fe @ 4mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW70A
Screen Interval: 4'-14'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

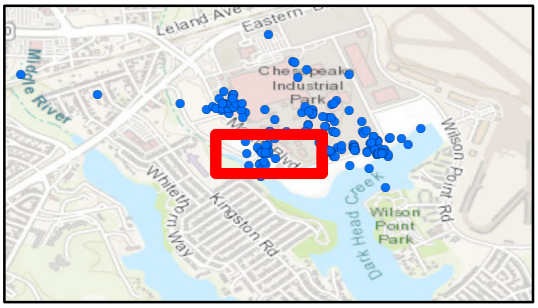
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

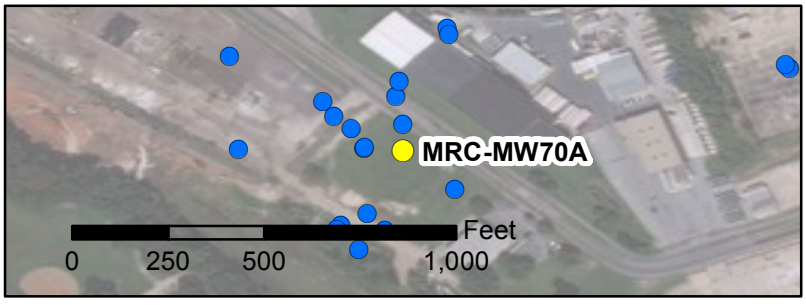
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:25	2.29	100	0.2	7.57	6.95	1.03	122	3.25	-50	
08:30	2.38	100	0.33	7.83	6.98	1.04	90.2	1.04	-55	
08:35	2.45	100	0.46	7.99	7	1.04	85.9	0.74	-58	
08:40	2.49	100	0.59	8.27	7.01	1.03	76.1	0.6	-60	
08:45	2.52	100	0.73	8.51	7.02	1.03	66.9	0.53	-61	
08:50	2.57	100	0.86	8.7	7.02	1.02	68.6	0.33	-62	
08:55	2.61	100	1	8.99	7.02	1.02	62.1	0.36	-62	
09:00	2.63	100	1.13	9.12	7.03	1.02	56.1	1.38	-63	
09:05	2.66	100	1.26	9.35	7.03	1.02	56.4	0.32	-63	
09:10	2.7	100	1.39	9.49	7.03	1.01	56.8	0.32	-63	
09:15	2.71	100	1.5	9.7	7.04	1.01	48.9	0.32	-68	
09:20	2.73	100	1.65	9.84	7.04	1.01	48.2	0.35	-64	
09:25	2.75	100	1.78	9.93	7.04	1.01	47.5	0.39	-64	
09:30	2.77	100	2	10.02	7.02	1.01	45.1	0.71	-64	
09:35	2.78	100	2.13	10.11	7.04	1.01	45.3	0.46	-64	
09:40	2.78	100	2.35	10.17	7.04	1.01	44	0.51	-64	
09:45	2.8	100	2.55	10.25	7.04	1.01	44	0.56	-64	
09:50	2.81	100	2.7	10.38	7.03	1.01	38.9	0.59	-64	

Sample Collection Information

TD listed as 14 ft from TT but measured in field as 9.41, Fe = 2.0 mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW110A
Screen Interval: 12'-22'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

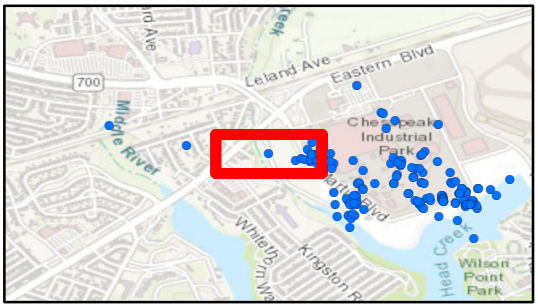
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

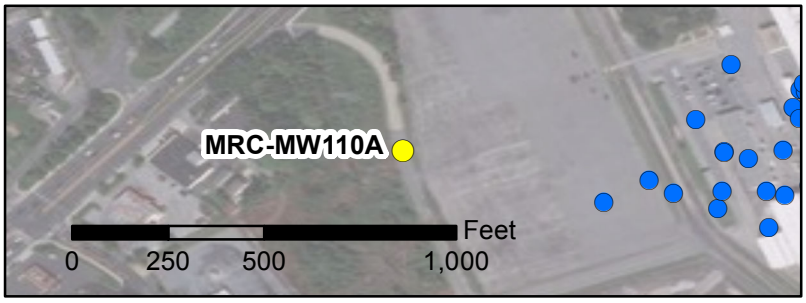
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:55	3.25	200	0.13	9.36	4.74	9.42	33	0	139	
09:00	4.29	100	0.26	10.02	4.88	9.16	28	0	138	
09:05	4.81	150	0.42	10.54	4.92	9.05	26.2	0	141	
09:10	5.21	160	0.58	11.29	4.94	9.06	24	0	145	
09:15	5.93	160	0.72	12.22	4.98	8.97	20.2	0	147	
09:20	6.19	160	0.9	12.41	4.98	9.01	19.5	0	145	
09:25	6.43	150	1.09	12.44	4.99	9	17.3	0	146	
09:30	6.59	150	1.28	12.6	4.99	8.94	16.7	0	155	
09:35	6.65	150	1.43	12.63	5	8.89	15.9	0	157	
09:40	6.96	200	1.78	13.37	5.01	8.77	14.5	0	155	
09:45	7.04	200	1.95	13.39	5.01	8.74	13.9	0	157	
09:50	7.21	200	2.15	13.5	5.03	8.65	12	0	156	
09:55	7.58	200	2.4	13.89	5.04	8.5	10.8	0	150	
10:00	7.77	200	2.65	13.84	5.15	8.41	9.3	0	151	
10:05	8.03	200	2.9	13.94	5.07	8.25	8.1	0	151	
10:10	8.3	200	3.2	13.85	5.1	8.31	7.8	0	151	

Sample Collection Information

Tubing discolored and in poor condition, replaced tubing. Water quality parameters stabalized. Total drawdown 5.3'. Hach Fe Test 7.0mg/L however color is more red. Sample depth 17'. Sample time 1010.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW62A
Screen Interval: 3'-13'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

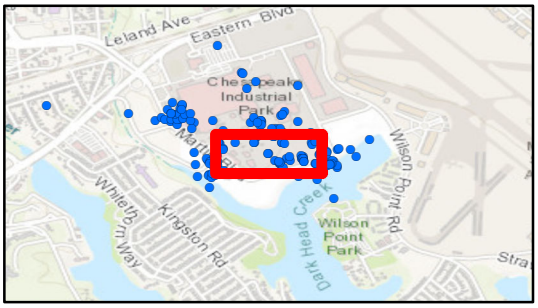
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

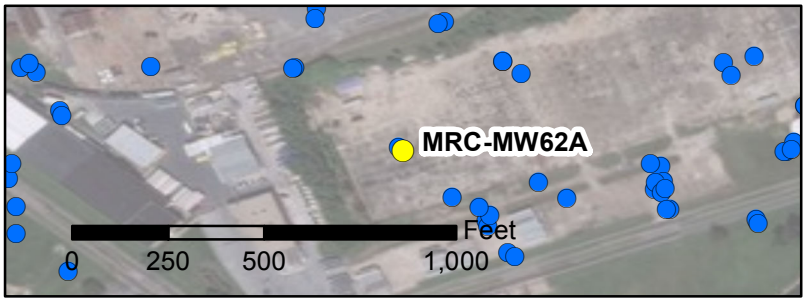
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:20	3.15	130	0.25	14.25	6.53	0.79	13.1	9.74	-28	
10:25	3.2	130	0.75	14.44	6.58	0.778	11.1	1.24	-20	
10:30	3.23	130	1	14.44	6.58	0.772	11	0.91	-16	
10:35	3.22	130	1.5	14.41	6.58	0.76	9.2	0.78	-12	
10:40	3.23	130	1.75	14.38	6.59	0.758	7.7	0.75	-12	
10:45	3.22	130	2	14.51	6.59	0.759	0.8	0.7	-12	

Sample Collection Information

Fe @ 5.5 mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW70B
Screen Interval: 20'-30'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

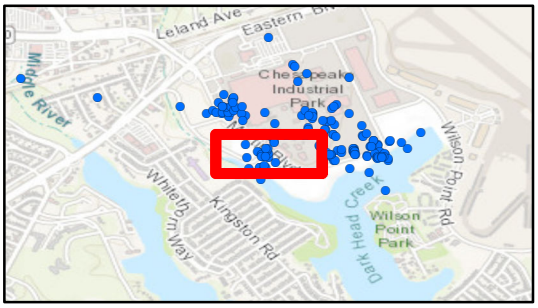
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

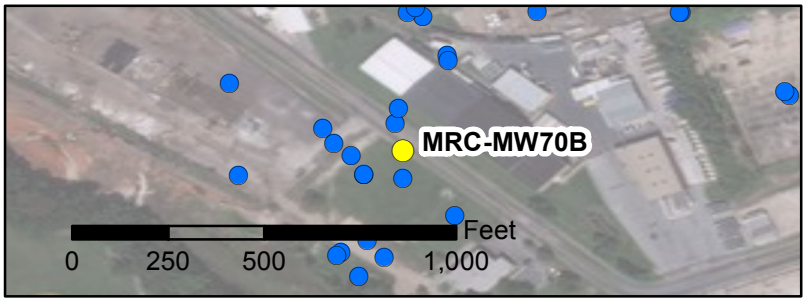
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:35	4.62	225	0.25	13.01	7.16	0.447	360	5.66	-96	
10:40	4.67	225	0.5	13.14	7.17	0.451	264	1.81	-105	
10:45	2.74	225	0.75	13.2	7.17	0.452	230	1.93	-107	
10:50	4.74	150	1	13.22	7.17	0.452	190	2.04	-108	
10:55	4.72	150	1.2	13.25	7.18	0.451	168	2.08	-108	
11:00	4.7	150	1.4	13.28	7.17	0.453	148	2.21	-108	
11:05	4.69	150	1.6	13.34	7.25	0.452	133	2.65	-109	
11:10	4.68	150	1.7	13.22	7.18	0.453	125	2.55	-107	
11:15	4.67	150	1.85	13.26	7.17	0.455	117	2.56	-107	
11:20	4.68	150	2	13.25	7.16	0.456	113	2.59	-108	
11:25	4.67	150	2.15	13.26	7.15	0.457	100	2.57	-109	
11:30	4.68	150	2.3	13.38	7.15	0.459	93.7	2.62	-108	
11:35	4.67	150	2.5	13.5	7.15	0.459	90.2	2.58	-109	
11:40	4.68	150	2.7	13.67	7.16	0.459	82.7	2.59	-109	
11:45	4.7	150	2.85	13.8	7.17	0.459	76.2	2.6	-109	
11:50	4.69	150	3	13.74	7.16	0.46	81.2	2.49	80.8	
11:55	4.68	150	3.2	13.88	7.16	0.462	68.7	2.25	-110	
12:00	4.68	150	3.4	13.89	7.17	0.462	64.7	2.24	-109	

Sample Collection Information

Fe = 6 mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW62C
Screen Interval: 55'-65'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Bladder

Sampled for

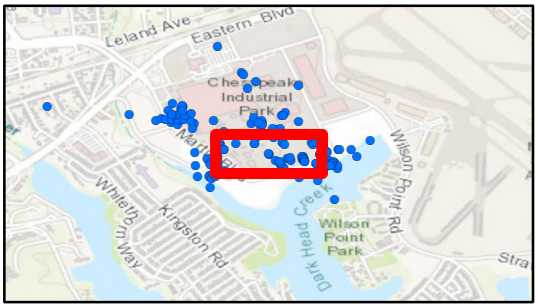
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

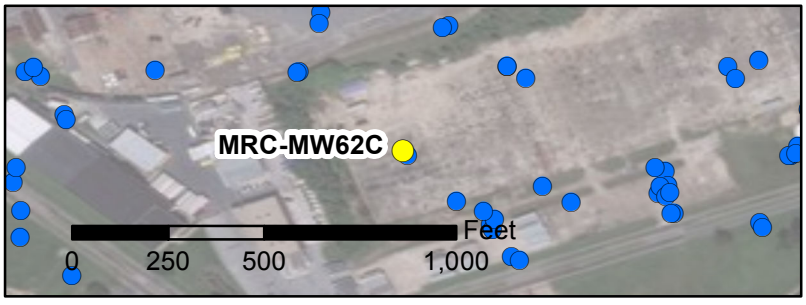
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:12	2.85	100	0.5	16.92	6.73	0.269	101	4.82	-60	
12:17	2.43	200	1	17.04	6.65	0.243	75.8	4.7	-46	
12:22	2.45	300	1.25	17.33	6.58	0.222	104	4.54	-28	
12:27	2.69	300	1.75	17.11	6.54	0.215	88.4	4.52	-17	
12:32	2.59	300	2.25	17.15	6.58	0.213	76.1	4.37	-16	
12:37	2.88	300	2.75	17.23	6.55	0.212	49.8	4.78	-12	
12:42	2.81	300	3.25	17.4	6.57	0.21	57.5	4.36	-15	
12:47	2.87	300	3.75	17.49	6.53	0.212	49	34.35	-11	
12:52	2.82	300	4.25	17.79	6.56	0.21	46.5	4.27	-13	
12:57	2.7	200	4.75	17.74	6.22	0.196	156	4.39	7	
13:02	3.02	300	5	17.63	6.3	0.201	113	4.34	6	
13:07	2.78	300	5.25	17.84	6.37	0.201	78.6	4.32	0	
13:12	2.73	300	5.5	18	6.34	0.198	60.2	4.13	1	
13:17	2.66	300	5.75	17.91	6.33	0.197	53.4	4.07	-1	
13:22	2.71	300	6.25	17.93	6.33	0.196	45.4	4.01	-1	
13:27	2.65	300	6.75	17.99	6.18	0.195	44	3.86	9	
13:32	2.72	300	7.25	17.97	6.31	0.195	38.9	3.93	0	
13:37	2.8	300	7.5	13.01	6.25	0.194	34	3.79	1	

Sample Collection Information

Fe @ 4.0 mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW110B
Screen Interval: 45'-55'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Bladder

Sampled for

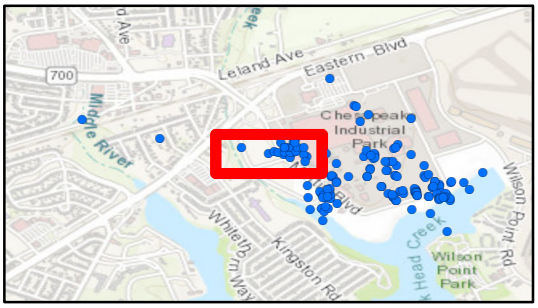
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

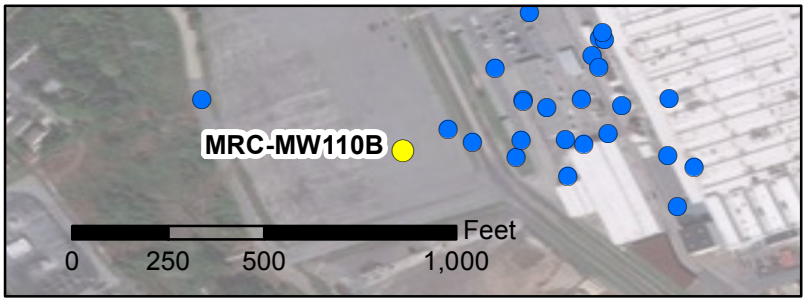
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:10	2.43	100	0.05	14.07	6.43	2.27	55.3	9.02	76	
12:15	2.55	100	0.13	14.62	6.46	2.27	58.6	7.1	69	
12:20	2.53	100	0.26	14.87	6.48	2.26	49.8	5.97	58	
12:25	2.53	100	0.4	14.93	6.48	2.26	47.1	5.73	56	
12:30	2.75	200	0.7	15.69	6.47	2.22	38.8	5.16	39	
12:35	2.7	200	0.95	15.67	6.45	2.15	37.4	4.91	37	
12:40	2.7	200	1.15	16.15	6.39	2.08	33.6	4.6	38	
12:45	2.7	300	1.4	16.15	6.37	1.99	33	5.94	41	
12:50	2.7	300	1.6	16.31	6.29	1.9	32.8	4.13	41	
12:55	2.7	400	1.9	16.76	6.23	1.76	40.01	3.85	38	
13:00	2.9	300	2.25	16.86	6.22	1.71	42.5	3.61	38	
13:05	2.9	300	2.6	16.9	6.21	1.62	42.7	3.34	43	
13:10	2.9	300	3	16.85	6.15	1.53	53.2	2.99	44	
13:15	2.9	300	3.4	16.8	6.11	1.53	42.3	2.82	41	
13:20	2.9	300	3.79	16.96	6.07	1.5	40	2.54	41	
13:25	2.9	300	4.3	17.01	6.06	1.48	42.2	2.6	44	
13:30	2.9	300	4.7	17.03	6.06	1.48	40.9	2.22	46	
13:35	2.9	300	5.1	17.04	6.03	1.44	37.2	1.91	47	

Sample Collection Information

Removed previous tubing. Hach FeTest 1.5 mg/L. Total drawdown 0.47'. Sample depth 50'. Sample time 1340.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW53A
Screen Interval: 3'-13'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

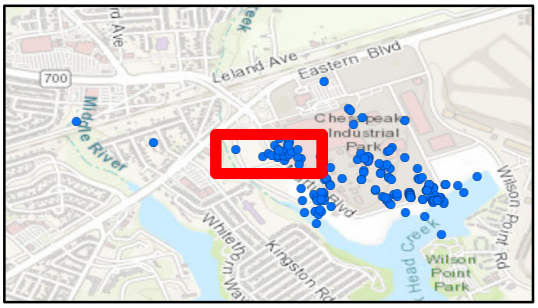
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

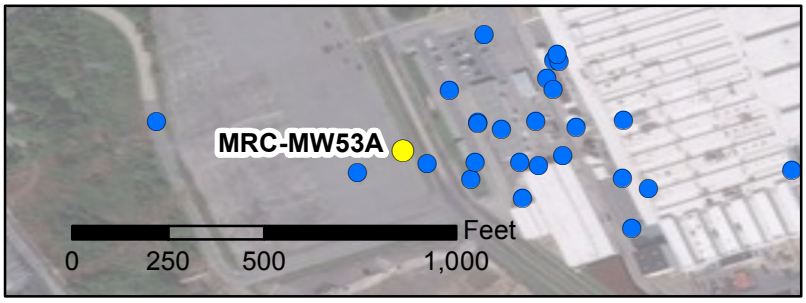
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:45	5.11	200	0.1	14.95	7.04	5.02	241	2.56	24	
14:50	5.21	200	0.3	14.43	7.07	4.92	209	2.75	23	
14:55	5.25	200	0.5	14.25	7.07	5.07	177	1.87	20	
15:00	5.36	150	0.7	14.22	7.06	5.12	104	4.78	14	
15:05	5.42	150	0.9	13.85	7.07	5.2	81	5.24	13	
15:10	5.56	180	1.2	14.16	6.99	5.18	73.6	5.55	11	
15:15	5.62	180	1.5	14.54	7.06	5.15	73.9	6.97	16	
15:20	5.67	180	1.8	14.12	7	5.22	57.6	5.2	17	
15:25	5.74	180	2.15	14.34	7.07	5.25	38.7	4.91	17	
15:30	5.79	180	2.35	14.34	7.06	5.28	36.3	4.78	17	
15:35	5.84	180	2.6	14.24	7.07	5.32	27.1	4.66	16	
15:40	5.89	180	2.85	14.02	7.06	5.36	31.4	4.64	17	
15:45	5.92	180	3.05	13.65	7.07	5.43	29.5	4.66	18	
15:50	5.91	180	3.25	13.74	7.05	5.43	32	4.4	17	
15:55	5.94	180	3.45	13.94	7.06	5.47	28.8	3.85	18	
16:00	5.98	180	3.6	14.19	7.06	5.47	27.8	3.6	19	
16:05	5.98	160	3.75	13.8	7.06	5.54	18.9	3.71	23	
16:10	5.98	160		13.88	7.05	5.51	18.3	3.58	23	

Sample Collection Information

90-minute purging condition met. Hach Fe test 0 mg/L. Sample Depth 9'. Sample time 1615.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW53B
Screen Interval: 39'-49'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Bladder

Sampled for

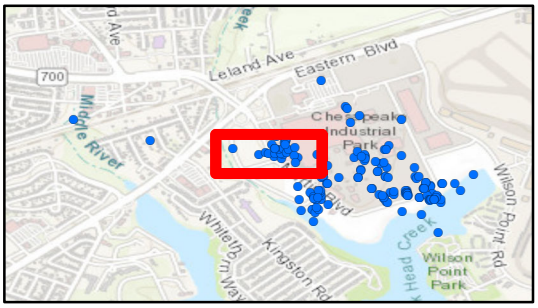
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

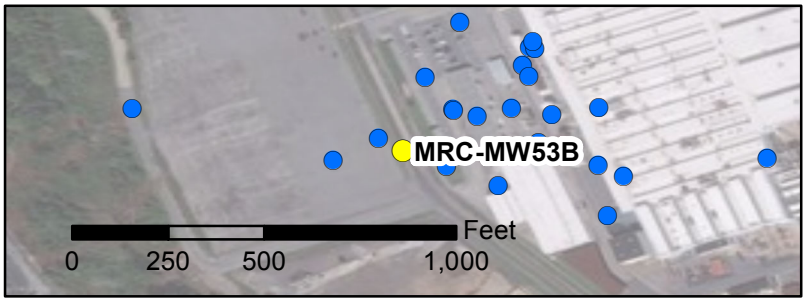
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
17:10	4.4	100	0.05	14.59	6.21	1.61	32.4	4.66	126	
17:15	4.35	100	0.13	14.87	5.76	1.87	31.9	1.99	147	
17:20	4.45	200	0.3	15.53	4.92	2.17	18.2	0.11	186	
17:25	4.45	300	0.65	16.51	4.52	2.23	9.1	0	217	
17:30	4.45	300	1.2	16.61	4.56	2.24	4.6	0	229	
17:35	4.45	300	1.7	16.67	4.51	2.25	3.2	0	237	

Sample Collection Information

Removed old tubing which was lodged in well. Water quality parameters stabalized. Hach Fe test 0 mg/L. Total drawdown 0.1'. Total purged 2.8 gal. Sample depth 44'. Sample time 1750.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW43A
Screen Interval: 3.5'-13.5'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/4/2018
Pump Method: Peristaltic

Sampled for

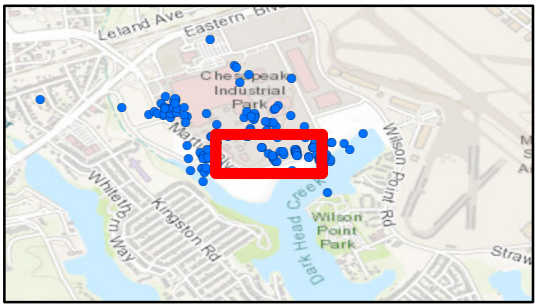
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

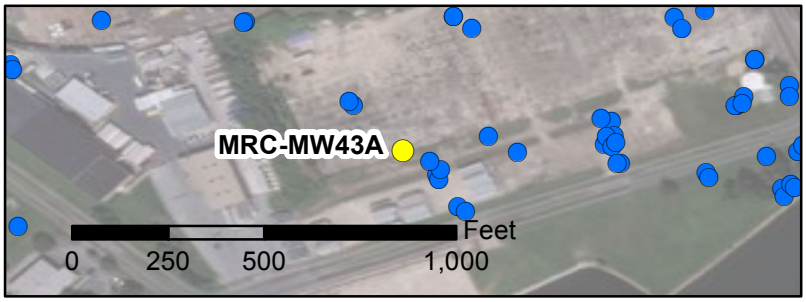
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:41		100	0.1	14.38	5.34	0.162	201	1.75	119	
13:46		100	0.5	14.75	5.09	0.162	140	1.44	138	
13:51		100	1	14.77	5.32	0.163	325	2.1	137	
13:56		100	1.5	14.37	4.98	0.165	93	1.07	154	
14:01		100	2.75	14.25	4.94	0.173	1000	0.81	133	

Sample Collection Information

Reached stabilization; Iron around 4.5-5.0 mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW123A
Screen Interval: 11'-21'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/4/2018
Pump Method: Peristaltic

Sampled for

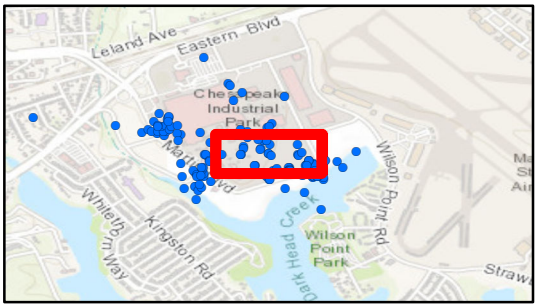
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

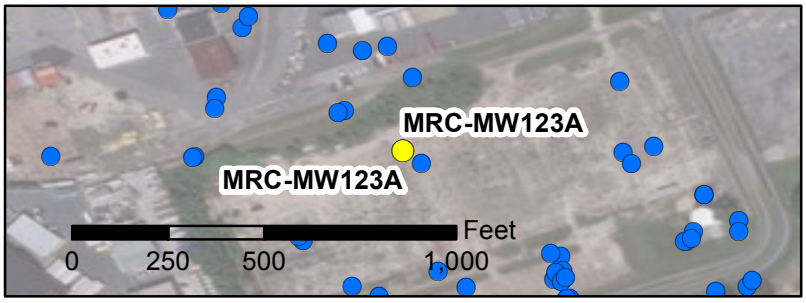
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:57		100	0.25	15.22	6.19	1	63.5	2.06	76	
15:02		100	0.5	15.24	6.17	1.01	62.7	1.33	62	
15:07		100	0.5	15.29	6.15	1.01	45.3	0.9	45	
15:13		100	0.75	15.31	6.12	1.01	39.1	0.74	36	
15:18		100	1.5	15.27	6.09	0.987	32.9	0.82	31	
15:23		100	2	15.25	6.05	0.975	33	0.63	27	
15:28		100	2.5	15.33	6.01	0.935	32.5	0.66	25	
15:33		100	3	15.26	5.99	0.943	27.4	0.59	26	
15:38		100	3.5	15.29	5.93	0.911	21.6	0.59	26	
15:43		100	4	15.33	5.91	0.901	19.2	0.55	27	
15:48		100	4.5	15.36	5.88	0.899	17.2	0.59	28	
15:53		100	5	15.37	5.82	0.867	13.8	1.09	30	
15:58		100	5.5	15.32	5.8	0.858	27.6	0.81	31	
16:03		100	6	15.17	5.79	0.852	21.1	0.58	31	
16:08		100	6.5	15.19	5.76	0.859	12.7	0.53	33	
16:13		100	7	15.16	5.73	0.847	13.4	0.56	35	
16:18		100	7.5	15.15	5.72	0.863	12.9	0.5	35	
16:23		100	8	15.13	5.7	0.842	12.4	0.49	36	

Sample Collection Information

Horiba turned offf, had to wait for restabilization, Iron at 3mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW121A
Screen Interval: 19'-29'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/4/2018
Pump Method: Peristaltic

Sampled for

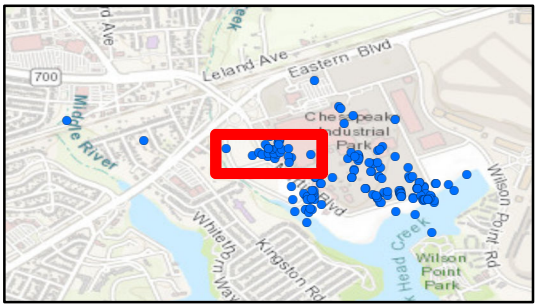
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

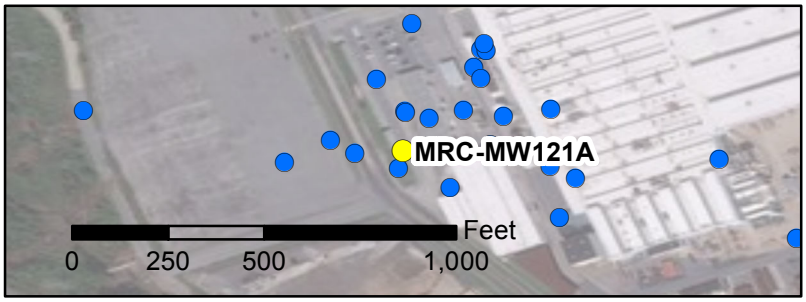
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:40		100	0.1	14.67	5.57	2.26	70.2	2.1	48	
14:10		100	1.8	15.87	5.79	2.22	102	1.36	67	
14:15		100	2	15.78	5.79	2.21	93.7	0.61	62	
14:20		100	2.2	15.78	5.8	2.21	94.4	0.58	61	
14:25		100	2.4	15.79	5.81	2.2	99.4	0.49	56	
14:30		100	2.6	16	5.83	2.2	88.4	0.46	49	
14:35		100	2.8	16.06	5.84	2.19	92.6	0.43	48	
14:40		100	3	16.16	5.85	2.19	85.5	0.48	45	

Sample Collection Information

1340 drawdown exceeded 0.2', purging well till dry at 1000 ml/min. 1410 protocol change, purging well at 100 ml/min. 90 min purge condition met for sampling. Final DTW is 18.27', drawdown of 14.1'. Hach Fe kit: 1.5 mg/L. Sample time 1455.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW71B
Screen Interval: 20'-30'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/4/2018
Pump Method: Peristaltic

Sampled for

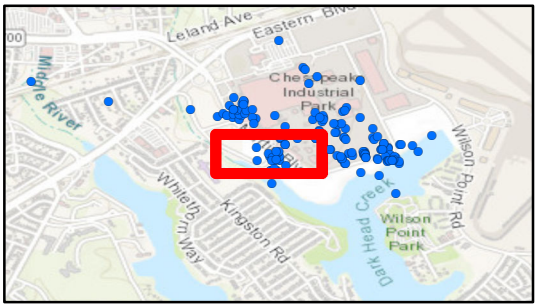
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: Yes

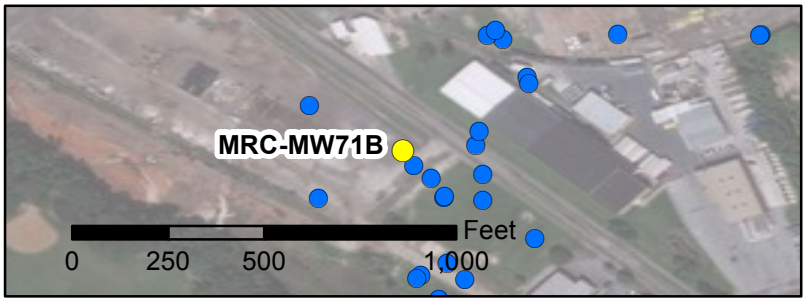
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:18		100	0.05	14.32	6.14	0.471	167	5.5	0.48	
14:23		100	0.25	14.47	6.12	0.462	154	5.78	203	
14:28		100	0.38	14.52	6.12	0.478	145	5.74	208	
14:33		100	0.5	14.57	6.1	0.474	137	5.52	215	
14:38		100	0.63	14.59	6.1	0.475	156	5.46	216	
14:43		100	0.8	14.83	6.11	0.471	130	5.25	218	
14:48		100	1	14.81	6.09	0.471	105	5.05	211	
14:53		100	1.15	14.83	6.07	0.468	142	4.8	206	
14:58		100	1.3	14.88	5.99	0.463	133	4.13	184	
15:03		100	1.5	14.93	5.96	0.461	76	3.89	179	
15:08		100	1.75	14.98	5.94	0.458	68.5	3.58	170	
15:13		100	2	14.97	5.92	0.454	64.5	3.32	167	
15:18		100	2.15	14.87	5.9	0.451	64.9	3.14	165	
15:23		100	2.3	14.88	5.88	0.449	56.1	2.95	164	
15:28		100	2.5	14.87	5.87	0.446	60	2.81	164	

Sample Collection Information

Begin set up on well at 1345, fe = 2 mg/L





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW123A
Screen Interval: 11'-21'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/4/2018
Pump Method: Peristaltic

Sampled for

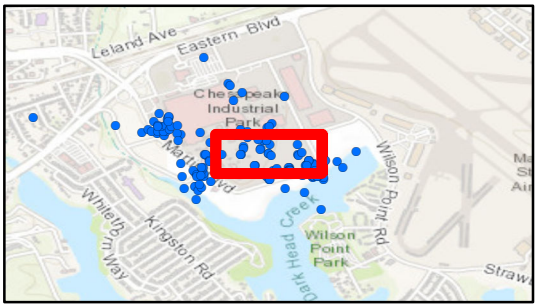
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

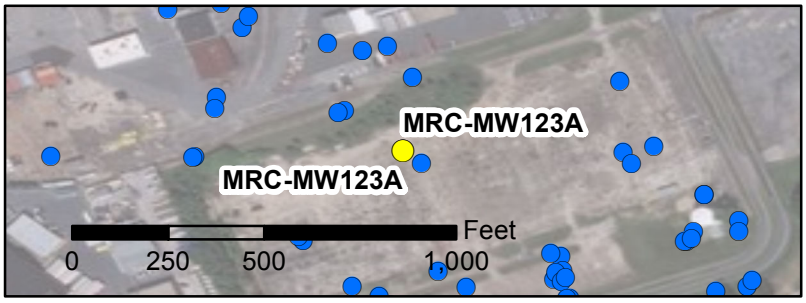
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:57		100	0.25	15.22	6.19	1	63.5	2.06	76	
15:02		100	0.5	15.24	6.17	1.01	62.7	1.33	62	
15:07		100	0.5	15.29	6.15	1.01	45.3	0.9	45	
15:13		100	0.75	15.31	6.12	1.01	39.1	0.74	36	
15:18		100	1.5	15.27	6.09	0.987	32.9	0.82	31	
15:23		100	2	15.25	6.05	0.975	33	0.63	27	
15:28		100	2.5	15.33	6.01	0.935	32.5	0.66	25	
15:33		100	3	15.26	5.99	0.943	27.4	0.59	26	
15:38		100	3.5	15.29	5.93	0.911	21.6	0.59	26	
15:43		100	4	15.33	5.91	0.901	19.2	0.55	27	
15:48		100	4.5	15.36	5.88	0.899	17.2	0.59	28	
15:53		100	5	15.37	5.82	0.867	13.8	1.09	30	
15:58		100	5.5	15.32	5.8	0.858	27.6	0.81	31	
16:03		100	6	15.17	5.79	0.852	21.1	0.58	31	
16:08		100	6.5	15.19	5.76	0.859	12.7	0.53	33	
16:13		100	7	15.16	5.73	0.847	13.4	0.56	35	
16:18		100	7.5	15.15	5.72	0.863	12.9	0.5	35	
16:23		100	8	15.13	5.7	0.842	12.4	0.49	36	

Sample Collection Information

Horiba turned offf, had to wait for restabilization





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW48A
Screen Interval: 11'-21'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/4/2018
Pump Method: Peristaltic

Sampled for

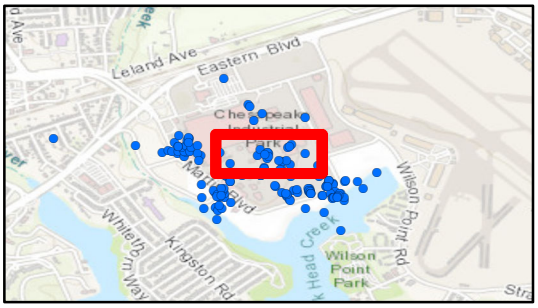
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: Yes

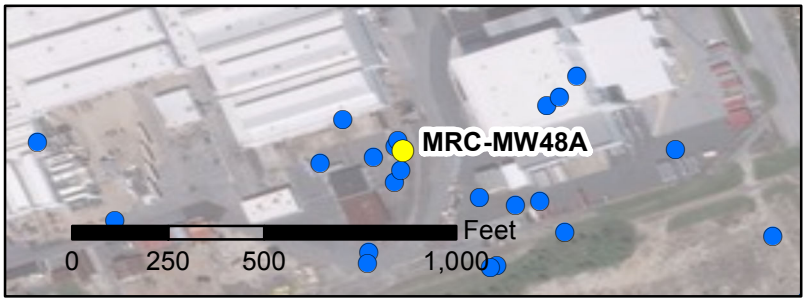
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:42		100	0.2	16.45	5.88	0.463	92.1	0.48	42	
14:47		100	0.13	16.48	5.89	0.471	81.2	0.41	40	
14:54		100	0.13	16.46	5.91	0.482	69.7	0.3	35	
15:01		100	0.13	16.48	5.91	0.491	57.9	0.26	33	
15:06		100	0.13	16.49	5.91	0.494	51.1	0.22	31	
15:13		100	0.13	16.59	5.91	0.502	42.2	0.2	30	
15:19		100	0.13	16.55	5.93	0.504	37.7	0.18	28	
15:27		100	0.13	16.18	5.93	0.506	27.5	0.24	28	
15:33		100	0.13	16.42	5.91	0.513	26.3	0.17	26	
15:43		100	0.26	16.53	5.93	0.522	15.6	0.16	25	
15:48		100	0.13	16.43	5.92	0.512	19.7	0.16	26	
15:53		100	0.13	16.46	5.93	0.522	14.4	0.16	24	
15:58		100	0.13	16.5	5.94	0.521	14.4	0.14	23	
16:04		100	0.03	16.61	5.94	0.523	13.7	0.14	22	

Sample Collection Information

Drawdown. 9.21; 9.30;9.25; 9.36; 9.45; 9.46; 8.90; 9.17; 9.25; 9.27; 9.25; 9.18; 9.44. // Iron 5.0 // 90 minute time limit reached, sampled after measurement #14





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW76B
Screen Interval: 24'-34'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Bladder

Sampled for

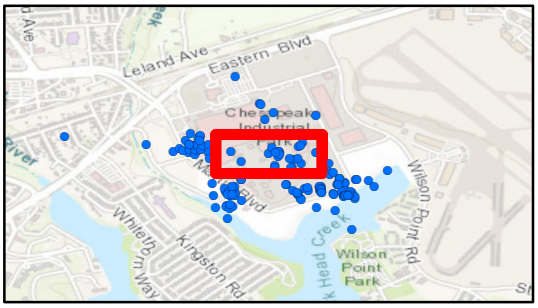
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

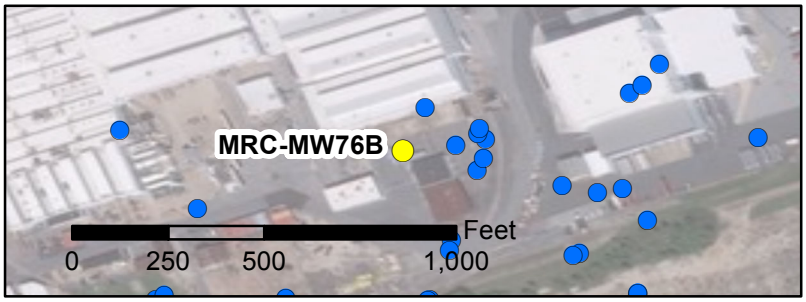
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:50		250	0.26	15.12	5.84	0.254	541	2.21	146	
09:00		250	0.66	15.24	5.82	0.251		1.59	102	
09:05		250	0.33	15.12	5.81	0.252	175	1.23	95	
09:12		100	0.13	14.69	5.82	0.257	146	0.93	88	
09:16		100	0.13	14.53	5.82	0.262	114	0.82	85	
09:21		100	0.13	14.55	5.82	0.282	95.7	0.72	82	
09:26		100	0.13	14.72	5.8	0.271	92.5	0.65	80	
09:31		100	0.13	14.9	5.83	0.278		0.64	80	
09:36		100	0.13	14.91	5.82	0.285	71.7	0.63	79	
09:45		100	0.26	15.12	5.83	0.29	64	0.6	79	
09:50		100	0.13	15.18	5.82	0.295	62.3	0.62	79	
09:55		100	0.13	15.05	5.83	0.297	59	0.61	79	61.2
10:02		100	0.13	15.19	5.82	0.305	53.2	0.63	78	
10:07		100	0.13	15.01	5.81	0.314	46.2	0.56	78	
10:15		100	0.13	15.08	5.81	0.318	43.6	0.55	77	
10:21		100	0.13	15.32	5.81	0.324	39.9	0.52	76	

Sample Collection Information

Drawdown 12.46; 12.58; 12.54; 12.23; 12.10; 12.09; 12.08; 12.04; 12.03; no drawdown at 100m/min // iron=7.0





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW76A
Screen Interval: 9'-19'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

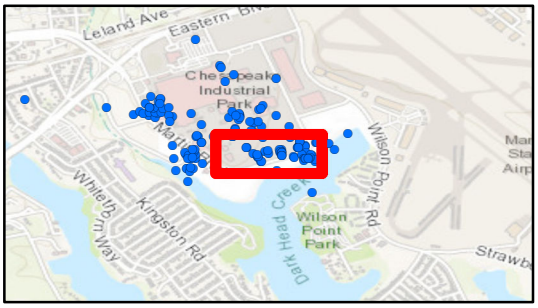
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

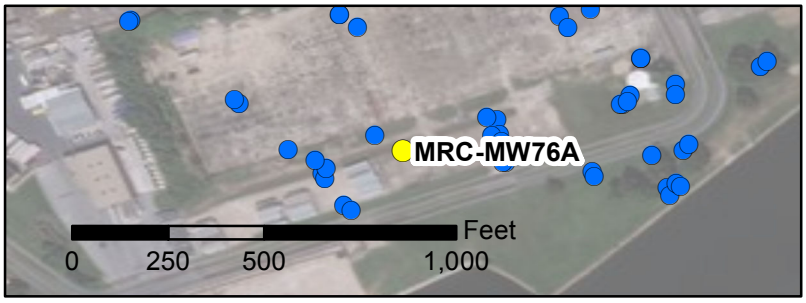
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:55	11.91	200	0.26	14.22	5.47	0.944	18.5	1.67	142	
12:01	12.19	150	0.2	14.38	5.45	0.94	9.6	1.2	143	
12:06	12.31	150	0.2	14.5	5.42	0.942	9.6	1.21	146	
12:11	12.39	150	0.2	14.48	5.39	0.941	8	1.27	151	

Sample Collection Information

Drawdown >0.2"





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SWMW-4S
Screen Interval: 7'-17'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

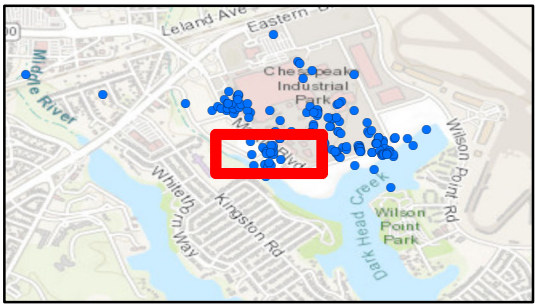
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

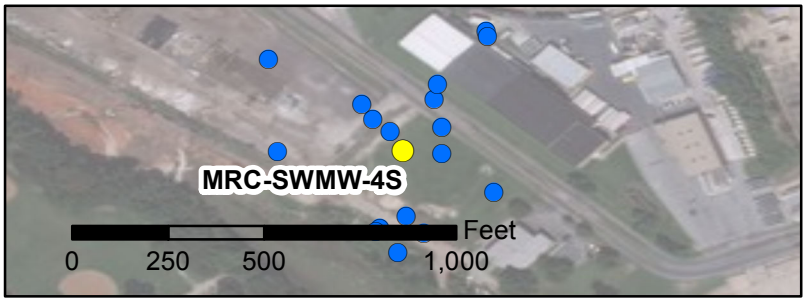
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:25	5.02	100	0.2	12.43	5.31	0.771	276	2.08	207	
13:30	5.42	100	0.33	12.26	5.31	0.771	262	1.7	210	
13:35	6.65	100	0.5	11.99	5.27	0.771	236	1.26	217	
13:40	7.62	100	0.63	11.84	5.26	0.776	214	1.2	222	
13:45	8.08	100	0.86	11.98	5.25	0.772	183	0.9	227	
13:50	8.06	100	1	11.89	5.13	0.778	145	0.81	237	
13:55	8.02	100	1.13	11.79	5.1	0.78	117	0.89	241	
14:00	8.05	100	1.26	11.82	5.12	0.78	14.8	1.28	243	
14:05	8.08	100	1.39	11.72	5.13	0.781	11.4	0.99	245	
14:10	8.1	100	1.54	11.7	5.14	0.781	11.9	0.96	244	

Sample Collection Information

Tt says 17 but, bottom is rock hard at 12.54 ft, 3 well volumes exceeded at reading #10





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW60A
Screen Interval: 12'-22'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

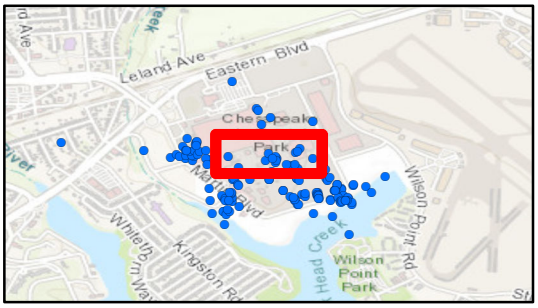
Sampled for

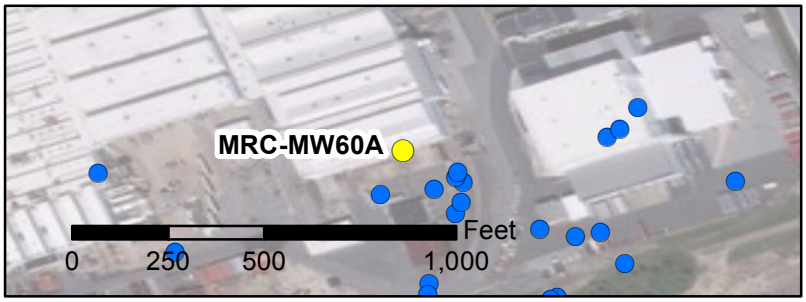
VOCs: Yes
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:00	14.8	200	0.26	15.65	6	0.556	52.2	0.76	15	
13:10	14.97	200	0.53	15.39	6.03	0.47	40.7	0.23	11	
13:15	15.13	200	0.26	15.35	6.03	0.41	31.9	0.17	7	
13:21	15.27	200	0.26	15.54	6.03	0.377	21.6	0.13	-1	
13:27	15.41	200	0.26	15.43	6.04	0.376	15.5	0.1	-3	16.2
13:32	15.54	200	0.26	15.47	6.03	0.376	14.1	0.08	-8	
13:40	15.53	200	0.42	15.53	6	0.375	19	0.04	-9	
13:45	15.61	200	0.26	15.49	6	0.379	32.1	0.03	-9	
13:50	15.68	200	0.26	15.52	6.02	0.379	45.2	0.05	-8	
13:55	15.77	200	0.26	15.41	6.02	0.381	36.1	0.06	-8	
14:00	15.89	200	0.26	15.53	6.01	0.377	36.1	0.04	-5	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW103A
Screen Interval: 7'-17'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

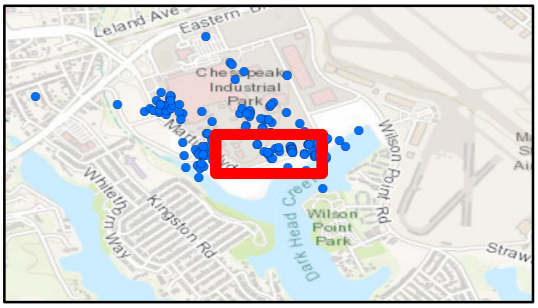
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

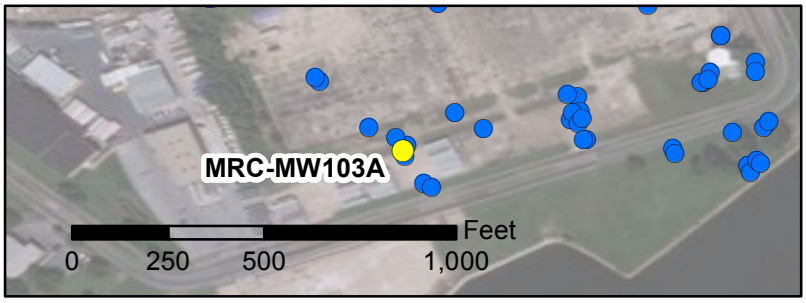
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:40	6.18	150	0.5	15.92	4.49	0.079	588	2.6	211	
14:45	6.52	130	0.75	15.87	4.45	0.078	208	2.46	227	
14:50	6.88	139	1.25	15.84	4.36	0.078	51.4	2.37	247	
14:55	7.22	130	1.75	15.84	4.34	0.078	27.8	2.32	257	
15:00	7.72	130	2.25	15.83	4.34	0.078	20.4	2.29	265	
15:05	8.21	130	2.75	15.77	4.33	0.078	17.9	2.33	272	
15:10	8.77	130	3.25	15.72	4.34	0.078	17.8	2.32	278	
15:15	9.22	130	3.75	15.73	4.33	0.08	15.3	2.29	283	
15:20	9.69	130	4.25	15.65	4.31	0.082	18.1	2.26	288	
15:25	10.05	130	4.75	15.73	4.29	0.085	16.6	2.24	293	
15:30	10.42	130	5.25	15.88	4.35	0.086	15.6	2.18	295	
15:35	10.8	130	5.75	15.97	4.33	0.087	16.3	2.27	300	
15:40	11.2	130	6	15.98	4.32	0.087	13.1	2.18	303	

Sample Collection Information

Sampled after 3 WV





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SWMW-4I
Screen Interval: 25'-35'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Bladder

Sampled for

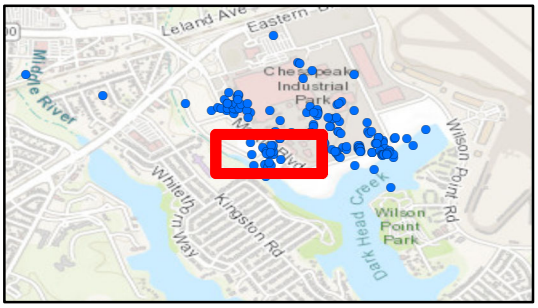
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

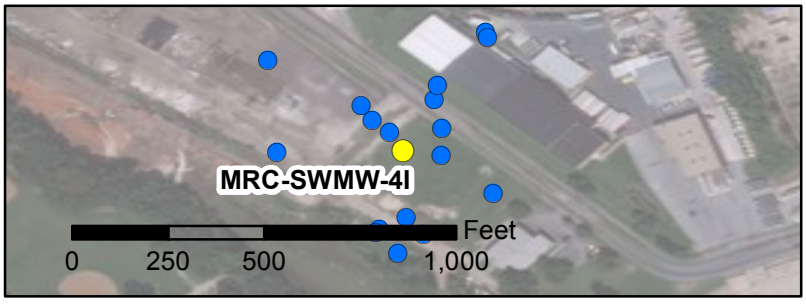
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:35	2.51	300	0.25	13.66	6.99	0.59	53.7	1.92	-56	
15:40	2.55	300	0.65	13.59	6.96	0.589	36.6	0.7	-57	
15:45	2.54	300	1.05	13.34	6.96	0.589	26.7	0.37	-58	
15:50	2.5	300	1.45	13.62	6.92	0.589	22.5	0.28	-59	
15:55	2.5	300	1.85	13.8	6.93	0.589	15.9	0.35	-59	
16:00	2.52	300	2.25	13.91	6.91	0.587	13.6	0.28	-59	
16:05	2.55	300	2.65	14.02	6.87	0.581	12.1	0.64	-60	
16:10	2.55	300	3.05	13.91	6.91	0.581	9.4	0.41	-61	
16:15	2.55	300	3.45	13.88	6.92	0.579	6	0.44	-62	
16:20	2.55	300	3.85	13.91	6.9	0.575	3.6	0.47	-62	

Sample Collection Information

Tubing stuck at 3 feet inside well





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW60B
Screen Interval: 22'-32'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Bladder

Sampled for

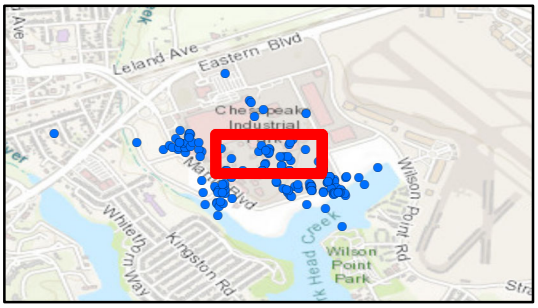
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: Yes

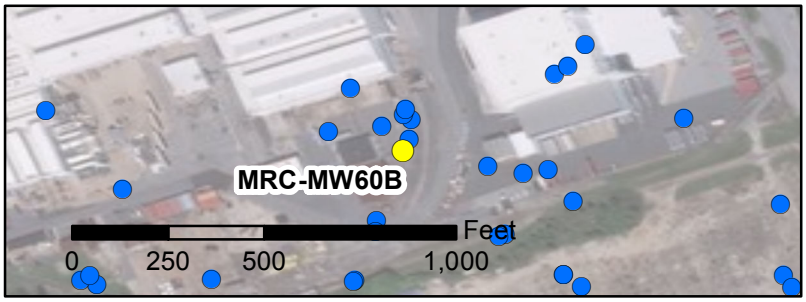
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:50	14.89	200	0.26	16.69	6	0.325	304	0.22	55	
15:57	14.96	200	0.26	16.86	5.94	0.327	172	0.17	56	
16:03	15.03	200	0.26	17.06	5.93	0.334	119	0.13	57	
16:09	15.05	200	0.26	17.23	5.93	0.334	79.9	0.12	55	
16:13	15.08	200	0.26	55	5.94	0.332	98.1	0.1	54	
16:18	15.1	200	0.26	17.29	5.91	0.345	86.8	0.33	56	
16:23	15.12	200	0.26	17.38	5.9	0.349	76.4	0.15	56	
16:28	15.14	200	0.26	17.45	5.9	0.349	76.1	0.11	55	
16:33		200	0.26	15.53	5.9	0.35	75.7	0.09	57	
16:40	15.16	200	0.26	1.54	5.91	0.345	64.4	0.07	55	
16:48	15.18	200	0.26	17.61	5.9	0.347	53.4	0.06	54	
16:56	15.2	200	0.26	17.81	5.91	53	59.4	0.04	54	
17:01	15.2	200	0.26	17.64	5.9	0.334	55.9	0.03	53	
17:07	15.21	200	0.26	17.78	5.91	0.33	45.2	0.03	54	
17:10	15.21	200	0.26	17.53	5.93	0.321	1.2	0.19	58	
17:15	15.21	200	0.26	17.58	5.91	0.323	1	0.17	59	
17:19	15.21	200	0.26	17.54	5.89	0.325	0	0.11	60	

Sample Collection Information

Iron precipitate formed in peristaltic tubing while pump was turned off for 60 seconds to adjust Horiba meter. Precipitate was seen in flow through cell, with visible turbidity higher than that in the tubing. Horiba cell was cleaned at 1707





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW63A
Screen Interval: 4'-14'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Peristaltic

Sampled for

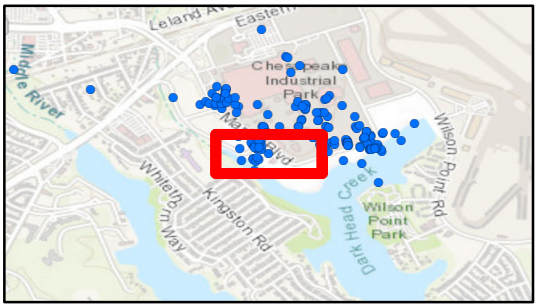
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

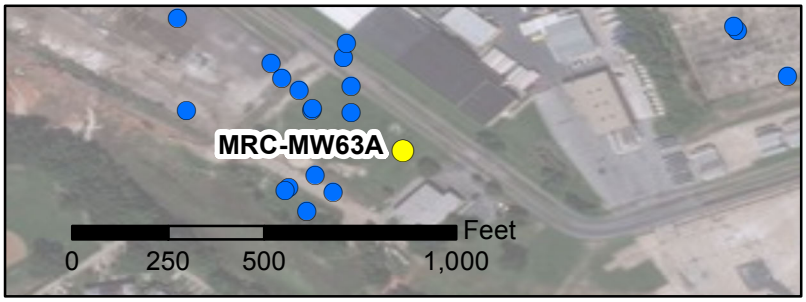
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
17:05	4.28	100	0.13	11.57	5.39	2.44	309	6.06	146	
17:10	4.4	100	0.26	11.78	5.38	2.45	255	2.38	150	
17:15	2.51	100	0.39	11.73	5.37	2.47	233	7.51	152	
17:20	4.58	100	0.52	11.49	5.36	2.49	204	1.31	153	
17:25	5.68	100	0.65	11.41	5.35	2.5	172	7.78	155	
17:30	4.76	100	0.78	11.34	5.38	2.45	131	3.41	152	
17:35	4.82	100	0.91	11.09	5.47	2.34	114	3.68	147	
17:40	4.89	100	1.04	11.06	5.56	2.22	82.3	7.36	140	
17:45	4.95	100	1.17	11.05	5.64	2.14	47.8	6.94	131	
17:50	5.03	100	1.3	10.94	5.72	2.06	37.6	0.05	124	
17:55	5.07	100	1.44	10.82	5.77	2.02	35.8	2.92	116	
18:00	5.12	100	1.57	10.77	5.81	1.98	25.4	4.53	112	
18:05	5.16	100	1.7	10.73	5.83	1.95	21.9	7.08	108	
18:10	5.21	100	1.87	10.64	5.87	1.93	20.9	0.01	106	
18:15	5.24	100	2	10.64	5.89	1.91	19.7	0	103	
18:20	5.28	100	2.13	10.61	5.92	1.88	17.8	0.09	100	
18:25	5.3	100	2.26	10.48	5.93	1.86	16.8	0.15	98	
18:30	5.32	100	2.39	10.4	5.94	1.86	15.9	0.91	97	

Sample Collection Information

Replaced tubing, highly oxidized (see collector)





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW103B
Screen Interval: 27'-37'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/5/2018
Pump Method: Bladder

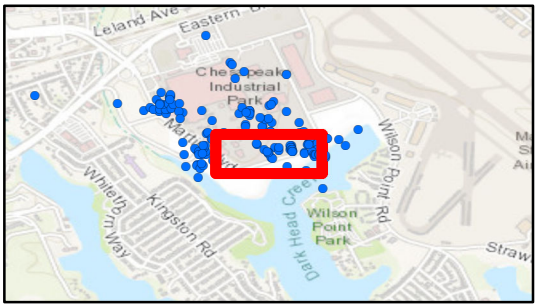
Sampled for

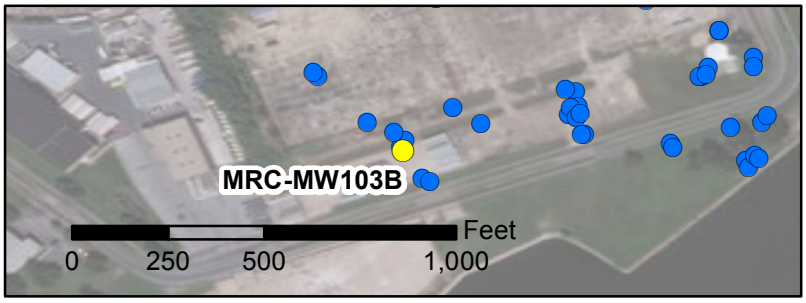
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:35	6	200	0.25	17.22	5.43	0.041	36.9	2.23	188	
16:40	6.78	200	0.5	17.44	5.41	0.04	51	2.64	196	
16:45	6.92	100	0.75	17.42	5.45	0.04	176	3.88	185	
16:50	7	100	1	17.16	5.48	0.041	153	3.9	188	
16:55	7.09	100	1.25	17.18	5.47	0.041	139	3.98	179	
17:00	7.19	100	1.5	17.17	5.47	0.041	133	4.01	177	
17:05	7.25	100	1.5	17.07	5.45	0.04	120	4.02	176	
17:10	7.31	100	1.75	17.06	5.48	0.04	96.7	4.05	174	
17:15	7.39	100	2	16.92	5.49	0.04	82.8	4.08	180	
17:20	7.77	200	2.25	16.97	5.41	0.041	66.4	3.52	178	
17:25	8.22	200	2.75	17.33	5.35	0.041	61.7	3.68	179	
17:30	8.57	200	3	17.28	5.37	0.041	53.6	4.67	180	
17:35	8.88	200	3.25	17.41	5.46	0.041	51.7	3.9	184	
17:40	9.15	200	3.5	17.48	5.38	0.04	43.4	4.12	182	
17:45	9.45	200	3.75	17.53	5.4	0.041	41.9	4.01	193	
17:50	9.55	200	4.25	17.6	5.43	0.04	38.9	4.65	184	
17:55	9.9	200	4.5	17.62	5.33	0.04	33.8	4.31	179	
18:00	9.95	200	4.75	17.62	5.38	0.041	29.7	3.95	186	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW81A
Screen Interval: 9'-19'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

Sampled for

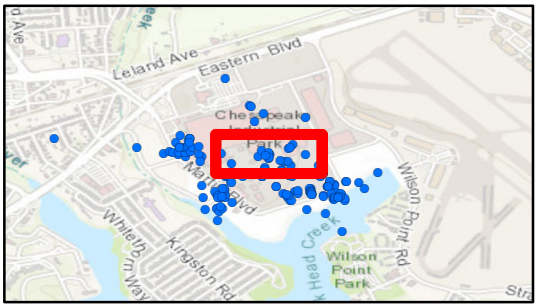
VOCs: No
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: No

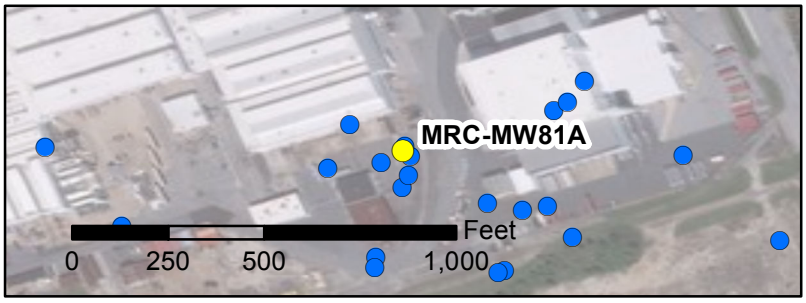
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:57	11.41	150	0.2	10.87	6.82	1.67	44.5	0.78	-145	
09:04	11.61	150	0.2	11.33	6.87	1.66	39.8	0.45	-144	
09:09	11.8	150	0.2	11.77	6.88	1.61	23.7	0.32	-142	
09:15	11.96	150	0.2	12.11	6.89	1.61	20	0.26	-142	
09:23	12.11	150	0.2	12.05	6.92	1.63	13.3	0.23	-144	
09:28	12.22	150	0.2	11.9	6.94	1.65	13	0.22	-145	
09:34	12.27	150	0.2	12.02	6.98	1.65	8.5	0.2	-147	

Sample Collection Information

Drawdown was substantial, little to no recharge





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW90B
Screen Interval: 30'-40'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

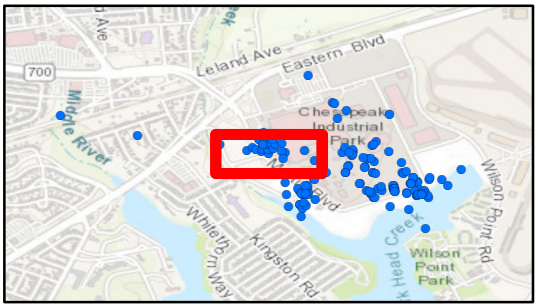
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

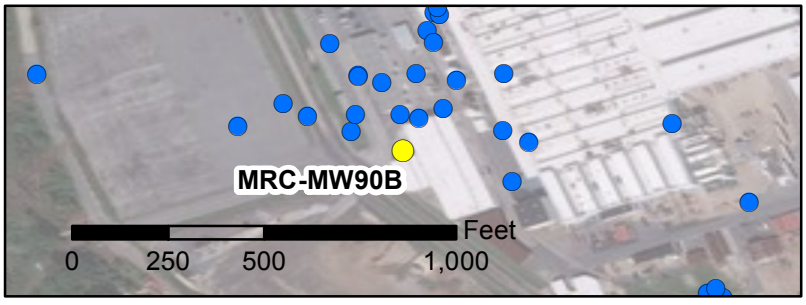
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:15	7.46	100	0.01	12.19	11.2	1.39	71.9	2.16	16	
09:20	7.87	100	0.13	13.23	11.22	1.4	74	1.54	-10	
09:25	8.12	100	0.26	13.79	11.29	1.39	75.1	1.05	-23	
09:30	8.25	100	0.4	14.06	11.34	1.4	67.5	0.88	-35	
09:35	8.35	100	0.53	14.06	11.14	1.4	61.7	0.96	-37	
09:40	9.35	100	0.66	14.29	11.22	1.4	53.6	1.2	-47	
09:45	8.35	100	0.79	12.67	11.15	0.561	32.8	1.5	-19	
09:50	8.35	100	0.92	14.26	11.28	1.22	38	1	-30	
09:55	8.35	100	1.06	14.54	11.26	1.37	39.7	0.62	-41	
10:00	8.35	100	1.19	14.75	11.25	1.37	34.7	0.29	-44	
10:05	8.35	100	1.32	14.72	11.23	1.36	36.5	0.25	-48	
10:10	8.35	100	1.45	14.97	11.21	1.35	29.7	0.05	-50	
10:15	8.35	100	1.59	14.94	11.19	1.34	26.2	0.01	-51	
10:20	8.35	100	1.72	15.09	11.05	1.33	29.8	0	-53	
10:25	8.35	100	1.85	14.21	10.99	1.17	20.5	0	-54	
10:30	8.35	100	1.98	15.25	11.13	1.18	23.2	0	-53	
10:35	8.35	100	2.11	15.38	11.08	1.2	20.5	0	-50	
10:40	8.35	100	2.25	15.49	11.01	1.2	19.7	0	-49	

Sample Collection Information

Removed 37’ of old perri tubing. 90-minute purging condition met. Total drawdown 0.89’. Sample depth 35’.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW126B
Screen Interval: 29'-39'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

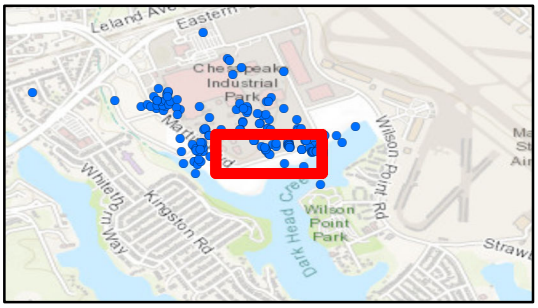
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

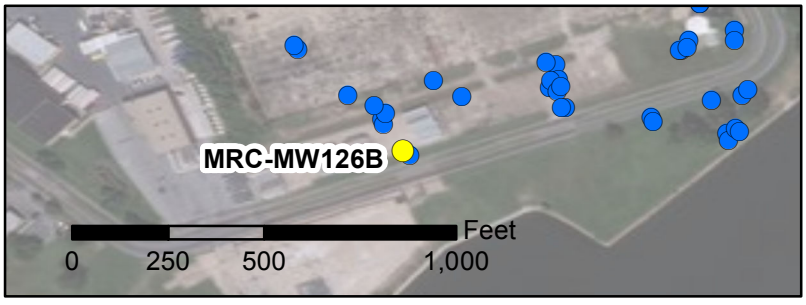
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:10	7.78	120	0.75	15.02	7.18	0.297	30.9	1.11	-68	
09:15	7.61	120	1.25	14.91	7.18	0.296	31.7	1	-78	
09:20	6.74	120	1.75	14.55	6.94	0.297	27.9	1.04	-70	
09:25	7.2	100	2	15.4	7.15	0.28	30.3	0.91	-88	
09:30	7.58	100	2.25	15.86	7.05	0.269	30.9	0.88	-88	
09:35	7.81	100	2.5	16.13	6.95	0.259	30.8	0.76	-86	
09:40	7.98	100	0.03	16.27	6.86	0.249	30	0.77	-82	
09:45	7.75	120	0	15.81	6.86	0.249	30.5	0.7	-80	
09:50	7.88	120	0	16.27	6.74	0.237	27.9	0.81	-75	
09:55	7.92	100	0	16.48	6.71	0.229	26.9	0.67	-70	
10:00	8.03	100	0	16.55	6.61	0.222	26.8	0.67	-66	
10:05	8.02	100	4	16.15	6.61	0.2	30.6	0.97	-53	
10:10	8	100	4.25	16.19	6.53	0.196	26.3	0.74	-49	
10:15	7.97	100	4.5	16.34	6.51	0.198	22.9	0.66	-46	
10:20	7.99	100	4.75	16.42	6.42	0.19	22.5	0.65	-42	
10:25	7.97	100	5	16.56	6.33	0.183	21.4	0.65	-36	
10:30	7.93	100	5.25	16.68	6.32	0.186	20.2	0.62	-35	
10:35	7.98	100	5.5	16.83	6.39	0.179	19.5	0.61	-36	

Sample Collection Information

Tubing in well was not long enough (~16ft); Stopped pump to move truck, had to wait for re-stabilization





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW106BC
Screen Interval: 40'-50'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

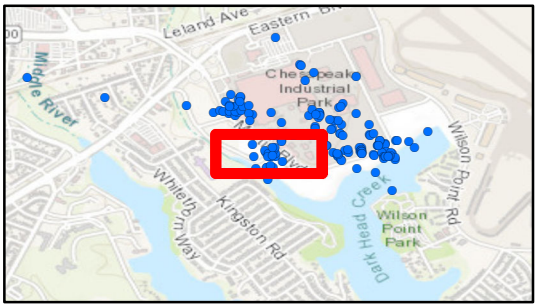
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

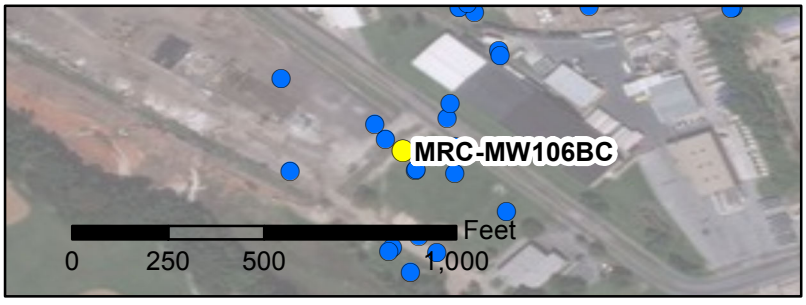
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:25	5.99	100	0.26	11.45	6.76	0.173	90.5	3.44	-29	
09:30	6.91	100	0.39	11.44	6.77	0.176	75.1	2.74	-29	
09:35	8.05	100	0.52	11.8	6.78	0.174	67.2	4.18	-16	
09:40	9.15	100	0.65	11.97	6.79	0.17	66.2	5.26		
09:45	9.69	100	0.78	12.06	6.66	0.172	66.8	5.66	-14	
09:50	10.77	100	0.91	12.22	6.74	0.175	68.4	5.78	-8	
09:55	11.53	100	1.04	12.38	6.74	0.172	72.2	5.28	2	
10:00	12.27	100	1.17	12.64	6.77	0.165	78.3	5.53	1	
10:05	13.15	100	1.3	12.85	6.77	0.167	76.2	5.82	4	
10:10	13.8	100	1.43	12.84	6.64	0.164	84.5	6.33	6	
10:15	14.76	100	1.56	12.95	6.74	0.161	77.9	5.69	10	
10:20	15.68	100	1.69	13.21	6.72	0.159	81.7	6.22	13	
10:25	16.3	100	1.82	13.28	6.75	0.163	82.8	5.45	23	
10:30	17.25	100	1.95	13.46	6.77	0.162	93.9	5.66	18	
10:35	18.1	100	2.08	13.56	6.79	0.167	86.7	5.6	16	
10:40	18.92	100	2.21	13.69	6.82	0.159	94.9	5.96		
10:45	19.26	100	2.34	13.79	6.85	0.159	90.3	6.39	13	
10:50	21.03	100	2.47	13.9	6.91	0.156	96.4	6.84	6	

Sample Collection Information

35 feet of peri tubing in the well from TT





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW81B
Screen Interval: 22'-32'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

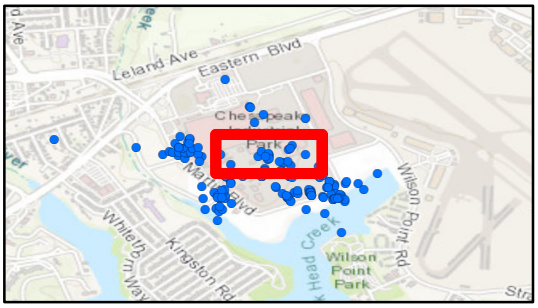
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: Yes

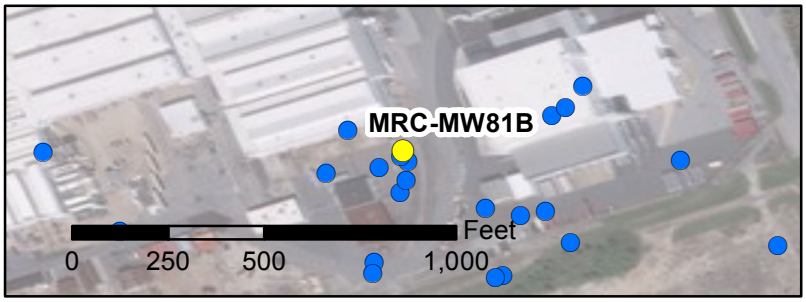
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:40	11.51	150	0.2	13.4	6.92	1.4	19.9	0.18	35	
10:46	13	150	0.24	13.76	6.88	1.38	15.9	0.14	27	
10:51	12.51	150	0.2	14.2	6.86	1.35	15.9	0.14	13	
10:56	13.64	150	0.2	14.36	6.85	1.32	13	0.13	7	
11:01	12.67	150	0.2	14.5	6.81	1.27	11.2	0.14	-1	
11:06	12.8	150	0.2	14.58	6.77	1.27	10.7	0.13	-3	
11:13	12.82	150	0.2	14.85	6.73	1.22	7.9	0.13	-5	
11:19	12.89	150	0.2	15	6.69	1.2	7.3	0.12	-5	
11:24	13.06	150	0.2	15.18	6.66	1.15	6.4	0.11	-5	
11:29	13.25	150	0.2	15.44	6.62	1.07	6.4	0.39	-3	
11:34	13.29	150	0.2	15.56	6.61	1.04	6.7	0.18	-2	
11:39	13.4	150	0.2	15.65	6.57	1.02	4.9	0.14	0	
11:44	13.32	150	0.2	15.77	6.55	0.99	4.4	0.13	0	
11:49	13.34	150	0.2	15.89	6.53	0.971	4.4	0.12	2	
11:54	12.37	150	0.2	16.07	6.49	0.923	2.7	0.11	5	
11:59	13.31	150	0.2	16.13	6.48	0.911	3.1	0.12	5	
12:04	13.38	150	0.2	16.34	6.45	0.857	2.8	0.1	6	

Sample Collection Information

Substantial drawdown, some recharge





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW126A
Screen Interval: 7'-17'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

Sampled for

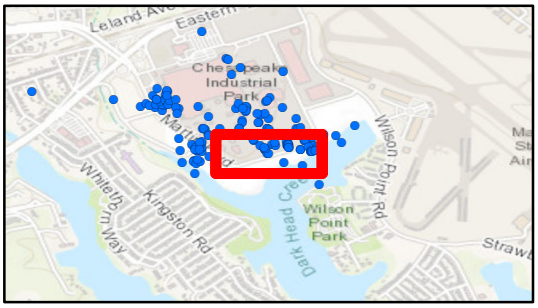
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

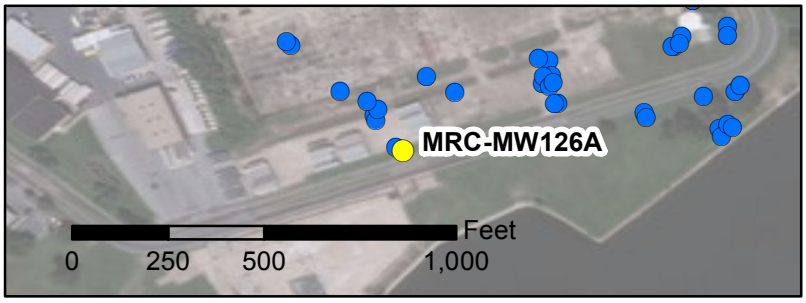
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:10	4.41	250	0.25	15.45	6.51	0.352	37.5	7.38	5	
11:15	4.41	250	0.75	15.18	6.4	0.355	33.7	1.82	17	
11:20	4.41	250	1.25	14.94	6.36	0.357	31.5	1.07	21	
11:25	4.41	259	1.75	14.79	6.4	0.354	26.6	0.92	19	
11:30	4.42	250	2.25	14.75	6.38	0.354	24.7	0.84	19	
11:35	4.41	250	3	14.72	6.38	0.351	23.7	0.81	18	
11:40	4.42	250	3.5	14.68	6.36	0.35	22	0.75	16	
11:45	4.41	250	4	14.64	6.35	0.347	20.4	0.68	14	
11:50	4.41	250	4.5	14.66	6.33	0.346	19.5	0.64	12	
11:55	4.41	250	5	14.6	6.36	0.344	17.9	0.63	9	
12:00	4.42	250	5.5	14.47	6.73	0.346	17	0.62	-14	
12:05	4.41	250	6	14.45	6.66	0.345	17.2	0.61	-12	
12:10	4.41	250	0.07	14.41	6.71	0.344	17	0.6	-14	

Sample Collection Information

Purged 3WV





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW21A
Screen Interval: 6'-16'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

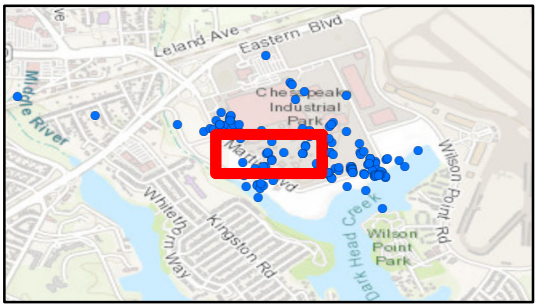
Sampled for

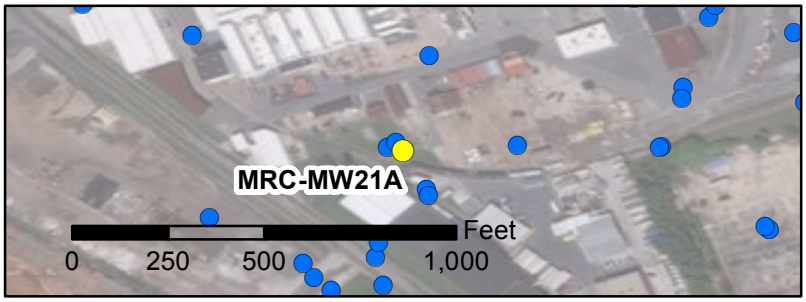
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:35	4.51	100	0.13	12.97	7.45	0.549	340	2.8	-48	
12:40	5.04	100	0.26	13.06	7.47	0.556	291	0.55	-54	
12:45	5.53	100	0.39	13.19	7.48	0.558	286	0.37	-56	
12:50	6.04	100	0.52	13.35	7.48	0.56	252	0.26	-58	
12:55	6.21	100	0.65	13.47	7.49	0.563	228	0.08	-60	
13:00	7.3	100	0.78	13.64	7.49	0.563	210	0	-62	
13:05	7.49	100	0.91	14.1	7.49	0.559	197	0.24	-64	
13:10	7.55	100	1.04	14.4	7.46	0.56	189	0.12	-67	
13:15	7.61	100	1.17	14.47	7.49	0.561	164	0.09	-67	
13:20	7.66	100	1.3	14.6	7.48	0.56	157	0.03	-70	
13:25	7.7	100	1.43	14.46	7.47	0.564	165	0.02	-72	
13:30	7.8	100	1.56	14.56	7.47	0.564	165	0.03	-73	
13:35	8.06	100	1.69	14.47	7.48	0.567	162	0.01	-74	
13:40	8.3	100	1.82	14.74	7.38	0.565	152	0.08	-70	
13:45	8.7	100	1.95	14.98	7.43	0.565	153	0	-73	
13:50	9.07	100	2.08	15.31	7.44	0.564	152	0	-73	
13:55	9.42	100	2.21	15.34	7.46	0.558	152	0	-73	
14:00	9.63	100	2.34	15.79	7.45	0.549	148	0	-72	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW125A
Screen Interval: 5'-15'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

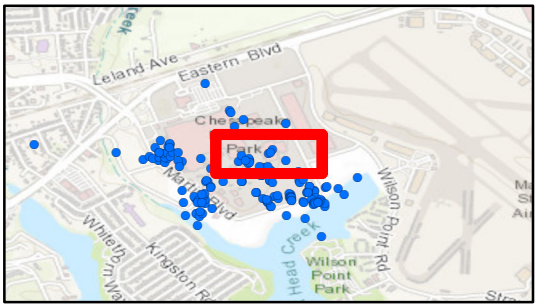
Sampled for

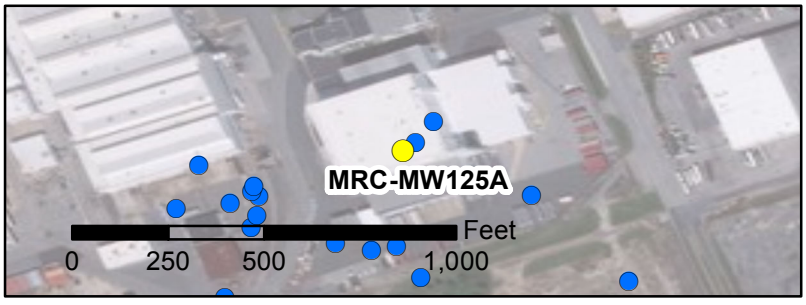
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:55	4.3	100	0.25	16.03	5.6	0.282	4.3	2.1	137	
14:00	4.53	100	0.5	15.3	5.46	0.289	4.5	1.52	150	
14:05	5	100	0.75	15.44	5.68	0.289	4.2	1.43	142	
14:10	5.02	100	1	15.34	5.67	0.29	3.8	1.28	145	
14:15	5	100	1.25	15.24	5.56	0.29	3	1.19	157	
14:20	5	100	1.5	15.15	5.49	0.291	2.4	1.17	168	
14:25	5.03	100	1.75	15.09	5.42	0.293	2.1	1.13	170	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW120B
Screen Interval: 40'-50'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

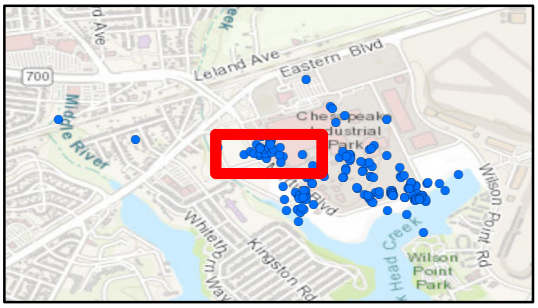
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

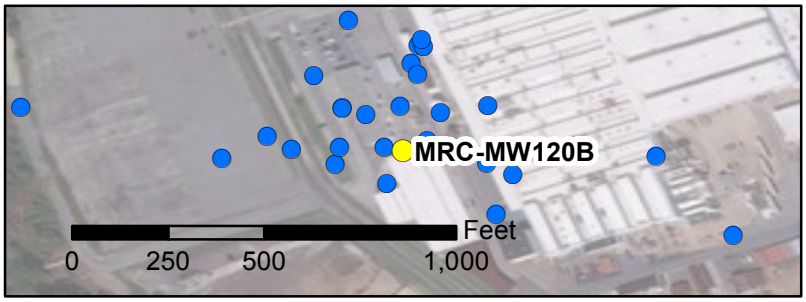
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:40	14.3	100	0.01	16.81	6.78	0.615	141	3.52	85	
13:45	14.3	200	1.13	17.33	5.14	0.555	1000	1.05	145	
13:50	14.35	200	0.5	17.77	4.92	0.477	956	0.71	157	
13:55	14.35	270	0.79	17.89	4.9	0.467	600	0	169	
14:00	14.35	350	1.4	17.65	4.9	0.418	237	0.52	152	
14:05	14.4	360	1.85	18.12	4.85	0.42	146	0	182	
14:10	14.4	380	2.3	18.09	4.85	0.413	118	0	187	
14:15	14.4	400	2.77	18.1	4.84	0.406	106	0	181	
14:20	14.4	400	3.2	17.93	4.93	0.383	274	0	173	
14:25	14.4	400	3.75	18.07	4.92	0.392	404	0	166	
14:30	14.4	400	4.23	18.12	4.88	0.395	394	0	168	
14:35	14.4	400	4.76	18.09	4.87	0.394	355	0	167	
14:40	14.4	400	5.28	18.14	4.86	0.393	300	0	168	
14:45	14.4	400	5.81	18.26	4.86	0.392	250	0	167	
14:50	14.4	400	6.34	18.27	4.82	0.39	208	0	171	
14:55	14.4	400	6.87	18.32	4.86	0.388	172	0	169	
15:00	14.4	400	7.4	18.37	4.87	0.388	143	0	171	
15:05	14.4	400	7.93	18.38	4.87	0.386	107	0	172	

Sample Collection Information

Removed 30' of old/discolored perri tubing. Murky, light yellow-brown colored water. High turbidity, Cleaned sediment out of Horiba 3 times. 90-minute purging condition met. Sample depth 45'. Total drawdown 0.10'..





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW120A
Screen Interval: 8.5'-13.5'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

Sampled for

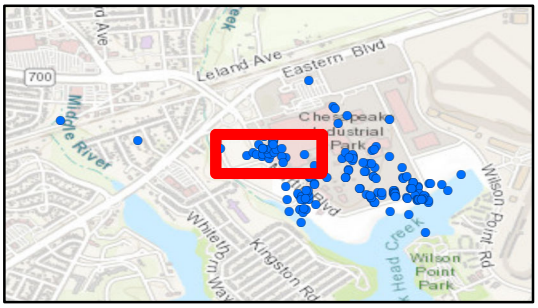
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

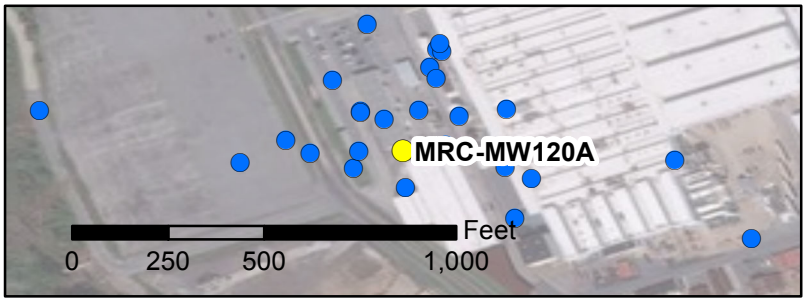
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:40	9.31	100	0.01	13.88	6.99	4.31	40	2.85	-189	
11:45	9.58	100	0.13	13.68	6.86	4.45	33.4	1.68	-179	
11:50	9.8	100	0.25	13.76	6.81	4.5	29.4	1.27	-173	
11:55	10.03	100	0.4	13.84	6.83	4.52	26.9	1.04	-171	
12:00	10.24	100	0.53	13.79	6.78	4.49	25.5	0.65	-170	
12:05	10.47	100	0.66	13.86	7.03	4.43	23.9	0.86	-166	
12:10	10.74	100	0.79	13.87	6.86	4.4	23.7	0.51	-169	
12:15	10.96	100	0.92	13.92	6.83	4.35	22.8	0.42	-169	
12:20	11.11	100	1.06	13.95	6.81	4.3	22.1	0.26	-167	
12:25	11.28	100	1.19	14.01	6.8	4.3	16	0.21	-165	
12:30	11.35	100	1.32	14.05	6.77	4.29	12.4	0.2	-164	
12:35	11.5	100	1.45	14.09	6.8	4.29	8.6	0.18	-160	
12:40	11.53	100	1.59	14.52	6.83	4.2	13.3	0.61	-155	

Sample Collection Information

Removed bailer. Sample depth 11.5'. Well dry @1240. Purged 1.65 gallons. Total drawdown 2.22'. Sample after 80% recharge. Waited 3 hours, sampled. Hach fe color darker.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW125B
Screen Interval: 25'-35'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

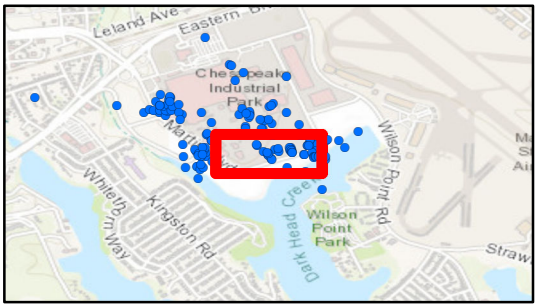
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

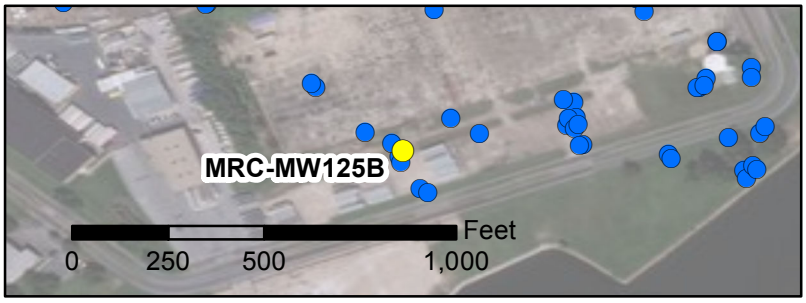
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:20	7.8	100	0.25	18.34	5.46	0.185	19.3	7.92	181	
15:25	8.58	100	0.5	18.41	5.5	0.185	15.8	1.66	185	
15:30	9.35	100	0.75	18.5	5.55	0.185	19	1.29	186	
15:35	10.03	100	1	18.6	5.55	0.184	16.1	1.18	188	
15:40	10.56	100	1.25	18.66	5.54	0.184	16.8	1.14	190	
15:45	10.87	100	1.5	18.7	5.57	0.184	16.4	1.11	191	
15:50	11.9	100	1.75	18.99	5.52	0.181	10	1.03	195	
15:55	12.62	100	2	18.93	5.48	0.177	8.7	1	200	

Sample Collection Information

Not enough tubing





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW78B
Screen Interval: 24'-34'
Sampled By: zachary.neigh@aecom.com,holly.brown@aecom.com,antonio.zarrelli@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

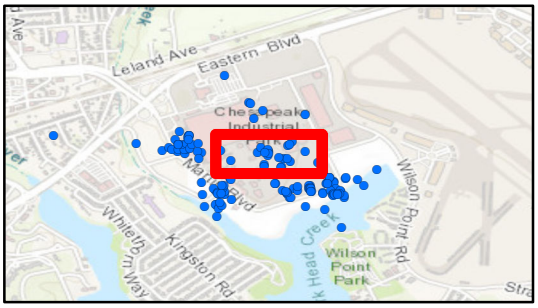
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

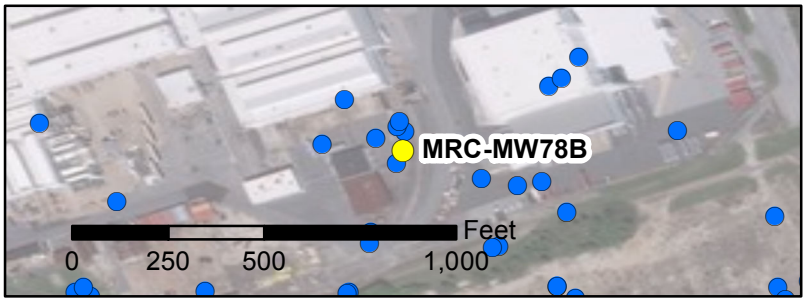
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:50	8.89	150	0.2	17.35	6.91	4.04	37.1	0.37	-99	
15:00	9.84	150	0.2	17.52	6.95	4.05	24.1	0.18	-104	
15:05	10.3	150	0.2	17.92	6.97	4.01	23.2	0.13	-106	
15:10	10.61	150	0.2	18.38	6.97	3.96	20.3	0.1	-107	
15:15	10.75	150	0.2	18.21	6.97	3.97	27.1	0.1	-107	
15:20	10.02	150	0.2	18.2	6.97	3.96	110	0.09	-108	
15:28	11.57	150	0.32	18.25	7.08	3.98	23.2	0.43	-99	
15:33	11.86	150	0.2	18.34	7.01	3.97	23.1	0.23	-106	
15:39	12.2	150	0.2	18.42	7	3.97	42.6	0.16	-109	
15:44	12.51	150	0.2	18.19	7	3.99	60.9	0.14	-112	
15:49	12.89	150	0.2	18.06	6.99	3.99		0.13	-114	
15:54	13.14	150	0.2	18	6.99	3.98	26.2	0.16	-115	
16:59	13.78	150	0.2	18.12	6.99	4	34.9	0.19	-117	
16:18	14.46	200	0.66	18.49	7.01	4.02	44.6	5.33	-104	
16:22	14.81	200	0.26	18.35	7.02	4.02	36.7	0.56	-108	

Sample Collection Information

Thoroughly Cleaned Horiba in effort to troubleshoot inconsistent readings





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW21B
Screen Interval: 24'-34'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

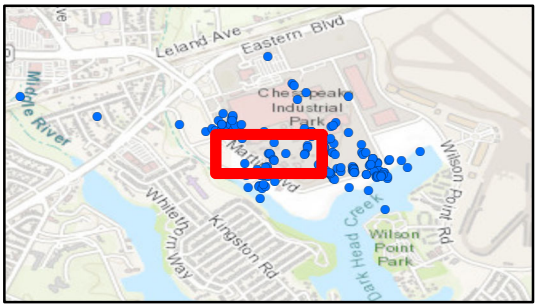
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: Yes

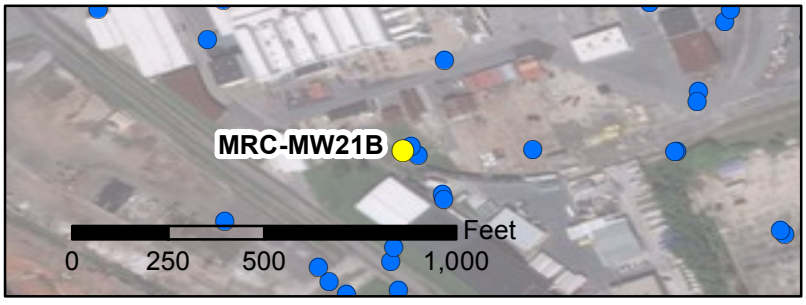
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:50	10.81	100	0.13	17.77	6.16	0.19	342	1.8	39	
14:55	10.94	100	0.26	17.73	6.17	0.189	337	0.57	41	
15:05	11.04	100	0.39	18.16	6.27	0.189	323	1.69	30	
15:10	11.06	100	0.52	18.32	6.2	0.188	320	1.26	47	
15:15	11.1	100	0.52	19.04	6.19	0.186	232	0.65	53	
15:20	11.17	100	0.68	19.4	6.2	0.185	212	0.23	54	
15:25	11.15	100	0.81	19.52	6.2	0.188	165	0.23	55	
15:30	11.15	100	0.94	19.74	6.19	0.189	155	0.14	57	
15:35	11.3	100	1.07	19.87	6.2	0.19	165	0.1	55	
15:40	11.41	100	1.2	19.3	6.19	0.194	161	0.04	55	
15:45	11.42	100	1.33	19.39	6.2	0.195	130	0.06	56	
15:50	11.48	100	1.46	19.73	6.22	0.196	134	0.07	52	
15:55	11.51	100	1.59	19.75	6.21	0.197	142	0.11	55	
16:00	11.48	100	1.72	19.24	6.21	0.207	147	0.2	52	
16:05	11.72	100	1.85	19.08	6.18	0.207	146	0.16	53	
16:10	11.83	100	1.98	19.17	6.2	0.205	143	0.01	52	
16:15	11.91	100	2.11	19.59	6.2	0.204	135	0	53	
16:20	11.93	100	2.24	19.41	6.19	0.206	140	0	53	

Sample Collection Information

Between 1255 and 1305 had to clean flow cell, lots of precipitate





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW113A
Screen Interval: 6'-16'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

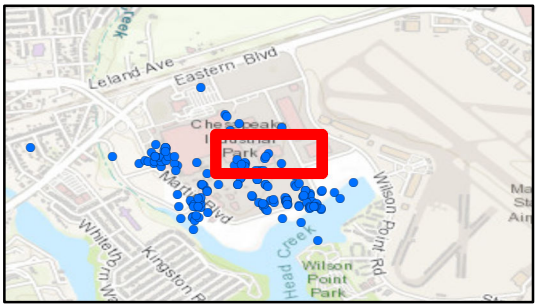
Sampled for

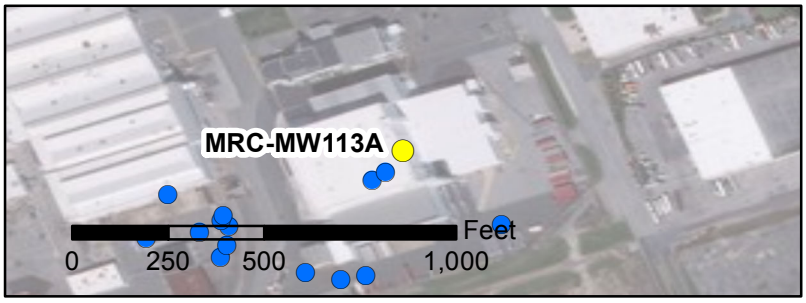
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:50	3.89	120	0.25	15.32	3.96	0.547	0.9	0.91	396	
16:55	4.74	120	0.5	15.06	3.88	0.548	1.6	0.76	406	
17:00	5.65	120	0.75	15.01	4.01	0.549	3.1	0.62	396	
17:05	5.93	120	1	15.09	3.86	0.557	3.1	0.66	403	
17:10	6.24	120	1.25	15	3.74	0.555	2.5	0.61	412	
17:15	6.61	120	1.5	14.98	3.67	0.562	1.7	0.62	417	
17:20	6.96	120	1.75	14.93	3.66	0.563	1	0.59	417	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW20A
Screen Interval: 15'-25'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

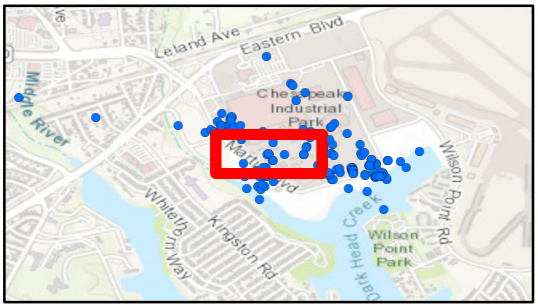
Sampled for

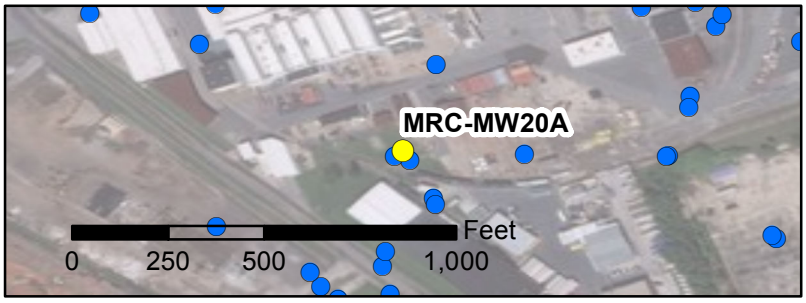
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
17:15	10.76	100	0.13	18.79	5.24	0.154	105	3.77	211	
17:20	11.39	100	0.26	18.68	5.21	0.16	76.6	2.8	228	
17:25	11.51	100	0.39	18.68	5.21	0.16	64.8	2.57	239	
17:30	11.92	100	0.52	18.24	5.12	0.16	81.9	2.32	246	
17:35	12.4	100	0.65	18.4	5.1	0.159	89.9	1.82	259	
17:40	12.38	100	0.78	18.79	5.17	0.158	85.6	1.48	261	
17:45	12.51	100	0.91	18.78	5.21	0.158	86.2	2.26	263	
17:50	12.89	100	1.04	18.64	5.22	0.157	94.6	2.21	267	
17:55	13.38	100	1.17	18.29	5.21	0.158	75.3	2.2	269	
18:00	13.87	100	1.3	18.11	5.21	0.159	72.5	2.13	275	
18:05	14.3	100	1.43	18.2	5.2	0.159	71.4	2.04	276	
18:10	14.51	100	1.56	18.34	5.2	0.159	57.5	2.04	280	
18:15	14.61	100	1.69	18.04	5.19	0.16	41.3	1.92		
18:20	14.75	100	1.82	18.39	5.16	0.159	32.4	1.97	288	
18:25	14.87	100	1.95	18.36	5.09	0.16	38.4	2.25	289	
18:30	14.99	100	2.08	18.33	5.09	0.161	26.7	1.78	290	
18:35	15.02	100	2.21	18.51	5.11	0.161	35.8	1.3	294	
18:40	15.1	100	2.34	18.57	5.12	0.162	36.3	1.82	295	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW119B
Screen Interval: 50'-60'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/7/2018
Pump Method: Bladder

Sampled for

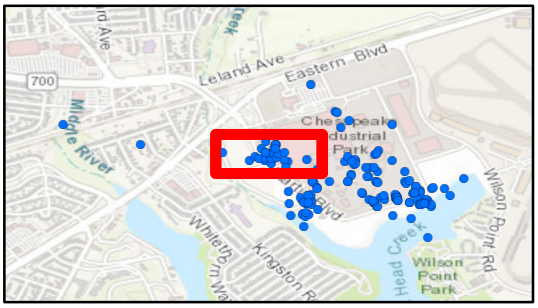
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

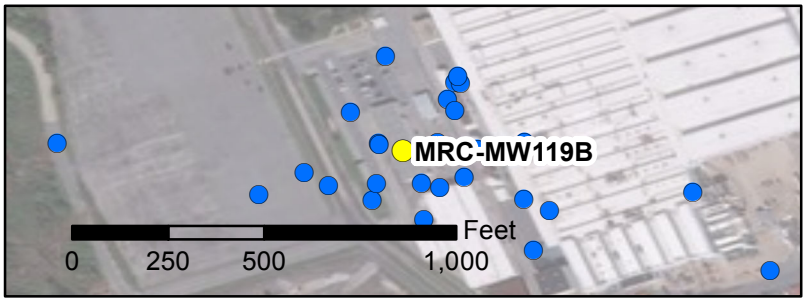
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
17:30	15.7	100	0.01	18.82	5.92	0.931	151	4.29	113	
17:35	15.7	200	0.13	17.82	4.84	1.37	659	1.4	121	
17:40	15.81	300	0.5	18.22	4.47	1.4	1000	1.29	137	
17:45	5.81	300	0.75	18.32	4.69	1.53	1000	1.41	232	
17:50	15.89	300	1	18.04	4.46	1.52	1000	0.25	237	
17:55	15.96	500	1.4	18	4.42	1.54	954	0	241	
18:00	15.96	500	1.98	18.01	4.44	1.54	346	0	246	
18:05	15.96	500	2.64	17.98	4.4	1.54	66.8	0	251	
18:10	15.96	500	3.3	17.97	4.42	1.54	36.7	0	253	
18:15	15.96	500	3.96	17.89	4.42	1.51	25.1	0	239	
18:20	15.96	500	4.62	17.87	4.43	1.53	23	0	250	
18:25	15.96	500	5.28	17.9	4.4	1.51	19.6	0	252	
18:30	15.96	500	5.94	17.9	17.91	1.51	18.6	0	250	
18:35	15.96	500	6.6	17.9	4.39	1.49	19	0	250	
18:40	15.96	500	7.26	17.9	4.39	1.49	18.2	0	251	
18:45	15.96	500	7.93	17.9	4.42	1.49	17.8	0	251	
18:50	15.96	500	8.59	17.91	4.41	1.49	18.4	0	251	
18:55	15.96	500	9	17.91	4.39	1.49	15.7	0	251	

Sample Collection Information

Removed 36' of perri tubing. Water color light brown. High turbidity, cleaned horiba 3 times. Sample depth 55'. Total drawdown 0.26'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW119A
Screen Interval: 8'-13'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Peristaltic

Sampled for

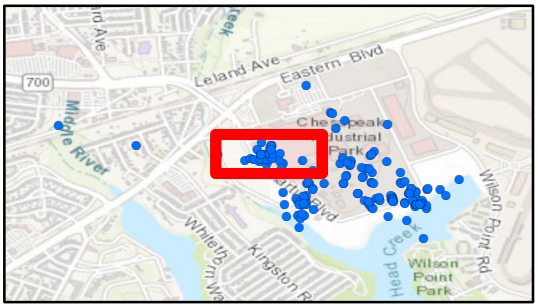
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

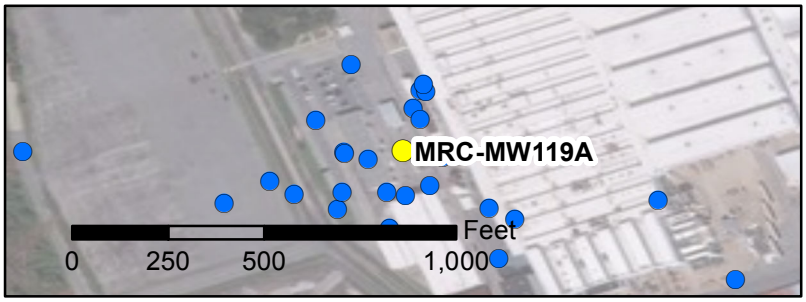
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:40	12.35	100	0.1	26.58	6.07	3.72	68.2	1.62	2	

Sample Collection Information

Removeyd bailer. Water column <1'. Well dry @1642 DTW 12.75, purged 500 ml. Waiting for 80% recharge. Very little recharge after 90 min. 4/6 1815 sampled 1 VOC of highly turbid gw. 4/12 1210 sampled 1 VOC and Cr+6. 4/13 0745 sampled 200ml 1,4-dioxane.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW92C
Screen Interval: 64.5'-74.5'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/6/2018
Pump Method: Bladder

Sampled for

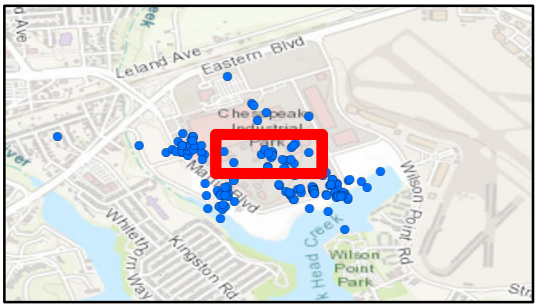
VOCs: Yes
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: No

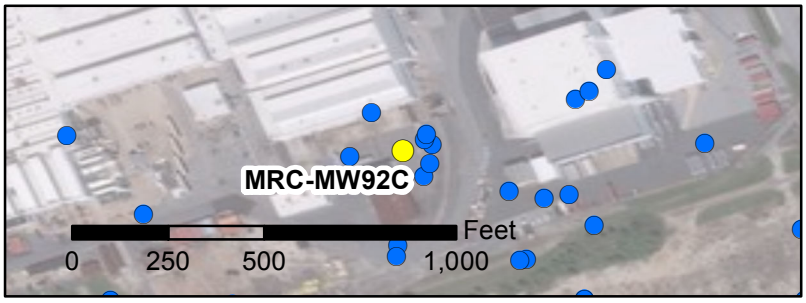
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
17:25	13.44	450	1.06	18.66	6.56	0.403	190	0.59	70	
17:33	16.8	450	0.59	18.65	6.5	87	124	0.56	88	
17:45	19.81	200	0.21	18.78	6.5	0.408	109	0.96	97	
17:52	20.96	200	0.26	18.72	6.45	0.41	108	0.85	103	
18:57	24.99	400	0.53	18.68	6.47	0.424	104	0.75	105	
18:04	26	250	0.33	18.81	6.47	0.426	96.2	0.8	107	
18:09	27.81	250	0.33	19.02	6.47	0.419	88.8	0.88	109	
18:14	28.74	250	0.33	18.97	6.47	0.42	84.7	0.91	108	
18:19	30.06	250	0.33	18.89	6.48	0.422	78.7	0.9	105	
18:24	30.18	100	0.13	19.06	6.27	0.422	68.7	0.95	112	
18:29	30.34	100	0.13	19.51	6.46	0.424	70.4	1	105	
18:35	32.41	100	0.13	19.14	6.46	0.425	68.5	0.97	104	
18:39	31.4	100	0.13	19.52	6.45	0.423	51.7	0.83	103	
18:44	31.41	100	0.13	19.42	6.33	0.426	56.2	1.1	107	
18:49	31.61	100	0.13	19.61	6.47	0.427	51.8	1.17	99	

Sample Collection Information

Flow adjusted and flow cell cleaned at 1735





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW114A
Screen Interval: 6'-16'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

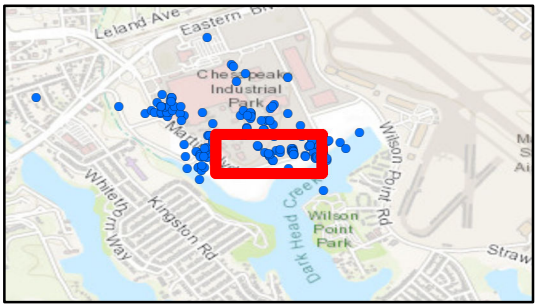
Sampled for

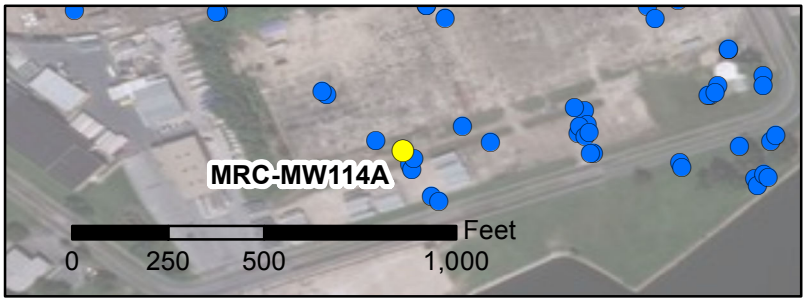
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
07:55	4.04	120	0.25	11.95	4.52	0.094	5.4	1.17	269	
08:00	4.24	120	0.5	12.11	4.48	0.086	3.7	1.1	275	
08:05	4.41	120	0.75	12.24	4.49	0.079	4.3	0.92	283	
08:10	4.59	120	1	12.59	4.45	0.075	6.5	0.85	285	
08:15	4.77	120	1.25	12.89	4.57	0.074	7.8	0.77	279	
08:20	4.98	120	1.5	12.91	4.62	0.073	9.3	0.76	272	
08:25	5.13	120	0.03	12.99	4.6	0.073	9.8	0.71	266	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW41A
Screen Interval: 6'-16'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

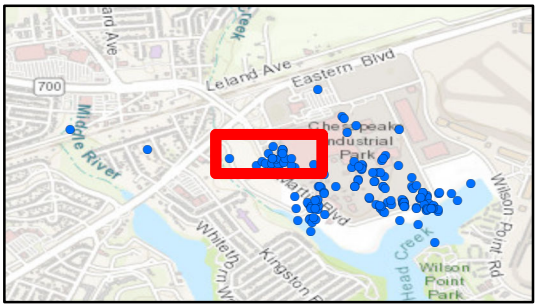
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

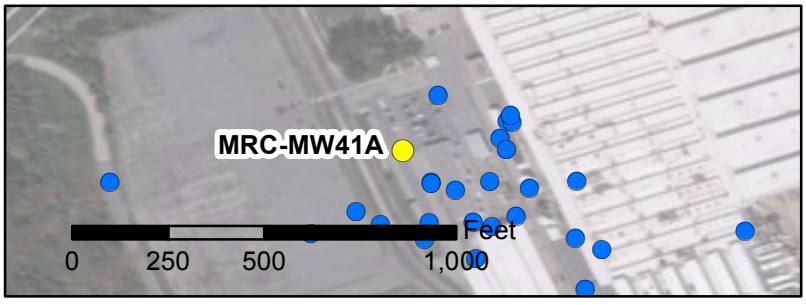
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:25	10.95	100	0.01	3.96	3.94	0.001	164	15.55	128	
08:30	11.27	100	0.1	8.94	6.06	3.91	14.1	0.07	-57	
08:35	11.48	100	0.2	9.99	6.23	3.86	14.9	0	-73	
08:40	11.87	100	0.4	10.9	6.27	3.81	12.5	0	-86	
08:45	12.01	100	0.53	11.29	6.27	3.78	11.4	0	-88	
08:50	12.11	100	0.66	11.24	6.28	3.78	10.9	0	-91	
08:55	12.22	100	0.79	11.26	6.35	3.81	10	0	-93	
09:00	11.34	100	0.92	11.25	6.29	3.81	9.1	0	-96	

Sample Collection Information

Removed discolored perri tubing. Last 9:05 reading - temp 11.18, pH 6.29, ORP -99, cond 3.83, turb 8.1, do 0.00, dye 12.5. Total purged 1.2 gal. Total dra wn 1.55'.Parameters stabilized. Sample depth 14'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW87A
Screen Interval: 6'-16'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

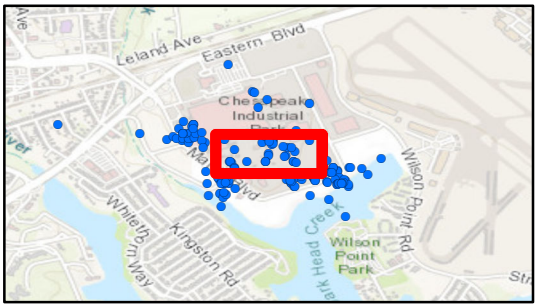
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

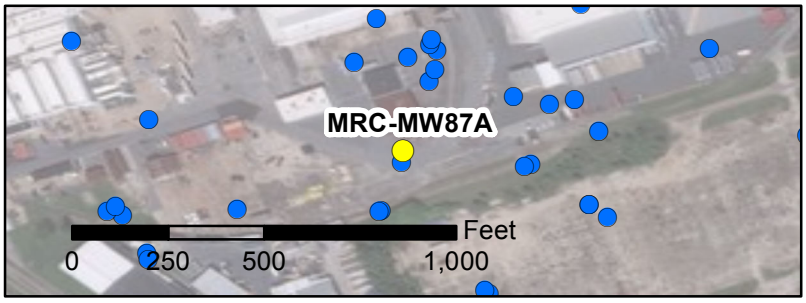
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:35	12.94	150	0.2	12.65	6.17	2.11	135	1.22	-41	
08:40	13.57	150	0.2	12.81	6.2	2.08	97.1	1.08	-44	
08:45	13.91	150	0.2	12.27	6.22	-50	192	1.1	-50	

Sample Collection Information

Replaced tubing; kinked and could not get to depth. Well ran dry, 0846. DTW 13.95. 80% recharge at 12.07. Sampled at 11.35' after45 min recharge





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW12A
Screen Interval: 4'-14'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

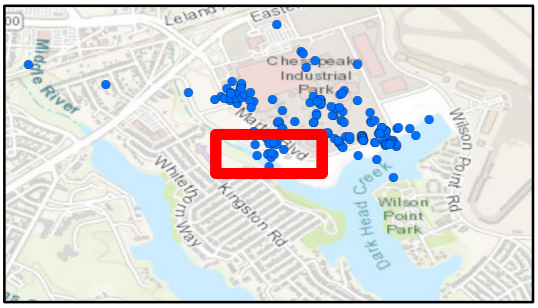
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: Yes

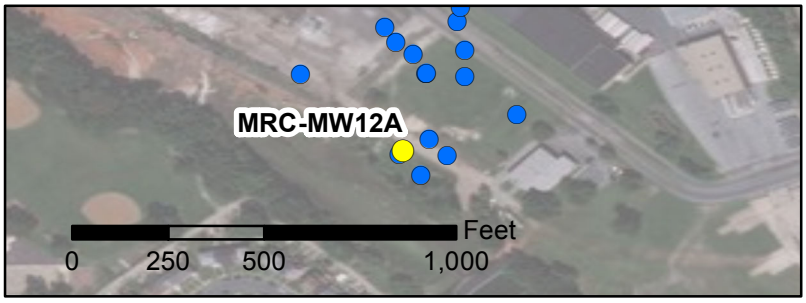
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:10	3.23	100	0.13	9.34	6.22	0.369	83.9	0.87	7	
08:15	3.55	100	0.26	9.14	6.37	0.372	71	0.57	-9	
08:20	3.97	100	0.39	8.74	6.36	0.377	53.4	0.31	-17	
08:25	4.51	100	0.52	8.51	6.36	0.382	52.6	4.08	-21	
08:30	4.56	100	0.65	8.37	6.34	0.384	56.1	3.79	-21	
08:35	4.82	100	0.78	8.21	6.35	0.385	56.8	3.6	-23	
08:40	5.02	100	0.91	8.11	6.36	0.385	51.4	0.1	-23	
08:45	5.36	100	1.04	8.01	6.35	0.387	49.5	0	-25	
08:50	5.61	100	1.17	7.95	6.37	0.388	49.4	0	-27	
08:55	5.81	100	1.3	7.88	6.38	0.389	45.3	0	-28	
09:00	6.04	100	1.44	7.82	6.39	0.389	43.8	0	-29	
09:05	6.33	100	1.57	7.81	6.38	0.394	40.2	0	-29	
09:10	6.61	100	1.7	7.84	6.38	0.394	38.3	0	-31	
09:15	6.95	100	1.83	7.87	6.39	0.395	31.7	0	-31	
09:20	7.22	100	1.96	7.91	6.37	0.395	30.4	0	-29	
09:25	7.58	100	2.09	7.95	6.39	0.393	27.1	0	-31	
09:30	7.93	100	2.22	7.97	6.4	0.394	27.7	0		
09:35	8.24	100	2.45	8.01	6.4	0.394	25.8	0	-32	

Sample Collection Information

DTW from AECOM mark on CPC 4.25 ft at 0800, slight film in purge bucket





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW102A
Screen Interval: 6'-16'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

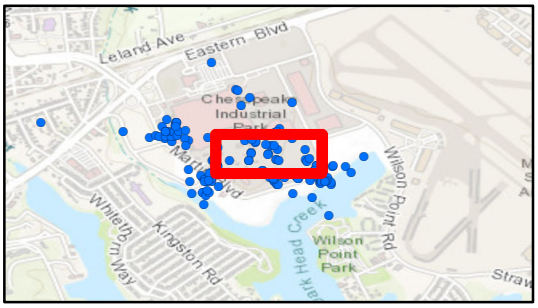
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

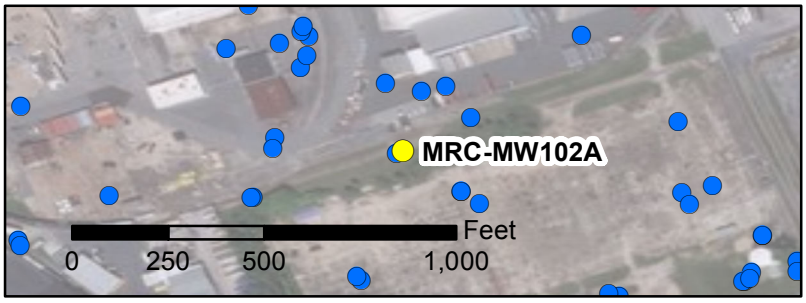
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:25	10.95	120	0.25	14.22	6.24	1.17	11.3	1.43	-21	
09:30	11.43	120	0.5	14.17	6.42	1.14	4.1	0.93	-47	
09:35	11.51	120	0.75	14.29	6.4	1.15	3.6	0.81	-51	
09:40	11.64	120	1	14.45	6.39	1.15	3.1	0.74	-54	
09:45	11.72	120	1.25	15.69	6.39	1.16	2.1	0.68	-56	

Sample Collection Information

Well ran dry, waited for 80% recharge





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW69A
Screen Interval: 7'-17'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

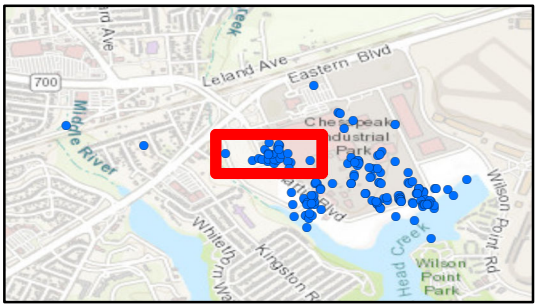
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

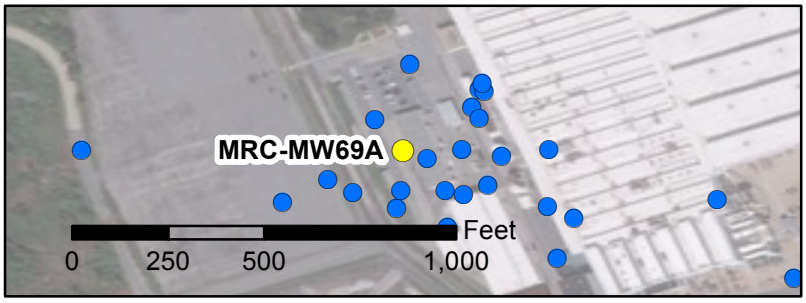
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:25	11.45	199	0.05	10.11	6.02	1.91	11.6	4.88	-19	
10:30	11.51	120	0.15	10.91	6.08	1.85	23	2.89	-28	
10:35	11.6	120	0.26	11.82	5.98	1.8	22.8	0.45	-17	
10:40	11.74	120	0.4	12.67	5.99	1.8	14	0	-18	
10:45	11.85	120	0.51	12.67	5.97	1.79	11.6	0	-17	
10:49	12.02	120	0.66	13.13	5.98	1.77	9.6	0	-21	
10:55	12.26	120	0.79	13.28	5.96	1.77	8.9	0	-21	
11:00	12.55	120	0.95	13.33	5.99	1.76	7.4	0	-22	

Sample Collection Information

Removed discolored perri tuning. Total drawdown 1.25'. Sample depth 14'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW102B
Screen Interval: 26'-36'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

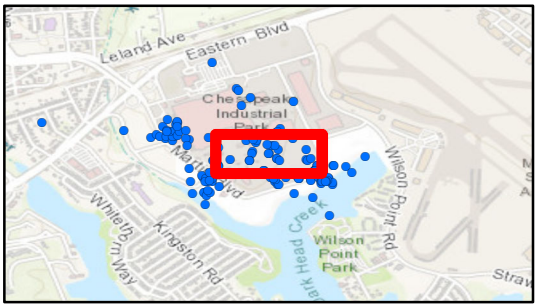
Sampled for

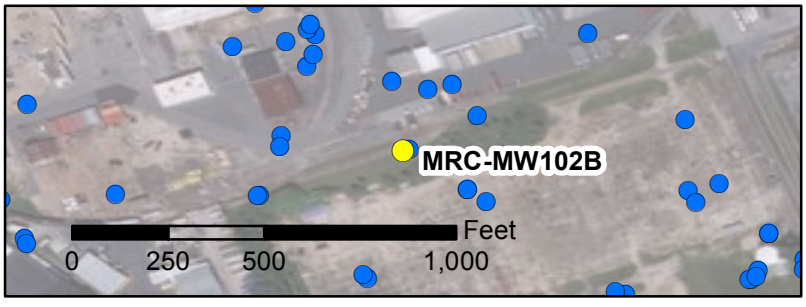
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:45	14.1	120	0.25	16.28	4.58	0.142	0	1.29	188	
10:50	15.1	120	0.5	16.51	4.62	0.141	1.1	0.94	201	
10:55	16.33	120	0.75	16.64	4.63	0.141	0.3	0.9	211	
11:00	17.45	120	1	17.04	4.63	0.141	0.4	0.86	222	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW87B
Screen Interval: 24.5'-34.5'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

Sampled for

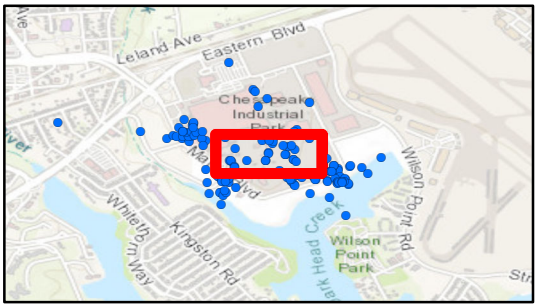
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

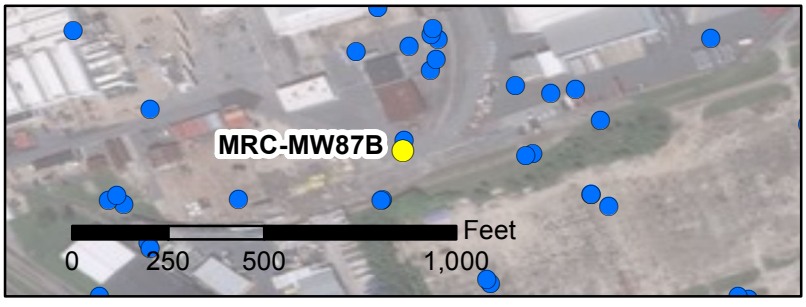
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:13	13.26	200	0.26	13.39	6.39	6.46	266	1.09	-17	
10:18	14.16	100	0.13	14.2	6.41	6.5	208	0.93	-21	
10:24	14.69	100	0.16	14.56	6.43	6.49	163	0.87	-23	
10:29	15.57	100	0.13	14.7	6.45	6.47	126	1.09	-25	
10:34	15.8	100	0.13	14.41	6.4	0.006	77.6	9.85	-58	
10:50	17.16	100	0.26	14.98	6.46	6.41	361	0.58	-28	
10:55	17.57	100	0.13	14.64	6.5	6.4	362	0.81	-28	
11:00	18.19	100	0.13	14.44	6.47	6.4	328	0.58	-27	
11:07	19.91	100	0.18	15.45	6.45	6.4	186	0.42	-30	
11:12	19.59	100	0.13	15.5	6.45	6.38	163	0.43	-30	
11:17	21.63	100	0.13	15.71	6.43	6.38	145	0.46	-30	
11:22	22.82	100	0.13	16.03	6.44	6.36	131	0.46	-31	
11:27	23.1	100	0.13	16.1	6.45	6.35	124	0.44	-32	
11:32	24.54	100	0.13	16.02	6.44	6.33	112	0.44	-31	
11:38	24.51	100	0.13	16.06	6.44	6.29	91.7	0.43	-32	
11:43	24.8	100	0.13	16.08	6.44	6.25	80.1	0.42	-31	

Sample Collection Information

Removed TT peri tubing to use bladder pump. 1039, bladder water tubing blew out in well, rework





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW69B
Screen Interval: 25'-40'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

Sampled for

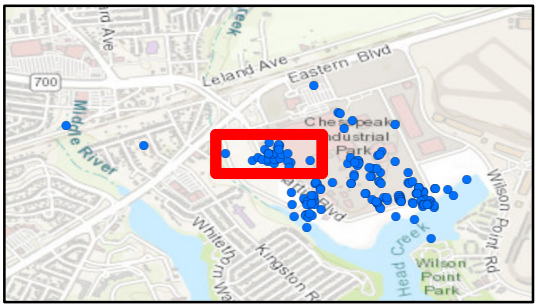
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

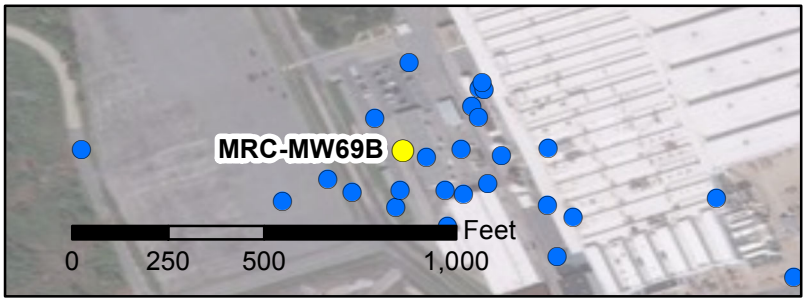
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:35	12.21	100	0.05	13.99	5.84	0.326	7.4	7.13	44	
11:40	13.79	150	0.26	15.22	5.31	0.295	5.5	0.44	134	
11:45	14.55	150	0.4	15.55	5.33	0.284	5	0.1	160	
11:50	15.41	150	0.63	15.64	5.34	0.28	3.9	0.01	178	
11:55	16.15	130	0.78	15.5	5.33	0.278	4.8	0	190	
12:00	16.93	130	0.9	15.47	5.33	0.274	4.6	0	199	
12:05	17.84									

Sample Collection Information

Removed 41' of old discolored perri tubing. Total drawdown 5'+. Sample depth 32.5'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW12B
Screen Interval: 20'-30'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

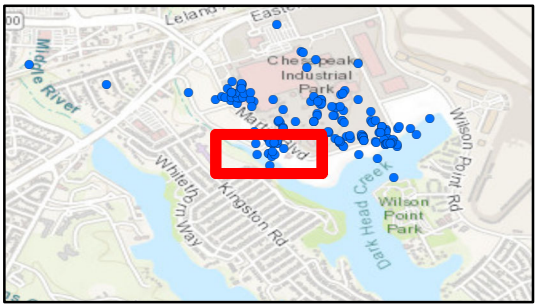
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: Yes

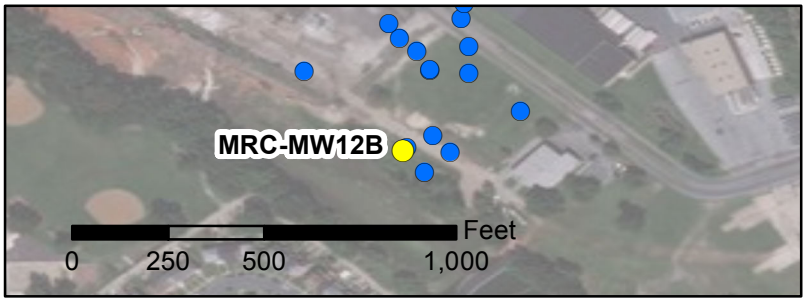
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:35	3.96	100	0.13	7.66	6.72	0.249	321	2.12	-41	
10:40	5.07	100	0.26	8.45	6.78	0.248	260	0.32	-72	
10:45	5.83	100	0.39	8.95	6.79	0.245	232	0.19	-77	
10:50	6.79	100	0.52	9.5	6.81	0.243	193	0.12	-81	
10:55	7.68	100	0.65	9.99	6.83	0.24	156	0.28	-84	
11:00	8.75	100	0.78	10.55	6.85	0.239	122	0.28	-86	
11:05	9.67	100	0.91	10.94	6.85	0.238	119	0.27	-88	
11:10	10.43	100	1.04	11.32	6.86	0.237	113	0.22	-89	
11:15	11.38	100	1.17	11.68	6.86	0.237	110	0.2	-89	
11:20	12.07	100	1.3	11.94	6.86	0.237	112	0.27	-90	
11:25	13.18	100	1.43	12.29	6.87	0.236	106	0.38	-90	
11:30	13.96	100	1.57	12.49	6.84	0.235	100	0.38	-90	
11:35	14.64	100	1.7	12.56	6.86	0.233	98.6	0.51	-90	
11:40	15.41	100	1.83	12.62	6.85	0.233	96.3	0.61	-90	
11:45	16.31	100	1.96	12.61	6.85	0.233	92.6	0.66	-90	
11:50	16.95	100	2.09	12.59	6.84	0.232	90.1	0.7	-90	
11:55	17.58	100	2.22	12.53	6.84	0.233	87.8	0.74	-90	
12:00	18.11	100	2.35	12.45	6.83	0.233	85.3	0.79	-89	

Sample Collection Information

Dtw at 0800 4.25 ft at aecom mark on cpc





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW101A
Screen Interval: 8'-18'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

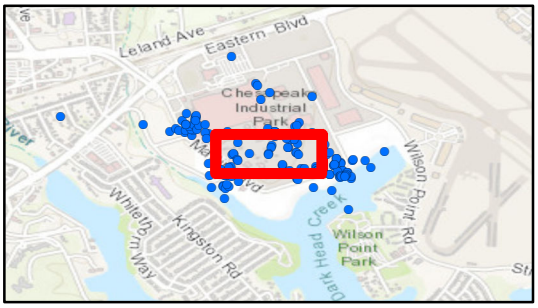
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

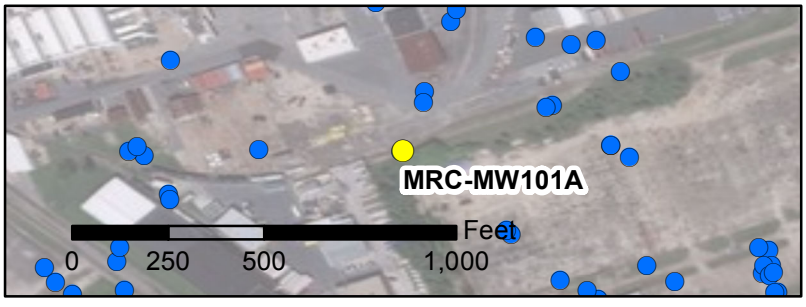
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:25	14.94	150	0.25	14.2	5.01	0.513	17.5	2.18	160	
12:30	15.42	120	0.5	14.16	4.83	0.515	4	1.19	167	
12:35	15.47	120	0.75	14.6	5.29	0.494	5.5	2.4	134	
12:40	15.46	120	1	14.57	5.32	0.494	5.9	2.74	131	

Sample Collection Information

Well ran dry, had to wait for 80% recharge ; ran dry again, couldn't collect all 1,4-dioxane bottles; collected remainder of 1,4-dioxane on 4/13/18 @ 0840





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW117B
Screen Interval: 40.5'-50.5'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

Sampled for

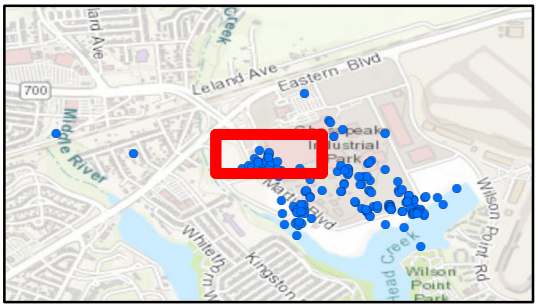
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

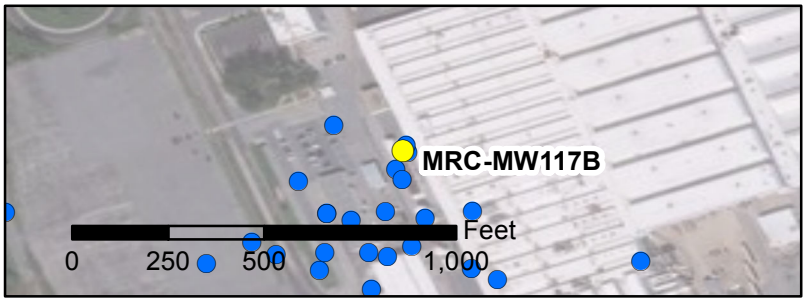
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:20	18.19	100	0.05	11.94	4.96	0.312	61.4	5.02	145	
13:25	18.24	100	0.13	13.8	7.4	0.441	62.7	2.35	-124	
13:30	18.72	200	0.33	15.59	7.38	0.435	55.8	0.6	-167	
13:35	18.4	100	0.54	15.57	7.5	0.441	53.9	2.29	-183	
13:40	18.76	200	0.71	16.2	7.34	0.435	52.3	1.6	-189	
13:45	18.77	200	0.9	16.57	7.39	0.425	47.9	2.21	-187	
13:50	18.77	200	1.28	16.01	7.07	0.377	39.2	0	-153	
13:55	18.77	200	1.54	16.34	7.1	0.382	36.8	0	-157	
14:00	18.77	200	1.8	16.62	7.02		31.6	0	-156	
14:05	18.77	200	2.06	16.74	6.85	0.347	25.9	0	-137	
14:10	18.77	200	2.32	16.89	6.88	0.337	24.7	0	-137	
14:15	18.77	200	2.58	16.82	6.82	0.326	23	0	-133	
14:20	18.77	200	2.84	16.9	6.89	0.313	22.6	0	-126	
14:25	18.77	200	3.1	16.9	6.62	0.289	18.8	0	-166	
14:30	18.77	200	3.36	16.92	6.64	0.288	18.4	0	-115	
14:35	18.77	200	3.72	16.93	6.58	0.274	16.8	0	-108	
14:40	18.77	200	3.98	16.96	6.53	0.265	16.6	0	-101	
14:45	18.77	200	4.24	16.82	6.38	0.257	16.4	0	-101	

Sample Collection Information

Removed 40’ old perri tubing. Total drawdown 0.58’. 90-minute purging condition met. Sample depth 45’.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW25A
Screen Interval: 20'-30'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

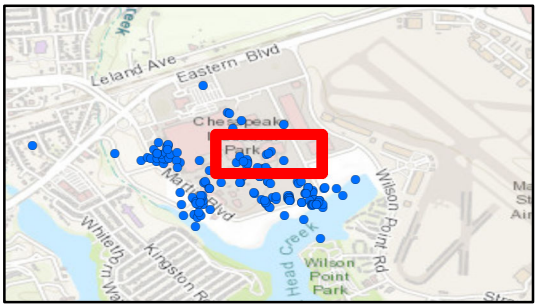
Sampled for

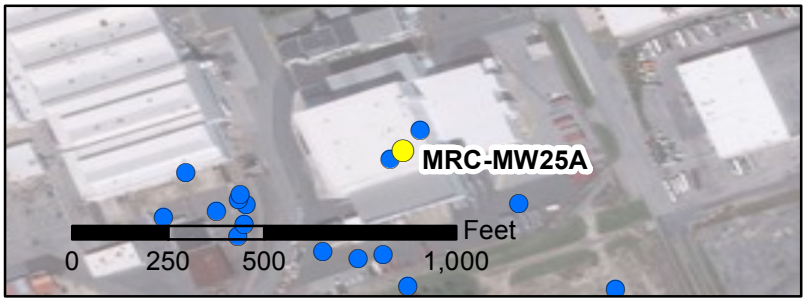
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: Yes

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:26	15.34	150	0.2	14.63	6.26	2.92	388	0.12	32	
12:31	15.84	150	0.2	14.39	6.26	2.93	371	0.07	31	
12:37	16.38	150	0.2	14.3	6.26	2.93	283	0.05	31	
12:42	16.09	150	0.2	14.21	6.26	2.87	247	0.07	31	
12:48	16.23	150	0.2	13.68	6.26	2.96	211	0.1	30	
12:53	16.4	150	0.2	13.66	6.26	2.97	145	0.07	29	
12:58	16.48	150	0.2	13.6	6.24	2.97	135	0.06	29	
13:03	16.65	150	0.2	13.65	6.24	2.99	114	0.06	29	
13:08	16.88	150	0.2	13.81	6.25	3	95	0.05	29	
13:13	17.11	150	0.2	13.97	6.23	3.02	77.8	0.05	29	
13:18	17.43	150	0.2	14.06	6.23	3.02	63	0.04	29	
13:23	17.63	150	0.2	14.04	6.22	3.02	57.4	0.04	29	
13:28	17.78	150	0.2	14.06	6.22	3.02	53.7	0.03	29	
13:33	17.95	150	0.2	14.13	6.21	3.01	42.7	0.02	29	
13:43	18.18	150	0.2	14.13	6.18	3	29.1	0.02	31	
13:48	18.29	150	0.2	14.18	6.17	2.98	22.2	0.01	31	
13:53	18.39	150	0.2	14.2	6.16	2.96	21.8	0.01	32	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW15A
Screen Interval: 3'-13'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

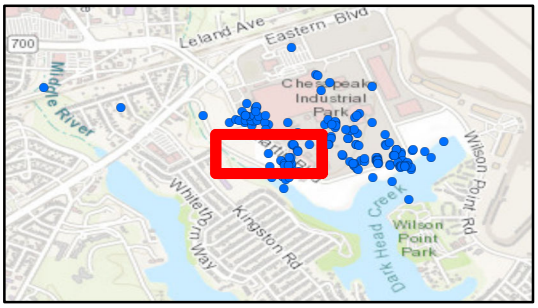
VOCs: No
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

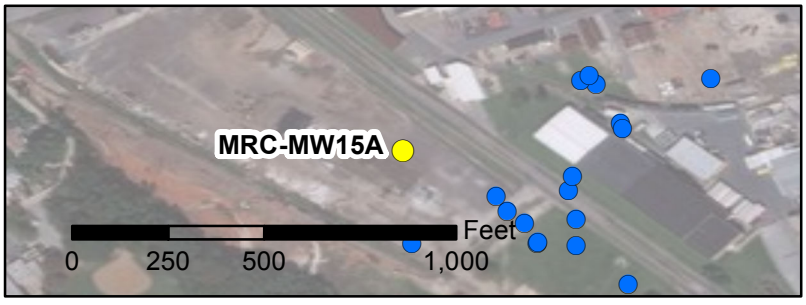
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:35	1.91	100	0.13	9.53	6.45	1.12	550	1.71	71	
13:40	1.94	100	0.26	9.5	6.42	1.13	1000	1.08	79	
13:45	1.96	100	0.39	9.41	6.41	1.14	689	0.71	87	
13:50	2.04	100	0.52	9.31	6.36	1.15	345	0.53	94	
13:55	2.14	100	0.65	9.21	6.38	1.17	340	0.78	95	
14:00	2.26	100	0.78	9.2	6.38	1.19	320	0.71	96	
14:05	2.31	100	0.91	9.32	6.38	1.2	318	0.8	97	
14:10	2.34	100	1.04	9.3	6.37	1.23	294	0.73	96	
14:15	2.35	100	1.17	9.28	6.36	1.25	282	0.63	96	
14:20	2.34	100	1.3	9.27	6.35	1.59	280	0.41	93	
14:25	2.3	100	1.43	9.24	6.33	1.63	265	0.36	92	
14:30	2.32	100	1.56	9.22	6.31	1.65	261	0.47	92	
14:35	2.37	100	1.69	9.2	6.29	1.67	254	0.1	91	
14:40	2.35	100	1.82	9.25	6.26	1.7	228	0.24	91	
14:45	2.32	100	1.95	9.22	6.29	1.34	167	0.28	85	
14:50	2.3	100	2.08	9.22	6.28	1.34	161	0.32	87	
14:55	2.31	100	2.21	9.24	6.25	1.35	151	0.63	92	
15:00	2.32	100	2.34	9.18	6.23	1.36	146	0.17	93	

Sample Collection Information

Will not read turbidity past 1000 ntus





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW122A
Screen Interval: 10'-15'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

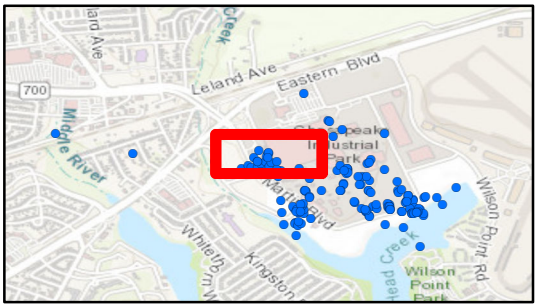
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

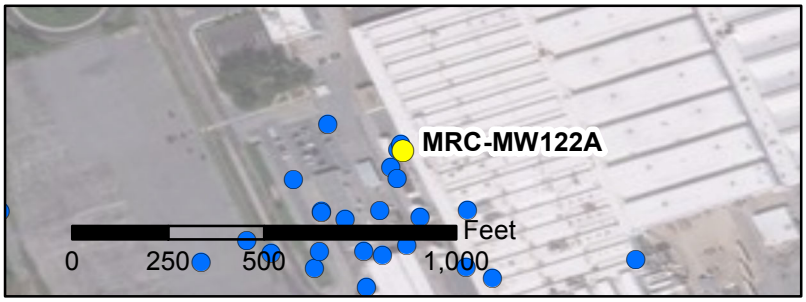
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:30	15.5	100	0.1	13.17	5.94	0.511	137	7.72	31	

Sample Collection Information

Well purged dry at 1531 after 3 minutes of purging to partially fill up horiba for water parameters. Waiting for 80% recharge. Waited 24 hours to sample. 4/10 1720 sampled only VOCs and Cr+6. Sampled 1,4-Dioxane (4/12 1235 300ml and 4/13 0800 350ml).





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW101B
Screen Interval: 25'-35'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

Sampled for

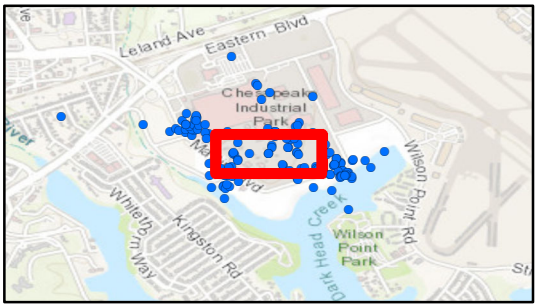
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

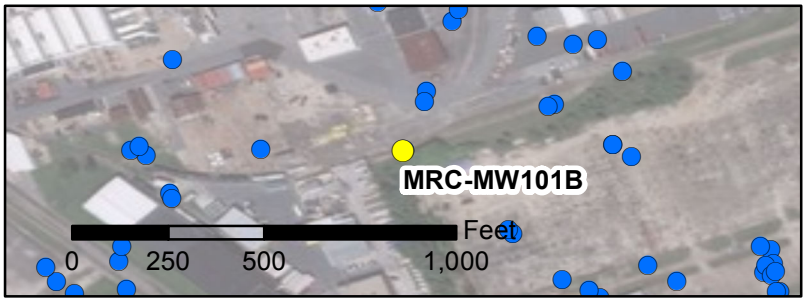
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:05	16.35	100	0.25	15.25	5.36	0.251	210	1.48	117	
14:10	17.25	100	0.5	15.01	5.35	0.249	99.5	0.95	120	
14:15	18.16	100	0.75	15.01	5.33	0.245	69.3	0.78	123	
14:20	18.98	100	1	15.06	5.31	0.244	55.7	0.71	125	
14:25	19.85	100	1.25	15.12	5.32	0.242	50.5	0.65	126	
14:30	20.69	100	1.5	15.15	5.31	0.243	46.7	0.62	126	
14:35	21.51	100	1.75	15.18	5.3	0.241	45.3	0.58	127	
14:40	22.31	100	2	15.18	5.3	0.241	43.1	0.57	127	
14:50	23.88	100	2.25	14.99	5.25	0.229	40.8	0.95	133	
14:55	24.71	100	2.5	14.89	5.24	0.229	38.4	0.72	134	
15:00	25.23	100	2.75	14.96	5.23	0.228	35.6	0.62	135	
15:05	26.01	100	3	15.07	5.22	0.228	32.8	0.56	137	
15:10	26	100	3.25	15.21	5.22	0.229	30.5	0.53	138	
15:15	26	100	3.5	15.31	5.19	0.229	24.3	0.52	141	
15:20	26.18	100	3.75	15.37	5.13	0.227	15.9	0.51	149	
15:25	26.44	100	4	15.32	5.03	0.218	9	0.52	169	
15:30	26.48	100	4.25	15.23	4.98	0.214	9.1	0.52	172	
15:35	26.66	100	4.5	15.19	5	0.211	7.1	0.53	174	

Sample Collection Information

Cleaned flow-through cell after reading @ 1440. Waited 5 mins for next reading to stabilize





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW64A
Screen Interval: 6'-16'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Peristaltic

Sampled for

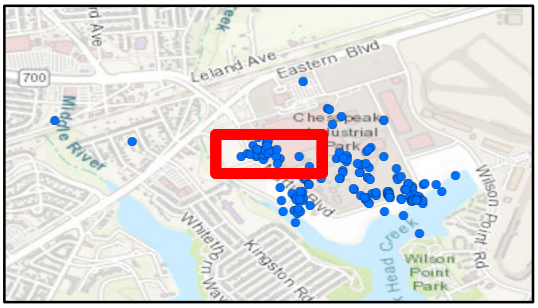
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

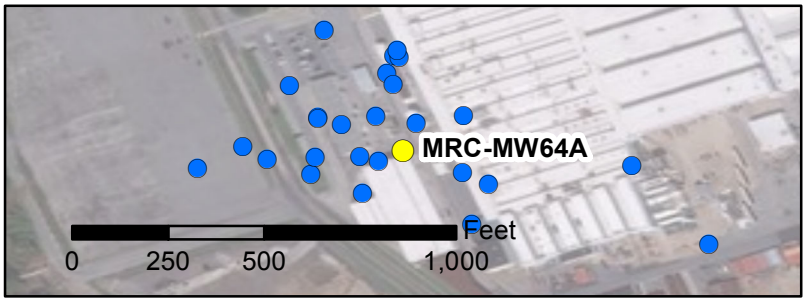
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:05	7.23	100	0.13	11.69	6.37	4.11	14.5	2.16	-104	
16:10	7.46	150	0.26	11.65	6.43	4.14	5.8	0	-117	
16:15	7.63	150	0.5	11.63	6.43	4.15	3.9	0	-120	
16:20	7.81	150	0.76	11.61	6.44	4.15	2.7	0	-123	

Sample Collection Information

Water parameters stabilized. Total drawdown 0.58'. Sample depth 12'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW79B
Screen Interval: 27'-37'
Sampled By: victoria.kirkpatrick@aecom.com,holly.brown@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

Sampled for

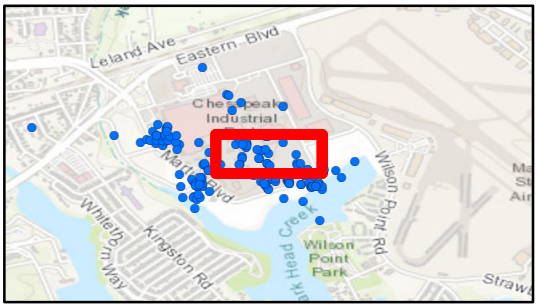
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

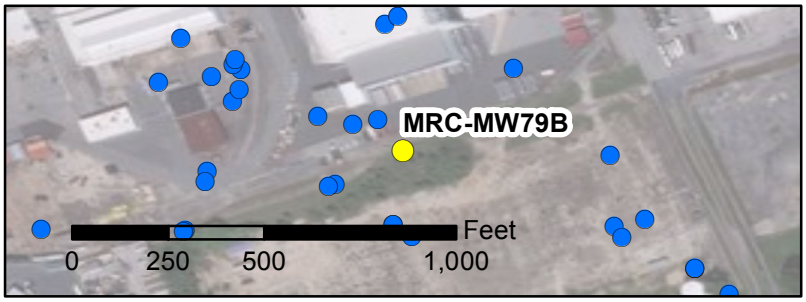
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:30	10.21	120	0.25	16.29	5.02	0.259	25.4	1.03	189	
16:35	10.23	120	0.5	16.46	4.97	0.26	15.8	0.71	192	
16:40	10.3	120	0.75	16.57	5.07	0.258	11.3	0.63	190	
16:45	10.33	120	1	16.61	5.07	0.257	8.9	0.58	193	
16:50	10.36	120	1.25	16.73	5.05	0.256	7.7	0.53	196	

Sample Collection Information

Replaced tubing (TT tubing wrong size)





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW95B
Screen Interval: 45'-55'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

Sampled for

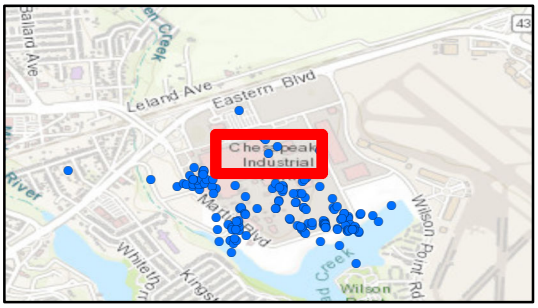
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

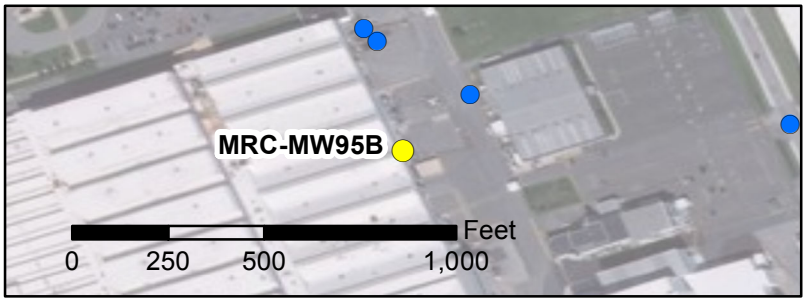
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:55	5.55	250	0.33	14.9	6.13	0.168	160	2.72	182	
16:00	5.21	100	0.2	13.89	6.08	0.169	133	2.8	190	
16:05	4.86	100	0.13	13.44	6.07	0.171	85.5	2.75	189	
16:10	4.73	100	0.13	13.48	6.07	0.169	67.1	2.72	186	
16:17	4.69	100	0.13	13.72	6.06	0.17	51.6	2.75	186	
16:22	4.72	100	0.13	13.86	6.04	0.166	38.9	2.67	184	
16:27	4.68	100	0.13	13.78	6.01	0.157	28	2.61	185	
16:32	4.62	100	0.13	13.89	5.99	0.144	27.9	2.54	182	
16:37	4.61	100	0.13	13.93	5.95	0.135	27.7	2.48	180	
16:43	4.59	100	0.13	13.91	5.94	0.13	25.2	2.51	179	
16:48	4.82	100	0.13	14.71	5.93	0.136	40.1	2.57	180	
16:55	4.91	100	0.13	14.45	5.93	0.124	32.2	4.9	176	
17:00	4.6	100	0.13	14.19	5.91	0.118	27.5	4.13	178	
17:05	4.58	100	0.13	14	5.92	0.117	27.3	2.63	177	
17:11	4.54	100	0.13	13.93	5.91	0.118	26	2.67	177	
17:16	4.56	100	0.13	13.89	5.92	0.118	24.9	2.64	175	
17:21	4.56	100	0.13	13.89	5.93	0.116	23.6	2.65	175	

Sample Collection Information

Tubing discovered at least 10' down well when bladder pump hit refusal during setup. TT tubing was recovered and discarded. Cleaned flow cell at 1650





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW22B
Screen Interval: 27'-37'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/9/2018
Pump Method: Bladder

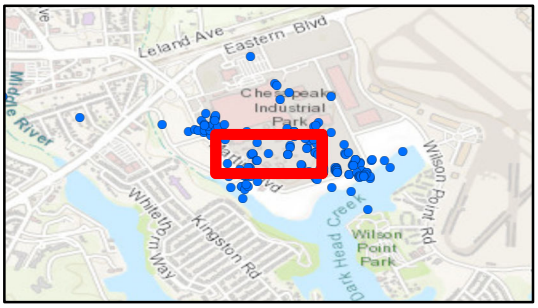
Sampled for

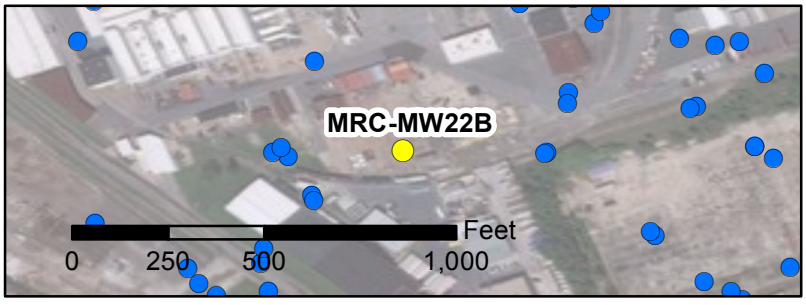
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:50	12.74	100	0.13	8.43	5.63	0.147	68.2	4.35	158	
15:55	13.01	100	0.26	8.6	5.62	0.146	61.1	3.05	160	
16:00	13.83	100	0.39	9.2	5.63	0.146	55.9	2.18	167	
16:05	14.62	100	0.52	9.73	5.64	0.143	44.9	2.22	173	
16:10	15.38	100	0.65	9.97	5.63	0.142	50.7	2.69	175	
16:15	16.26	100	0.78	10.26	5.64	0.143	49.9	2.28	177	
16:20	17.24	100	0.91	10.54	5.65	0.142	43.7	1.97	179	
16:25	17.97	100	1.04	10.72	5.65	0.142	38.3	1.63	177	
16:30	18.81	100	1.17	10.88	5.66	0.141	36.3	2.57	177	
16:35	19.52	100	1.3	10.98	5.66	0.141	35.6	2.74	178	
16:40	20.26	100	1.43	11.15	5.67	0.141	32.3	2.57	179	
16:45	21.05	100	1.57	11.24	5.67	0.14	32.2	6.1	178	
16:50	21.76	100	1.7	11.32	5.64	0.141	33.3	10.49	179	
16:55	22.57	100	1.83	11.4	5.67	0.14	25.2	8.83	180	
17:00	23.36	100	1.96	11.49	5.68	0.14	24.9	9.36	180	
17:05	23.98	100	2.09	11.53	5.65	0.14	28.9	8.77	180	
17:10	24.68	100	2.22	11.59	5.68	0.14	27.3	9.15	181	
17:15	25.51	100	2.35	11.63	5.68	0.14	21.5	8.94	181	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW50A
Screen Interval: 16'-26'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

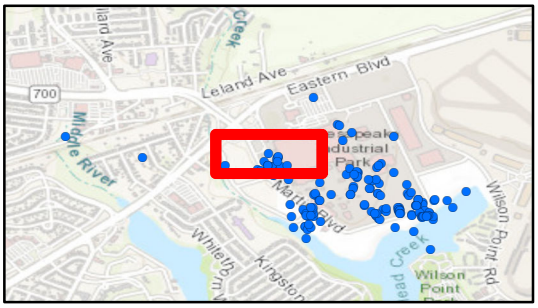
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

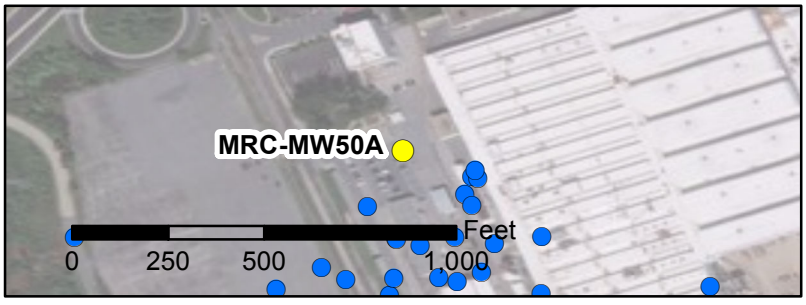
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:20	14.46	100	0.01	7.48	4.62	3.91	17.9	2.63	224	
08:25	14.77	100	0.13	13.02	5.25	5.78	15.3	0.72	234	
08:30	14.91	100	0.26	13.02	5.3	5.83	13.4	0.74	229	
08:35	14.92	100	0.4	13.3	5.34	5.8	11.9	0.67	226	
08:40	14.95	120	0.53	13.64	5.34	5.84	7.8	0.57	222	
08:45	14.96	120	0.67	13.72	5.34	5.71	8.1	0.54	221	
08:50	15	120	0.8	13.79	5.35	5.82	6	0.55	214	

Sample Collection Information

Removed 600ml standing water in well manway. Water quality parameters stabilized. Total drawdown 0.54'. Sample depth 21'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW127B
Screen Interval: 17.8'-22.8'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

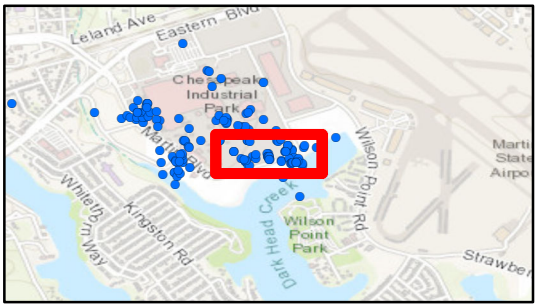
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

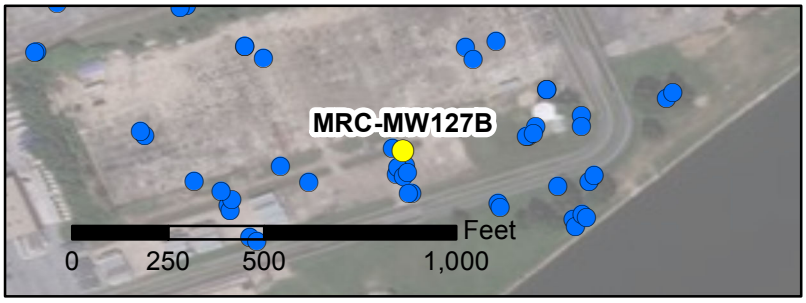
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:00	5	150	0.25	13.48	4.54	0.449	26.5	1.54	236	
08:05	5.34	150	0.5	13.81	4.68	0.447	30.1	1.36	231	
08:10	5.45	150	0.75	14.07	4.76	0.449	29.3	1.28	225	
08:15	5.58	150	1.25	14.31	4.82	0.447	27.5	1.21	220	
08:20	5.68	150	1.5	14.39	4.84	0.445	22.7	1.09	219	
08:25	5.83	150	1.75	14.77	4.86	0.444	16.5	1.03	215	
08:30	5.93	150	2	14.98	4.88	0.447	16.8	0.98	213	
08:35	6.02	150	2.25	15.08	4.9	0.441	15.4	0.92	211	
08:40	6.12	150	2.5	15.22	4.92	0.439	14.7	0.9	209	
08:45	6.22	150	2.75	15.41	4.97	0.437	12.7	0.87	209	
08:50	6.28	150	3	15.58	4.92	0.438	8.6	0.84	208	

Sample Collection Information

No tubing in well





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW10A
Screen Interval: 3'-13'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

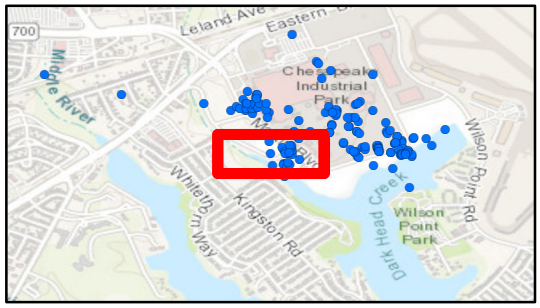
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

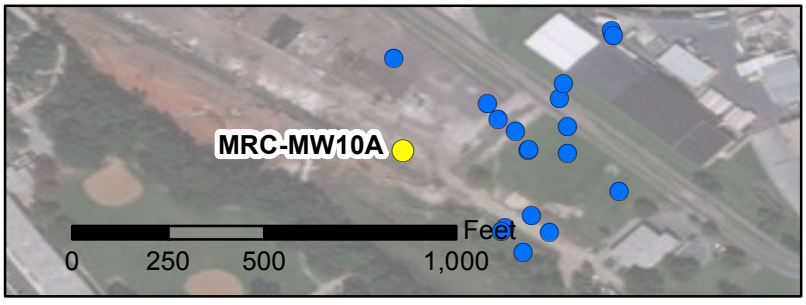
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:10	1.35	100	0.13	7.25	6.16	0.438	131	1.19	46	
08:15	2.19	100	0.26	8.05	6.51	0.422	112	0.51	-25	
08:20	2.99	100	0.39	8.37	6.54	0.419	103	0.24	-35	
08:25	3.67	100	0.52	8.46	6.55	0.418	104	0.18	-39	
08:30	3.95	100	0.65	8.75	6.56	0.416	110	0.07	-41	
08:35	4.38	100	0.78	8.9	6.58	0.415	117	0.1	-43	
08:40	4.75	100	0.91	8.97	6.58	0.416	120	0.08	-44	
08:45	5.27	100	1.04	9.11	6.58	0.416	110	0.08	-44	
08:50	5.71	100	1.17	9.23	6.6	0.416	101	0.06	-44	
08:55	6.05	100	1.3	9.43	6.63	0.416	94.3	0.06	-48	
09:00	6.37	100	1.43	9.85	6.69	0.417	86.3	0.04	-44	
09:05	6.59	100	1.57	9.97	6.7	0.416	75.8	0	-59	
09:10	6.89	100	1.7	10.13	6.7	0.415	65.5	0	-59	
09:15	7.07	100	1.83	10.25	6.7	0.415	67.1	0	-58	
09:20	7.38	100	1.96	10.19	6.69	0.415	61.2	0	-60	
09:25	7.6	100	2.09	10.29	6.71	0.417	63.4	0	-63	
09:30	7.81	100	2.22	10.35	6.74	0.417	62.6	0	-66	
09:35	7.93	100	2.35	10.37	6.74	0.418	65	0	-67	

Sample Collection Information

Dtw at aecom mark on cpc is 4.6 ft at 0735





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW115A
Screen Interval: 25'-35'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Bladder

Sampled for

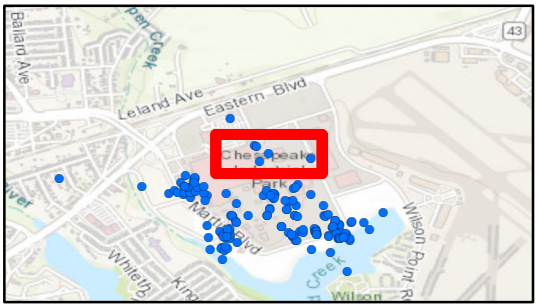
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

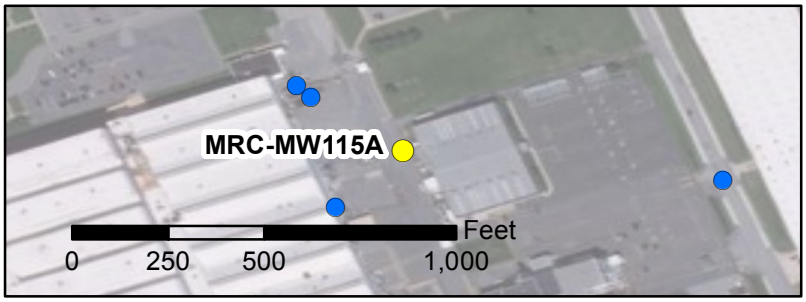
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:33	8.81	400	0.53	14.25	6.61	0.826	6.8	0.73	174	
09:38	10.27	150	0.2	14.21	6.72	0.814	1.3	0.75	164	
09:43	11.42	150	0.2	14.29	6.76	0.811	0.5	0.7	160	
09:48	12.64	150	0.2	14.56	6.78	0.808	0	0.7	156	

Sample Collection Information

Fe2+ test was completely clear





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW127A
Screen Interval: 5'-15'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

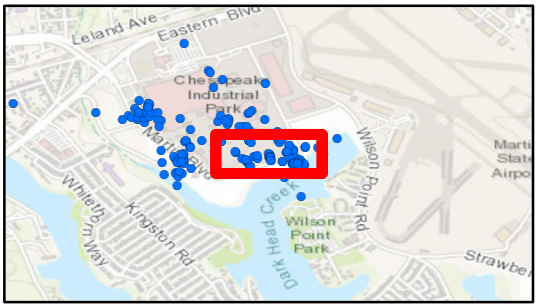
Sampled for

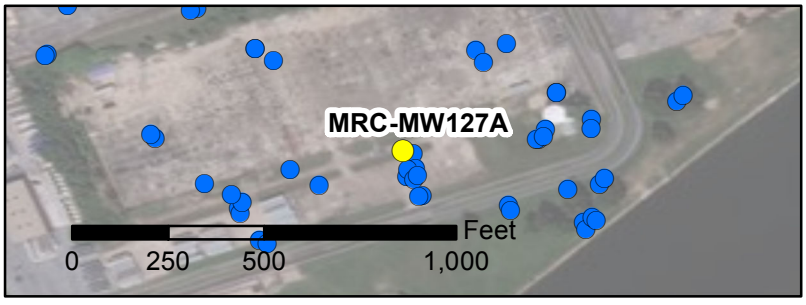
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:35	3.88	120	0.25	13.5	5.72	0.449	7.4	2.95	155	
09:40	3.94	120	0.5	13.45	5.78	0.449	6.9	2.31	155	
09:45	4.01	120	0.75	13.49	5.79	0.451	5.9	1.98	158	
09:50	4.05	120	1	13.54	5.77	0.444	5.1	1.88	161	
09:55	4.09	120	1.25	13.64	5.76	0.438	5.1	1.8	162	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW17A
Screen Interval: 9'-19'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

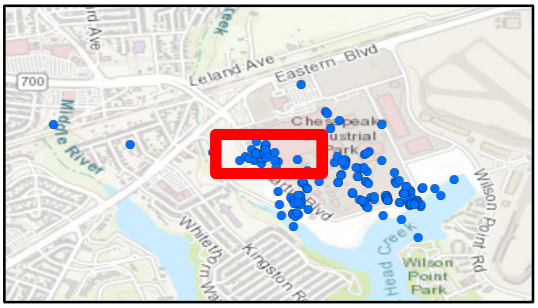
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

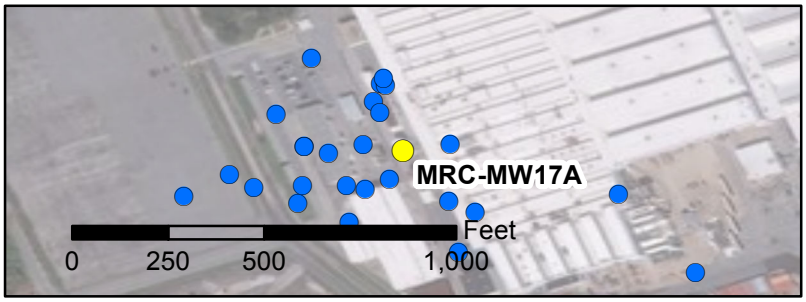
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:40	7.9	120	0.13	12.59	5.81	2.64	71.9	2.04	12	
09:45	8.05	120	0.26	12.65	5.82	2.62	64.6	0.56	8	
09:50	8.14	120	0.45	12.61	5.83	2.63	59.1	0	-2	
09:55	8.22	120	0.7	12.5	5.88	2.63	53	0	-9	
10:00	8.27	120	0.9	12.6	5.92	2.68	54.5	0	-20	
10:05	8.28	120	1.1	12.76	5.99	2.82	39.5	0	-32	
10:10	8.31	120	1.25	12.8	5.99	2.83	44	0	-39	
10:15	8.3	120	1.55	12.9	6.06	2.96	34.2	0	-56	
10:20	18.3	120	1.72	12.8	6.1	3.05	29.7	0	-62	
10:25	18.3	120	1.89	12.78	6.1	3.04	29.7	0	-67	
10:30	18.3	120	2.04	12.88	6.1	3.04	28.4	0	-69	
10:35	18.3	120	2.23	12.95	6.15	3.13	23.9	0	-77	
10:40	18.3	120	2.41	12.96	6.18	3.19	18.6	0	-84	
10:45	18.32	120	2.58	12.97	6.18	3.19	19.8	0	-84	
10:50	18.33	120	2.73	12.58	6.22	3.23	17.4	0	-88	
10:55	18.35	120	2.87	12.53	6.22	3.23	17.4	0	-93	
11:00	18.35	120	3.1	12.89	6.23	3.26	15.2	0	-95	
11:05	18.35	120	3.5	12.87	6.23	3.25	16.3	0	-96	

Sample Collection Information

Replaced old discolored tubing. Total drawdown 0.45'. Sample depth 14'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW128A
Screen Interval: 9'-19'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

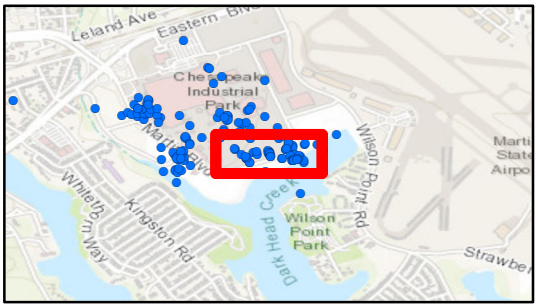
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

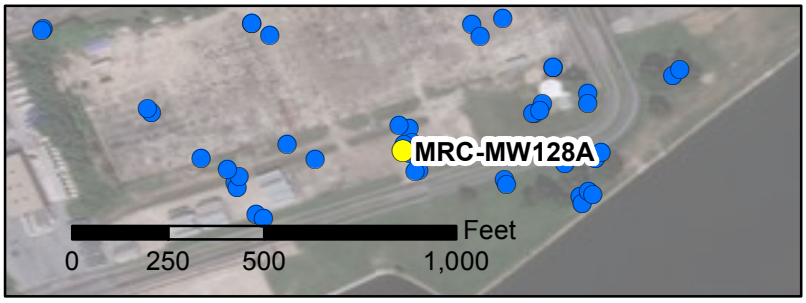
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:10	3.9	120	0.25	14.73	5.11	0.604	37.3	2.75	184	
11:15	3.9			15.35	5.06	0.6	36.9	1.48	205	
11:20	3.92	150	0.75	15.6	4.92	0.594	31.4	1.21	220	
11:25	3.94	150	1	15.8	4.98	0.586	27.2	1.07	221	
11:30	3.98	150	1.25	15.77	5.01	0.584	21.8	0.93	223	
11:35	3.99	150	1.5	16.06	5.02	0.575	20.3	0.9	224	
11:40	3.99	150	2	16.21	5.01	0.57	17.7	0.86	225	
11:45	3.99	150	2.5	16.31	5	0.561	12.9	0.82	227	
11:50	3.98	150	3	16.13	5	0.557	13	0.79	229	
11:55	3.98	150	3.5	16.26	4.99	0.557	13.2	0.77	231	
12:00	3.98	150	4	16.32	4.97	0.55	8.9	0.75	235	

Sample Collection Information

Tubing not long enough





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW27C
Screen Interval: 67'-77'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Bladder

Sampled for

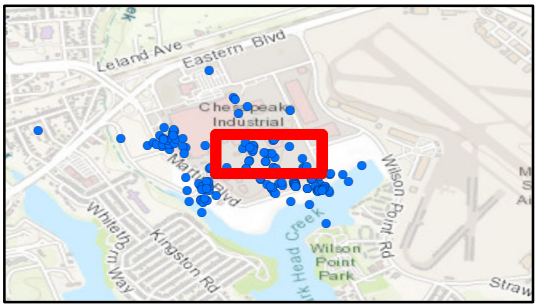
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

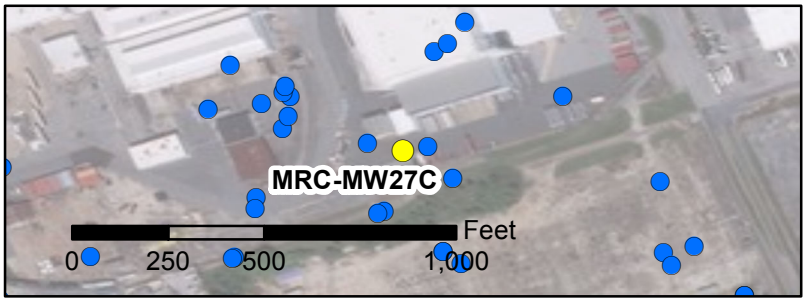
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:02	13.5	150	0.2	5.85	5.87	0.163	986	2.03	170	
11:07	13.59	250	0.26	17.02	5.67	0.132	1000	1.12	169	
11:12	13.61	500	0.66	17.5	5.56	0.111	378	0.68	194	
11:22	13.69	500	0.66	17.65	5.45	0.087	220	0.41	202	
11:32	13.65	500	0.66	17.68	5.35	0.076	156	0.16	206	
11:37	13.62	150	0.2	17.68	5.37	0.077	149	0.17	205	
11:42	13.59	150	0.2	17.62	5.35	0.078	125	0.19	207	
11:47	13.58	150	0.2	16.9	5.34	0.077	120	0.19	208	
11:57	13.62	150	0.2	16.89	5.31	0.073	106	6.65	213	
12:02	13.55	100	0.13	17.31	5.31	0.074	93.1	5.77	212	
12:07	13.54	100	0.13	17.63	5.31	0.074	90.2	5.27	211	
12:12	13.59	150	0.2	17.37	5.31	0.078	77.2	4.83	210	
12:17	13.6	150	0.2	17.28	5.32	0.079	75.8	4.24	210	
12:22	13.51	150	0.04	17.74	5.33	0.079	70.2	3.94	209	

Sample Collection Information

Removed TT tubing to setup bladder pump. Troubleshooting high turbidity, adjusted flow and cleaned flow cell





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW109B
Screen Interval: 38'-48'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Bladder

Sampled for

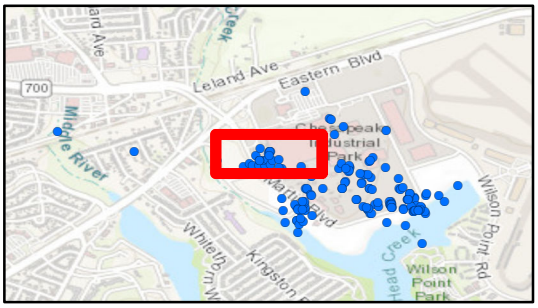
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

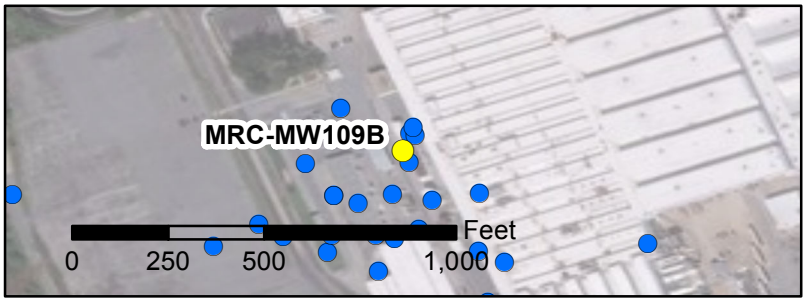
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
00:00	16.55	100	0.13	14.96	7.35	2.14	49.5	2.58	-44	
12:05	16.56	100	0.26	16.41	6.82	4.48	25.4	0	-28	
12:10	16.56	100	0.4	16.45	6.8	4.47	22.7	0	-19	
12:15	16.6	150	0.53	16.71	6.7	4.45	18.2	0	-9	
12:20	16.7	300	0.79	17.28	5.52	4.22	12.6	0	9	
12:25	16.7	300	1.19	17.39	6.4	4.05	11.3	0	24	
12:30	16.7	300	1.59	17.42	6.28	3.89	9.2	0	42	
12:35	16.7	300	1.98	17.53	6.17	3.8	9.3	0	52	
12:40	16.7	300	2.38	17.62	6.13	3.77	7.9	0	55	
12:45	16.7	300	2.77	17.65	6.08	3.71	7.2	0	65	
12:50	16.7	300	3.17	17.66	6.06	3.67	67	0	68	
12:55	16.7	300	3.57	17.75	6.02	3.6	5.1	0	73	

Sample Collection Information

Removed 45' perri tubing. Parameters stabilized. Total drawdown 0.15'. Sample depth 43'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW12C
Screen Interval: 65'-75'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Bladder

Sampled for

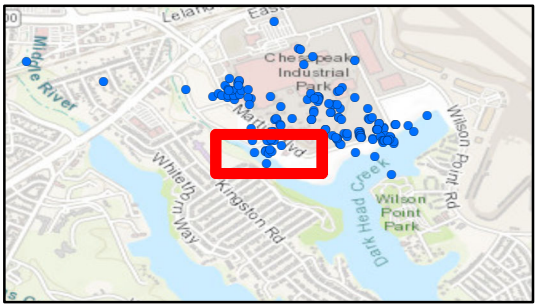
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: No

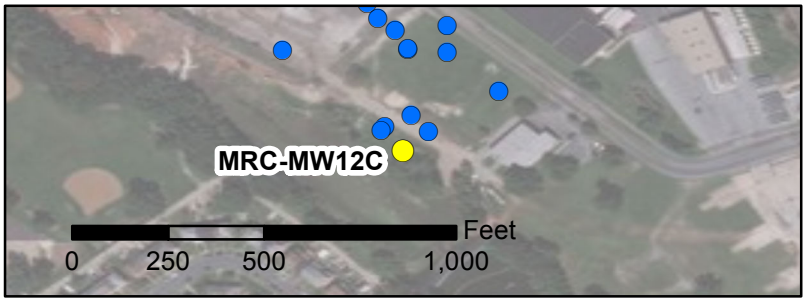
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:20	0.1	300	0.4	13.59	5.08	0.03	1000	6.79	263	
11:25	0.1	300	0.8	13.6	4.94	0.017	1000	6	275	
11:30	0.1	300	1.2	13.58	4.9	0.016	1000	5.28	282	
11:35	0.1	300	1.6	13.64	4.82	0.016	1000	5.13	293	
11:40	0.1	300	2	13.69	4.76	0.016	1000	5.19	295	
11:45	0.1	300	2.4	13.12	4.98	0.016	1000	5.22	290	
11:50	0.1	300	2.8	13.02	5.02	0.022	1000	5.27	292	
11:55	0.1	300	3.2	13.39	4.98	0.021	1000	5.34	304	
00:00	0.1	300	3.6	13.57	4.93	0.019	1000	5.26	315	
12:05	0.1	300	4	13.67	4.82	0.017	1000	5.31	327	
12:10	0.1	300	4.4	13.79	4.95	0.017	1000	5.34	324	
12:30	0.1	300	4.8	13.84	5.04	0.021	1000	5.56	325	
12:35	0.1	300	5.2	14	5	0.017	1000	5.61	322	
12:40	0	300	5.6	14.06	4.96	0.018	1000	5.33	331	
12:45	0	300	6	14.07	5.03	0.02	1000	5.45	332	
12:50	0	300	6.4	14.09	4.81	0.0017	1000	5.27	344	
12:55	0	300	6.8	14.21	4.86	0.016	1000	5.34	347	
13:00	0	300	7.2	14.25	4.67	0.016	1000	5.23	353	

Sample Collection Information

300 ml/min holding at 0.1 ft bgs (stained ring in well at this depth), 1000 ntus is max, 50-55 feet of peri tubing removed from well, bladder pump died from 1210 to 1225, aecom mark on cpc 5.00 at 1112, water too turbid for total iron reading2





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW109A
Screen Interval: 5'-15'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

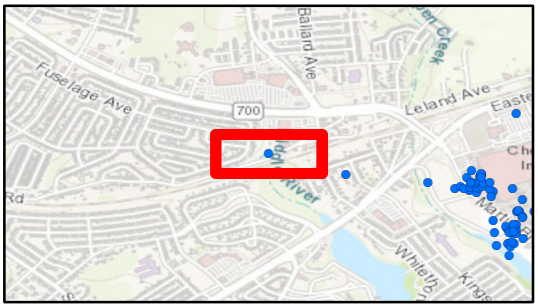
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

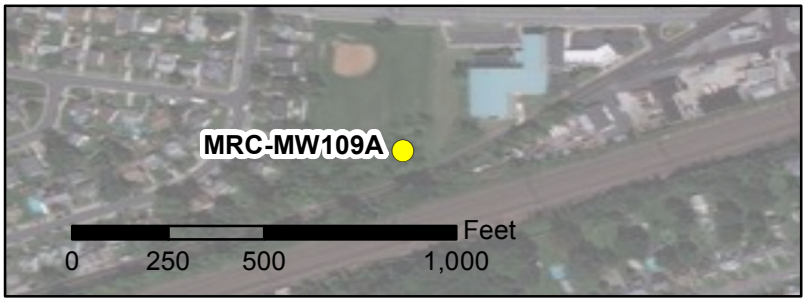
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:10	14.1	200	0.1	15.98	6.55	1.16	1000	1.7	-138	
13:15	14.43	200	0.26	16.46	6.55	1.14	1000	1.39	-141	

Sample Collection Information

1317 purged well dry after 9 min of purging accumulating 800ml of murky light brown colored groundwater. Waiting for 80% recharge. Sampled 4/10/18 1740





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW27A
Screen Interval: 8.5'-18.5'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

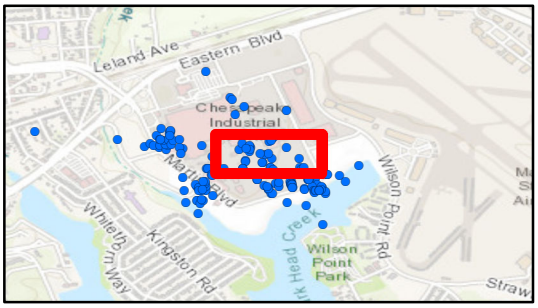
Sampled for

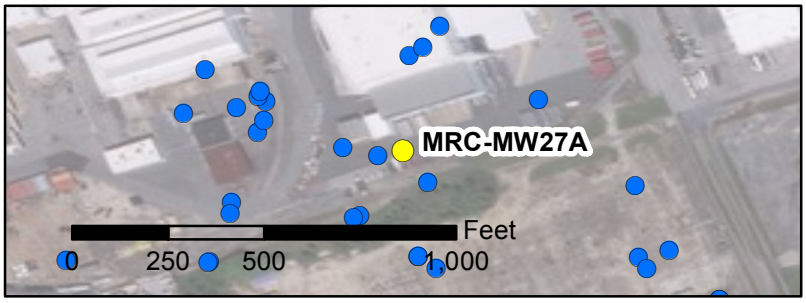
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: Yes

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:25	9.79	200	0.26	16.19	5.97	2.87	33.1	2.26	-6	
13:30	9.81	150	0.2	15.83	6.03	2.91	24.9	0.68	-12	
13:35	9.8	150	0.2	15.67	6.05	2.91	24.6	1.93	-13	
13:40	9.82	150	0.2	15.62	6.05	2.92	21.1	0.79	-13	
13:45	9.84	150	0.2	15.63	6.06	2.92	15.7	0.73	-15	
13:50	9.82	150	0.2	15.61	6.07	2.91	13.3	0.19	-15	
13:55	9.84	150	0.2	15.56	6.08	2.91	11	0.79	-15	
14:01	9.85	150	0.2	15.32	6.09	2.92	1.9	0.07	-16	
14:05	9.86	150	0.2	15.34	6.08	2.93	1.2	0.07	-16	
14:10	9.86	150	0.2	15.51	6.09	2.93	0.2	0	-17	
14:15	9.89	150	0.2	15.41	6.09	2.93	0	0	-17	
14:20	9.9	150	0.2	14.89	6.1	2.95	0	0	-17	
14:25	9.92	150	0.2	14.84	6.1	2.94	0	0	-17	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW118A
Screen Interval: 8'-13'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

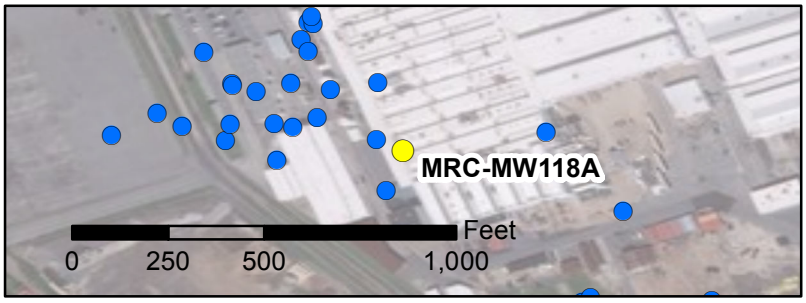
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:20	7.16	150	0.1	15.76	6.18	1.85	5.7	2.36	45	
14:25	7.29	180	0.26	15.8	6.15	1.86	5.4	1.9	54	
14:30	7.36	180	0.45	15.56	6.2	1.89	4.9	1.69	65	
14:35	7.43	180	0.6	15.39	6.23	1.44	4.2	1.45	6	
14:40	7.49	180	0.84	15.33	6.26	1.9	2.7	1.29	82	
14:45	7.51	180	1.05	15.27	6.28	1.91	3.6	1.14	87	
14:55	7.59	180	1.23	15.19	6.33	1.92	2.7	1.62	93	

Sample Collection Information

Parameters stabilized. Total drawdown 0.43'. Sample depth 11.5'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW13A
Screen Interval: 4'-14'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

Sampled for

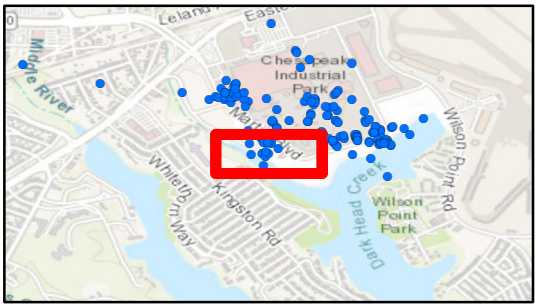
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

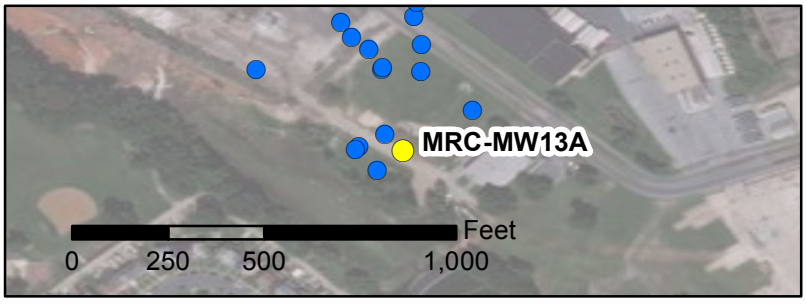
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:45	2.75	100	0.13	14.02	7.43	0.617	227	1.18	22	
13:50	2.86	100	0.26	14.26	7.42	0.622	203	0.36	-41	
13:55	2.97	100	0.39	14.31	7.42	0.629	179	0.17	-70	
14:00	2.98	100	0.52	14.28	7.42	0.633	175	0.09	-79	
14:05	3.04	100	0.65	14.19	7.4	0.635	173	0.06	-84	
14:10	3.06	100	0.78	14.42	7.38	0.639	170	0.17	-87	
14:15	3.1	100	0.91	14.51	7.38	0.649	166	0.07	-89	
14:20	3.2	100	1.04	14.46	7.38	0.648	157	0	-90	
14:25	3.25	100	1.17	14.55	7.37	0.651	148	0	-93	
14:30	3.31	100	1.3	14.67	7.36	0.654	132	0	-94	
14:35	2.35	100	1.43	14.71	7.34	0.656	127	0	-95	
14:40	3.4	100	1.56	14.67	7.32	0.661	125	0	-94	
14:45	3.46	100	1.69	14.57	7.3	0.668	122	0	-93	
14:50	3.5	100	1.82	14.51	7.28	0.673	118	0	-92	
14:55	3.57	100	1.95	14.53	7.26	0.679	113	0.02	-90	
15:00	3.58	100	2.08	14.61	7.26	0.683	106	0.01	-90	
15:05	3.66	100	2.21	14.74	7.26	0.687	109	0.01	-88	
15:10	3.68	100	2.34	14.77	7.26	0.688	108	0.01	-87	

Sample Collection Information

Aecom mark at cpc 5.00 ft at 1112





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW27B
Screen Interval: 30'-40'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Bladder

Sampled for

VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: Yes

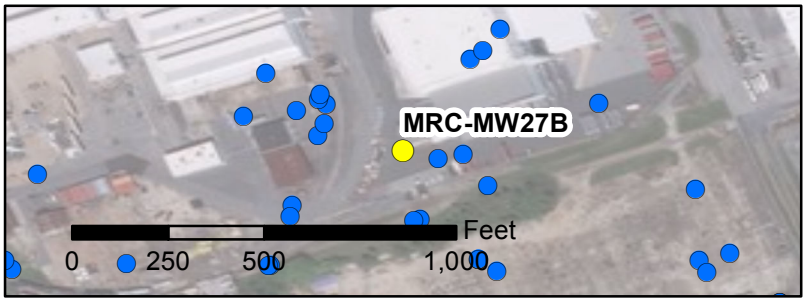
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:02	15.63	250	0.33	17.88	5.1	0.4	241	1.86	222	
15:07	16.39	100	0.13	17.53	5.09	0.399	213	2.2	249	
15:12	17.03	100	0.13	17.38	5.1	0.396	245	2.14	264	
15:17	17.6	100	0.13	17.3	5.09	0.396	257	2.13	277	
15:22	17.77	100	0.13	17.7	5.12	0.394	218	2.03	275	
15:32	18.6	100	0.13	16.65	5.1	0.389	235	2.26	288	
15:37	16.65	150	0.2	16.58	5.11	0.391	242	2.45	288	
15:42	19.69	300	0.4	1.67	5.13	0.386	437	2.22	281	
15:52	20.97	200	0.53	16.57	5.13	0.366	279	2.54	276	
15:57	21.6	200	0.26	16.48	5.13	0.376	251	2.45	284	
16:02	22.23	200	0.26	16.39	5.11	0.382	205	2.45	289	
16:07	27.77	200	0.26	16.37	5.11	0.385	188	2.41	293	
16:12	22.13	200	0.26	16.34	5.12	0.387	166	2.43	295	

Sample Collection Information

Cleaned flow cell at 1545. Well depth was greater than originally indicated. Tubing was long enough to reach screened interval but a new length of tubing will be installed after sampling to avoid tubing falling down in well





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW33A
Screen Interval: 4'-14'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

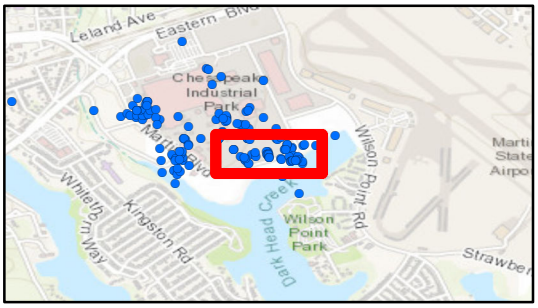
Sampled for

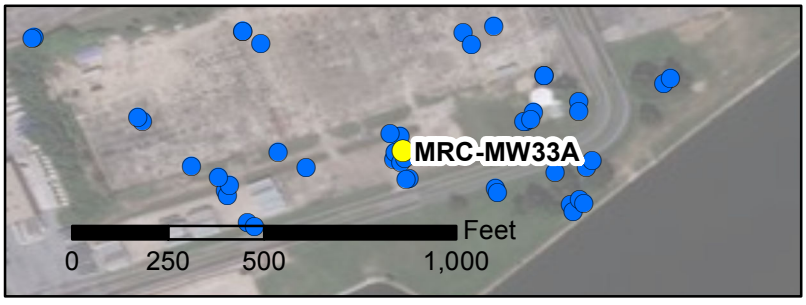
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:10	3.87	100	0.25	16.89	4.56	0.133	59.1	1.54	213	
15:15	4.04	100	0.5	16.61	4.86	0.133	56.3	1.22	208	
15:20	4.06	100	0.75	16.64	4.82	0.134	52.8	1.14	231	
15:25	4.14	100	1	16.45	4.65	0.133	53.2	1.01	234	
15:30	4.26	100	1.25	16.41	4.71	0.133	50.2	1	237	
15:35	4.34	100	1.5	16.37	4.65	0.132	47.5	1	244	
15:40	4.43	100	1.75	16.29	4.76	0.131	46.1	1.16	243	
15:45	4.48	10	2	16.21	4.74	0.128	45.3	1.21	247	
15:50	4.53	100	2.25	16.25	4.76	0.127	45	1.33	248	
15:55	4.59	100	2.5	15.99	4.71	0.127	17.7	1.46	253	
16:00	4.67	100	2.75	15.77	4.79	0.123	31.4	1.81	251	
16:05	4.74	100	3	15.73	4.72	0.126	24.5	2.22	259	
16:10	4.8	125	3.5	15.8	4.64	0.125	29.5	2.1	264	
16:15	4.81	125	4	15.8	4.54	0.123	18.1	1.66	271	
16:20	4.95	125	4.5	15.95	4.55	0.123	12.7	1.67	271	
16:25	5.01	125	5	15.95	4.56	0.124	8.4	1.7	272	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW128B
Screen Interval: 24.5'-29.5'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

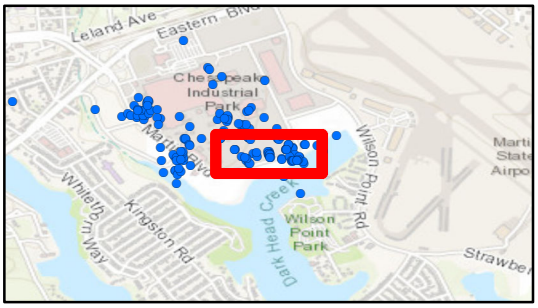
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

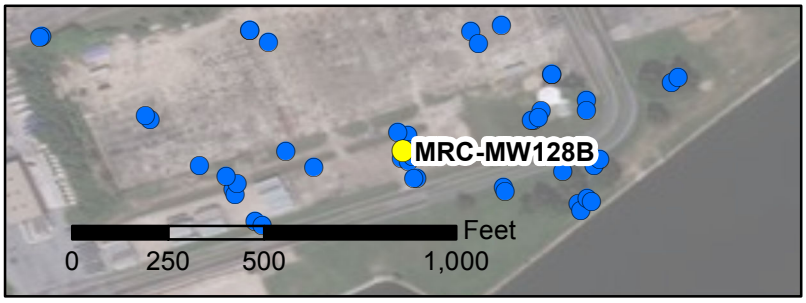
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:40	9.3	120	0.25	16.65	6.18	0.589	91.2	2.12	143	
12:45	10.39	120	0.5	16.77	6.19	0.591	85.7	1.86	132	
12:50	11.43	120	0.75	16.86	6.2	0.591	80.1	1.74	127	
12:55	12.5	120	1	16.93	6.19	0.59	77	1.69	111	
13:00	13.8	120	1.25	17.01	6.18	0.589	75	1.63	99	
13:05	14.82	120	1.5	17.06	6.2	0.589	71.2	1.62	87	
13:10	15.79	120	1.75	17.08	6.2	0.586	68.2	1.63	80	
13:15	16.64	120	2	17.1	6.23	0.586	65.3	1.59	75	
13:20	17.37	129	2.25	17.18	6.24	0.586	63.5	1.57	66	
13:25	18.1	120	2.5	17.22	6.28	0.585	60.9	1.56	62	
13:35	19.47	120	3	17.42	6.12	0.547	123	1.97	63	
13:40	20.4	120	3.25	17.48	6.25	0.571	118	1.61	54	
13:45	20.98	120	3.5	17.63	6.23	0.572	112	1.43	52	
13:50	21.71	120	3.75	17.78	6.17	0.577	114	1.45	55	
13:55	22.43	120	4	17.87	6.06	0.579	113	1.43	54	
14:00		120	4.25							

Sample Collection Information

Tubing not long enough; cleaned Horiba after reading @ 1325; waited 5 mins for stabilizion; well went dry, sampled following day





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW118B
Screen Interval: 45'-55'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Bladder

Sampled for

VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

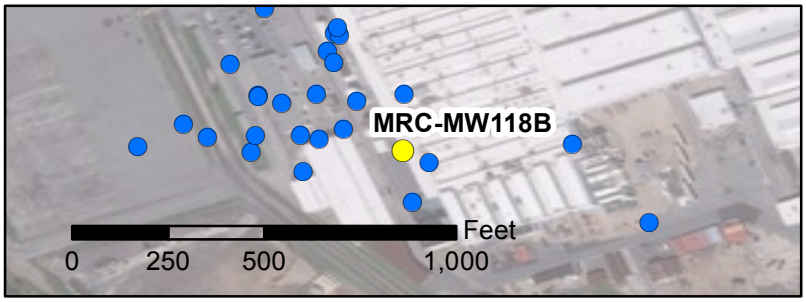
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:35	17.22	200	0.1	18.97	6.11	0.397	156	2.81	27	
15:40	17.18	200	0.25	18.97	6.2	0.374	647	4.05	-20	
15:45	17.3	200	0.43	18.99	6.07	0.372	735	4.15	-22	
15:50	17.35	200	0.55	19	6.08	0.366	845	4.22	-23	
15:55	27.43	200	0.69	19.06	6.09	0.333	987	4.32	-26	
16:00	17.55	20	0.8	19.27	5.95	0.31	1000	3.12	-27	
16:05	17.63	200	0.97	19.4	6.23	0.289	753	3.3	-29	
16:10	17.78	200	1.13	19.33	6.02	0.245	647	3.12	-33	
16:15	17.97	400	1.35	19.32	5.96	0.224	584	3.26	-32	
16:20	18.01	400	1.8	19.32	5.96	0.221	428	3.1	-32	
16:25	18.12	400	2.22	19.35	5.93	0.218	396	3.03	-29	
16:30	18.14	400	2.89	19.34	5.92	0.215	376	2.99	-28	
16:35	18.15	400	3.3	19.16	5.89	0.202	290	3.16	-23	
16:40	18.17	400	3.75	19.23	5.89	0.201	294	3.22	-24	
16:45	18.21	400	4.06	19.26	5.84	0.195	242	2.88	-23	
16:50	18.26	400	4.5	19.27	5.86	0.193	221	2.91	-21	
16:55	18.33	400	4.94	19.34	5.81	0.184	186	2.99	-21	
17:00	8.3	400	5.1	19.36	5.81	0.182	145	2.94	-19	

Sample Collection Information

Removed 33' perri tubing. Groundwater very turbid, light brown color. Cleaned out horiba multiple times. 90-minute purging condition met.Sample depth 50'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW32A
Screen Interval: 4'-14'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/10/2018
Pump Method: Peristaltic

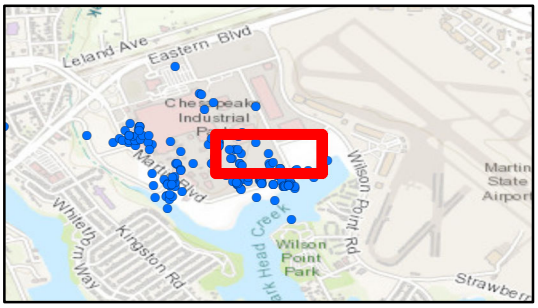
Sampled for

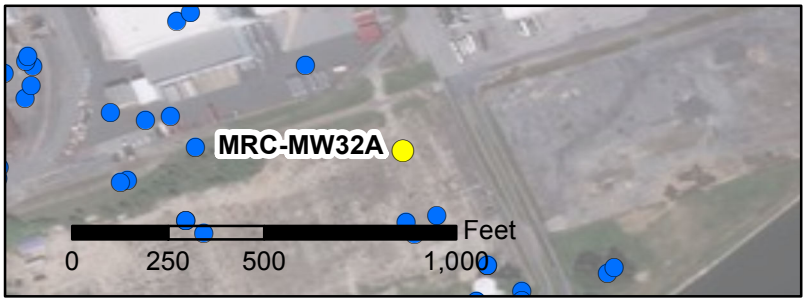
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:05	4.75	100	0.13	17.5	5.69	0.155	75.5	4.86	162	
16:10	4.76	100	0.26	17.02	5.34	0.156	73.8	3.98	199	
16:15	4.83	100	0.39	16.7	5.29	0.157	71	3.85	214	
16:20	4.98	100	0.52	16.22	5.24	0.159	69.5	3.8	226	
16:25	5.07	100	0.65	15.98	5.21	0.159	65.3	3.75	234	
16:30	5.17	100	0.78	15.79	5.17	0.16	64.6	3.72	242	
16:35	5.27	100	0.91	15.62	5.13	0.16	60.2	3.57	248	
16:40	5.38	100	1.04	15.1	5.07	0.161	57	3.73	254	
16:45	5.48	100	1.17	15.1	5.04	0.162	56.5	3.79	259	
16:50	5.49	100	1.3	15.26	5.08	0.161	51.8	3.45	259	
16:55	5.48	100	1.43	15.17	5.07	0.161	50.2	3.62	261	
17:00	5.48	100	1.57	15.19	5.05	0.161	46.9	3.62	264	
17:05	5.46	100	1.7	15.05	5.04	0.161	45.2	3.6	267	
17:10	5.47	100	1.83	14.84	5.01	0.161	43.9	3.53	271	
17:15	5.51	100	1.96	14.76	4.97	0.161	40.9	3.23	275	
17:20	5.51	100	2.09	14.71	4.97	0.161	37.8	3.48	277	
17:25	5.52	100	2.22	14.8	4.93	0.16	34.5	3.43	282	
17:30	5.52	100	2.35	14.66	4.94	0.16	32.9	3.16	283	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW100A
Screen Interval: 9'-19'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

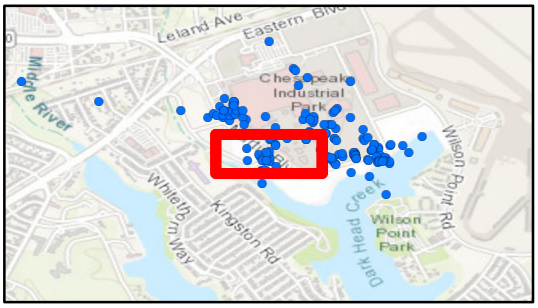
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

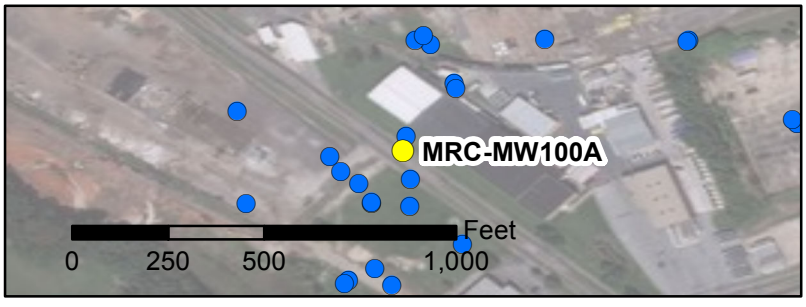
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:20	10.08	250	0.33	15.55	6.46	0.461	67.7	2.21	202	
08:25	11.34	150	0.13	15.24	6.52	0.458	57.3	2.1	206	
08:32	11.54	150	0.2	15.37	6.54	0.455	38.1	2.11	207	
08:37	11.69	150	0.2	15.5	6.57	0.456	34.2	1.97	207	
08:42	11.85	150	0.2	15.79	6.57	0.458	26.6	1.61	206	
08:47	11.98	150	0.2	15.87	6.59	0.462	19.6	1.47	206	
08:52	12.11	150	0.2	15.92	6.59	0.467	16.7	1.31	206	
08:57	12.22	150	0.2	15.81	6.6	0.471	9.5	1.15	205	
09:02	12.26	150	0.2	15.83	6.6	0.474	7.4	1.09	205	
09:07	12.35	150	0.2	16.01	6.6	0.478	6.4	1.06	204	

Sample Collection Information

No one answered door at Tilley when I attempted to check in. Later an employee came up to me, complaining that I did not check in with them before setting up on the well





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW131B
Screen Interval: 28.3'-38.3'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Bladder

Sampled for

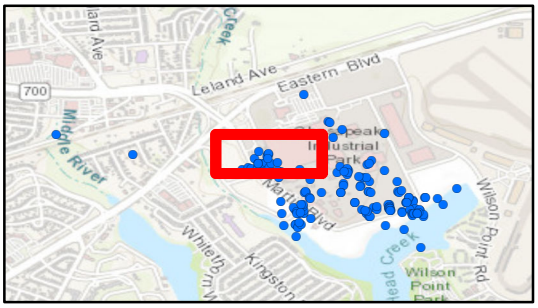
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

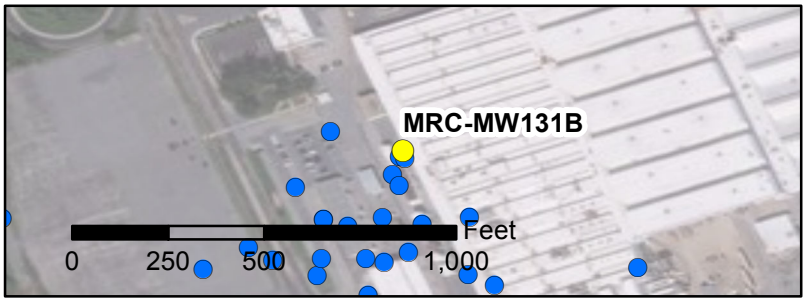
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:15	18.06	100	0.05	6.89	3.91	0.003	88.3	10.45	203	
08:20	18.35	100	0.13	7.59	5.61	1.3	74.5	0	26	
08:25	18.53	100	0.26	8.5	5.67	0	74.4	0	34	
08:30	18.67	100	0.4	9.34	5.7	1.26	67.9	0	10	
08:35	18.73	100	0.53	9.6	5.72	1.25	64.5	0	6	
08:40	18.73	100	0.66	10.03	5.77	1.25	49.9	0	-7	
08:45	18.76	100	0.79	10.25	5.81	1.3	39.1	0	-16	
08:50	18.78	100	0.92	10.58	5.89	1.31	33.2	0	-30	
08:55	18.8	100	1.06	10.91	5.98	1.26	27.1	0	-43	
09:00	18.84	100	1.19	11.2	6.01	1.24	28.3	0	-47	
09:05	18.86	100	1.32	11.5	6.01	1.22	25.1	0	-47	
09:10	18.89	100	1.45	11.59	6.02	1.22	23.5	0.09	-48	
09:15	18.88	100	1.59	11.6	6.03	1.23	23.3	0	-49	
09:20	18.9	100	1.72	11.65	6.06	1.23	22.4	0	-55	
09:25	18.92	100	1.85	11.69	6.05	1.33	22.1	0	-56	
09:30	18.94	100	1.98	11.7	6.03	1.24	19.9	0	-59	
09:35	18.95	100	2.11	11.77	6.24	1.13	16.2	0	-61	
09:40	18.97	100	2.25	11.78	6.01	1.12	15.3	0	-62	

Sample Collection Information

Sample depth 33'. 90-min purging condition met. Total drawdown 0.91'. DUP sample time 0955.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SWMW-5I
Screen Interval: 10'-30'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Bladder

Sampled for

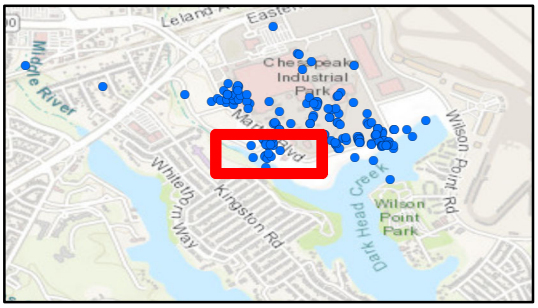
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

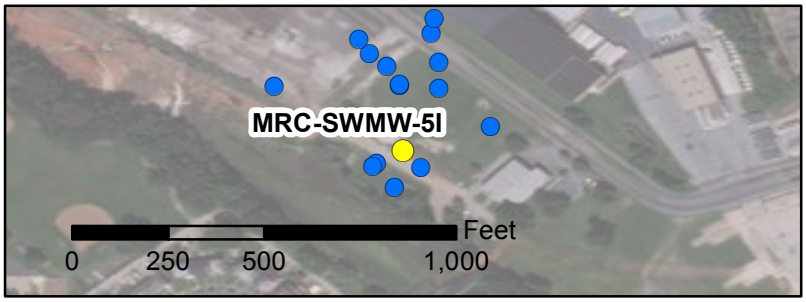
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
07:55	4.67	100	0.13	7.44	5.93	0.522	18.4	2.72	35	
08:00	4.98	100	0.26	8.11	0.629	0.512	5.8	1.42	-13	
08:05	5.51	100	0.39	8.71	6.46	0.508	3.9	0.74	-30	
08:10	5.91	100	0.52	9	6.49	0.506	6.9	0.41	-34	
08:15	6.39	100	0.65	9.31	6.51	0.505	8.8	0.22	-37	
08:20	6.91	100	0.78	9.41	6.52	0.505	15.5	0	-38	
08:25	7.29	100	0.91	9.52	6.52	0.504		0	-39	
08:30	7.74	100	1.04	9.57	6.53	0.505	17.1	0	-40	
08:35	8.06	100	1.17	9.64	6.53	0.504	15.9	0	-41	
08:40	8.43	100	1.3	9.91	6.54	0.504	18.5	0	-42	
08:45	8.83	100	1.43	9.99	6.54	0.505	31.9	0	-42	
08:50	9.27	100	1.57	10.13	6.55	0.504	15.9	0	-43	
08:55	9.52	100	1.7	10.32	6.55	0.505	17.2	0	-44	
09:00	9.79	100	1.83	10.44	6.56	0.506	18	0	-45	
09:05	10.08	100	1.96	10.54	6.56	0.507	19.2	0	-46	
09:10	10.39	100	2.09	10.72	6.57	0.507	20.3	0	-47	
09:15	10.63	100	2.22	10.78	6.57	0.508	20.7	0	-47	
09:20	10.82	100	2.35	10.95	6.58	0.509	21.1	0	-48	

Sample Collection Information

Tubing replaced, some parts too oxidized to clean, DUP @ 0930, MS/MSD @ 0925





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW129A
Screen Interval: 9'-19'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

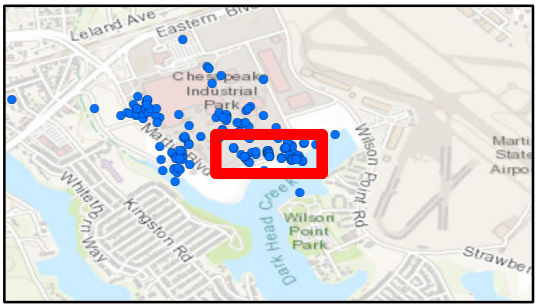
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

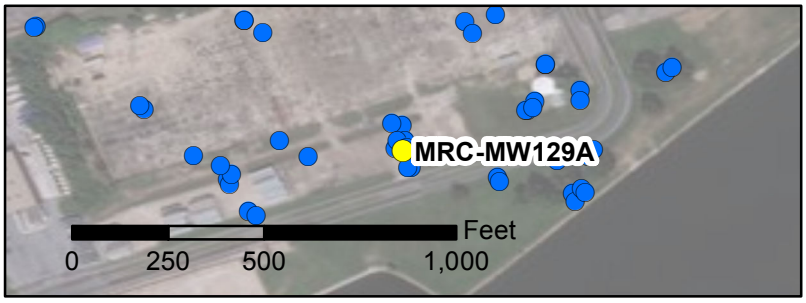
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:45	4.06	120	0.25	13.26	6.18	0.614	55.4	2.53	166	
08:50	4.1	100	0.5	13.71	6.36	0.603	41.6	1.7	144	
08:55	4.12	100	0.75	13.98	6.41	0.598	37.3	1.31	129	
09:00	4.17	100	1	14.18	6.42	0.596	29.5	1.14	118	
09:05	4.16	100	1.25	14.39	0.595	0.595	27	1.02	107	
09:10	4.17	100	1.5	14.45	6.44	0.593	23.4	0.95	98	
09:15	4.18	100	1.75	14.59	6.44	0.592	21.1	0.9	90	
09:20	4.2	100	2	14.68	6.44	0.592	18.4	0.84	83	
09:25	4.19	100	2.25	14.63	6.45	0.591	17.6	0.81	76	
09:30	4.2	100	2.5	14.82	6.45	0.591	17	0.78	72	
09:35	4.2	100	2.75	14.91	6.45	0.59	15.5	0.76	68	
09:40	4.2	100	3	15.09	6.44	0.59	11.9	0.71	63	
09:45	4.21	100	3.25	15.11	6.46	0.588	11.6	0.7	59	
09:50		100	3.5	15.16	6.46	0.587	11.4	0.67	55	
09:55	4.22	100	3.75	15.21	6.45	0.587	9.7	0.65	51	

Sample Collection Information

Not enough tubing





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW100B
Screen Interval: 26'-36'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Bladder

Sampled for

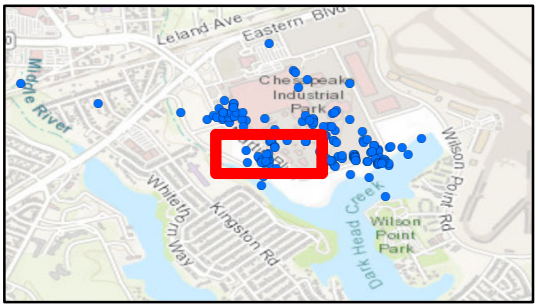
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

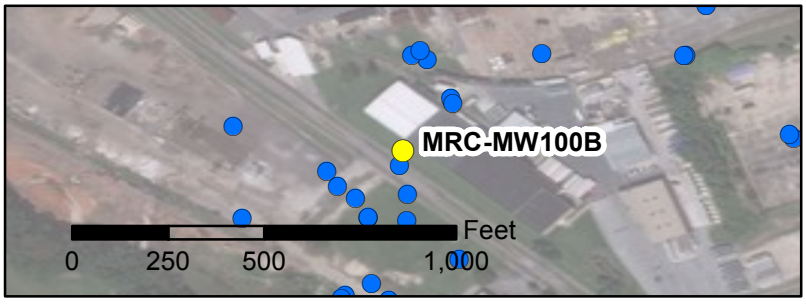
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:39	12.98	200	0.26	17.05	5.72	0.354	115	0.18	92	
09:44	14.16	150	0.2	16.82	5.67	0.355	85	0.15	94	
09:49	14.74	150	0.2	16.74	5.63	0.355	80.4	0.21	97	
09:54	15.79	150	0.2	16.73	5.62	0.355	72.1	0.1	98	
10:04	16.79	150	0.2	16.47	5.62	0.354	65.1	0.09	101	
10:09	17.21	150	0.2	16.38	5.61	0.354	56.5	0.12	103	
10:14	16.6	150	0.2	16.62	5.61	0.355	70.8	0.09	102	
10:19	18.75	150	0.2	16.82	5.61	0.357	63.1	0.07	104	
10:29	19.74	150	0.2	17.6	5.65	0.357	70.2	0.76	104	
10:34	20.69	150	0.2	17.77	5.63	0.356	62.9	0.15	104	
10:39	21.52	150	0.2	17.89	5.63	0.357	58.2	0.08	103	
10:44	21.91	150	0.2	17.85	5.63	0.357	54.3	0.07	103	
10:49	22.24	150	0.2	17.99	5.64	0.357	51	0.07	103	
10:54	22.71	150	0.2	18.35	5.63	0.357	43.4	0.07	103	
10:59		150	0.2	18.45	5.64	0.357	42	0.09	102	
11:04	23.3	150	0.2	18.69	5.64	0.357	40.3	0.07	102	
11:09	23.83	150	0.2	18.85	5.64	0.357	41.1	0.06	101	

Sample Collection Information

Cleaned flow cell 1024, water was red tinted in cell but clear in tubing





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW93A
Screen Interval: 4'-14'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

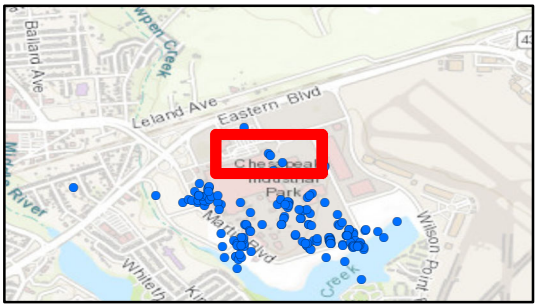
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

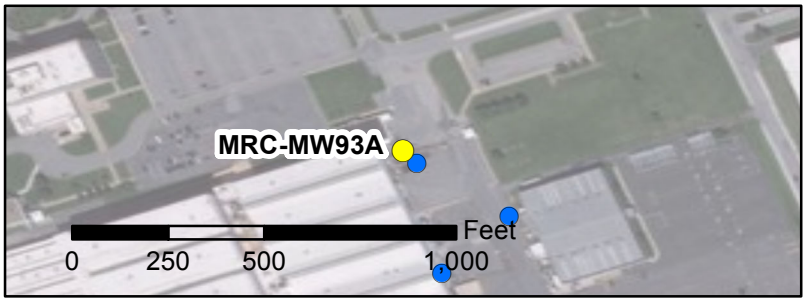
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:50	10.52	100	0.13	12.13	3.61	4.77	829	4.58	235	
10:55	10.89	100	0.26	11.82	3.68	5.01	563	3.17	262	
11:00	11.23	100	0.39	11.75	3.75	5.06	423	2.85	275	
11:05	11.66	100	0.52	11.69	3.78	5.09	349	2.68	288	
11:10	12.17	100	0.65	11.71	3.77	5.12	261	2.52	304	
11:15	12.61	100	0.78	11.72	3.79	5.15	219	2.26	317	
11:20	13	100	0.91	11.49	3.87	5.15	350	3.57	331	
11:25	13.51	100	1.04	11.66	3.85	5.14	337	3.05	341	

Sample Collection Information

Tubing thrown ou, oxidized on inside of tubing, at 1120 tubing lowered to 13.70 ft, well dry @ 1127(tubing raised to 12 ft bgs), 10-15% recharge after 30 min need to return later and sample, SAMPLED ON 4/12/18





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW34B
Screen Interval: 20'-30'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

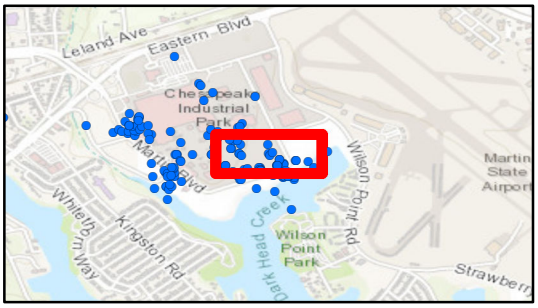
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: Yes

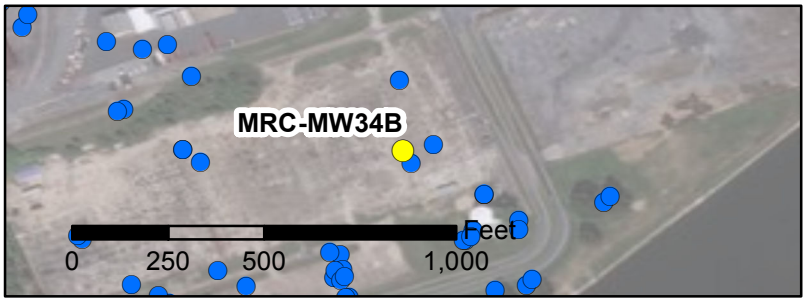
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:15	4.96	150	0.05	16.37	4.82	0.662	20	0.1	123	
11:20	4.95	150	0.2	16.31	4.79	0.654	16.7	0	152	
11:25	4.95	150	0.4	16.41	87	0.651	19	0	181	
11:30	4.96	180	0.6	16.55	4.65	0.65	22.2	0	197	
11:35	4.98	180	0.86	16.69	4.7	0.649	22.5	0	211	
11:40	4.98	200	1.1	16.6	4.69	0.655	18.7	0	222	
11:45	4.98	200	1.36	16.62	4.66	0.656	16.9	0	229	
11:50	5.02	200	1.62	16.78	4.61	0.672	10.8	0	240	
11:55	4.98	200	1.88	16.6	4.57	0.668	8.4	0	248	

Sample Collection Information

1200 - temp 16.92, pH 4.57, orp 259, cond 0.665, turb 8.4, do 0, DTW 4.99, purge 2.2. 1205 - temp 16.93, pH 4.57, orp 262, cond 0.665, turb 7.5, do 0, DTW 15.00, purge 2.5 gal. Parameters Stabilized. Total Purged 6.5 gals. Sample depth 25'. Collect MS/MSD





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW129B
Screen Interval: 25'-30'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Bladder

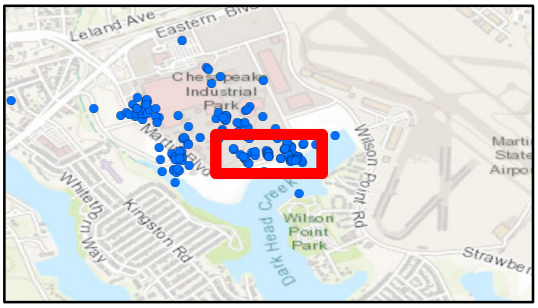
Sampled for

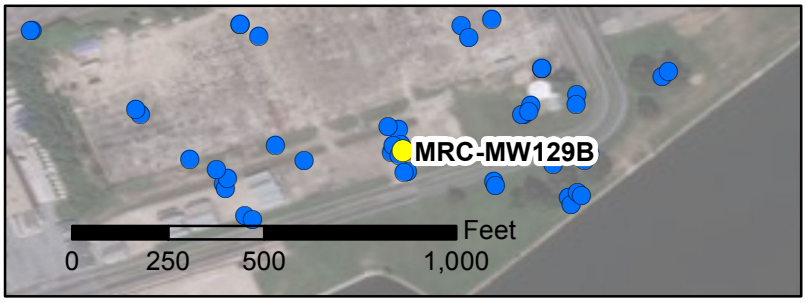
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:55	8.12	100	0.25	17.21	5.42	0.06	24	2.24	157	
11:00	9.18	100	0.5	17.2	5.39	0.058	23.8	1.74	168	
11:05	9.53	100	0.75	17.32	5.38	0.058	20.6	1.61	170	
11:10	10.25	100	1	17.38	5.35	0.057	21	1.38	172	
11:15	10.83	100	1.25	17.43	5.37	0.057	18.2	1.35	172	
11:20	11.32	100	1.5	17.39	5.38	0.057	16.9	1.29	170	
11:25	11.78	100	1.75	17.32	5.38	0.059	16.1	1.2	166	
11:30	12.06	100	2	17.24	5.4	0.059	15.6	1.16	163	
11:35	12.24	100	2.25	17.12	5.4	0.058	14.9	1.14	162	
11:40	12.41	100	2.5	16.88	5.39	0.057	13.9	1.11	162	
11:45	12.51	100	2.75	16.73	5.38	0.057	13.5	1.09	161	
11:50	12.65	100	3	17.08	5.34	0.057	11.9	1.26	161	
11:55	12.8	100	3.25	17.19	5.27	0.057	11.1	1.13	163	
12:00		100	3.5	17.16	5.27	0.057	9.9	1.09	161	
12:05	12.96	100	3.5	17.11	5.28	0.057	9.4	1.08	160	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW29A
Screen Interval: 5'-15'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

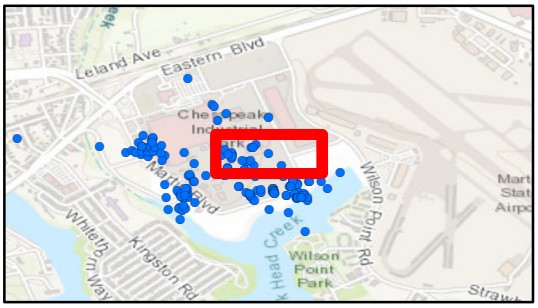
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

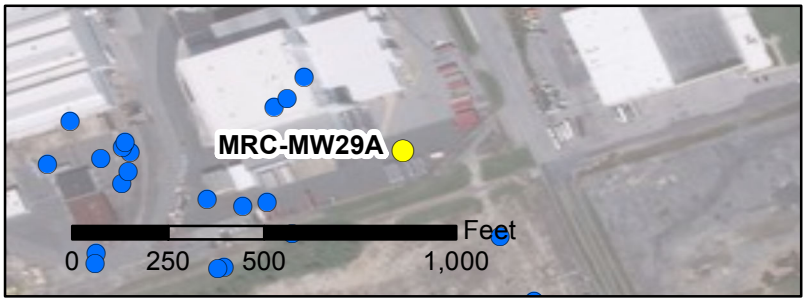
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:45	5.7	100	0.13	14.06	4.5	0.655	12.3	1.7	298	
12:50	5.71	100	0.26	14.12	4.5	0.659	20.3	1.35	298	
12:55	5.72	100	0.39	14.25	4.49	0.664	3.5	0.35	297	
12:00	5.72	100	0.52	14.24	4.49	0.666	3.2	0.34	297	
13:05	5.72	100	0.65	14.1	4.48	0.668	0	0.31	297	

Sample Collection Information

Bailed 0.5 gallons





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW111B
Screen Interval: 35'-45'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Bladder

Sampled for

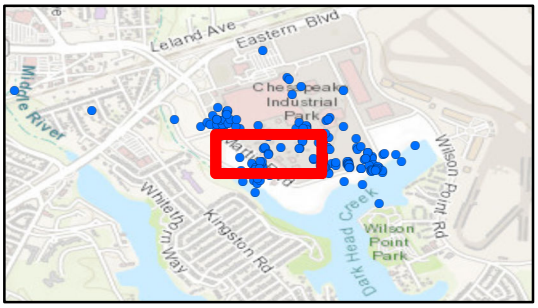
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

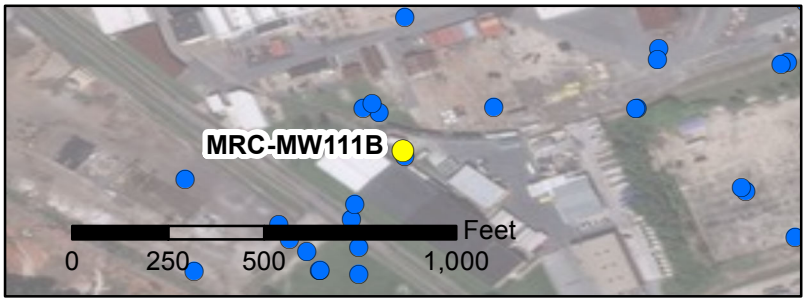
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:10	16.26	150	0.26	16.68	6.19	0.362	39.7	0.28	4	
14:15	16.34	150	0.2	16.54	6.16	0.365	30.6	0.19	3	
15:10	16.07	200	0.26	16.89	6.12	0.358	4.2	0.15	4	
15:15	16.49	150	0.2	17.01	6.13	0.355	3.1	0.16	4	
15:20	16.64	150	0.2	16.94	6.13	0.357	2	0.15	4	

Sample Collection Information

Having problems with iPad. Tried to swap, but can only edit data from original iPad. Set up makeshift portable charging station. pump was turned off during this time. AMS MSD and DUP collected here





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW111A
Screen Interval: 5'-15'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

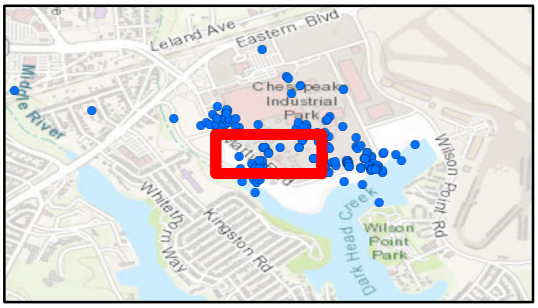
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

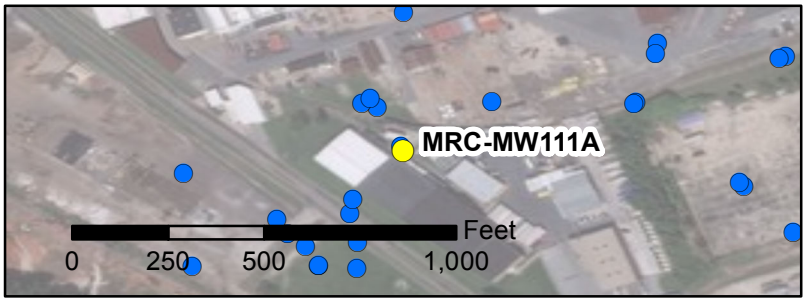
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:01	6.78	200	0.26	13.75	6.51	0.539	0.6	0.26	-36	
13:05	6.97	200	0.13	12.65	6.53	0.549	0	0.17	-41	
13:10	7.35	200	0.26	12.21	6.53	0.543	0	0.05	-43	
13:15	7.86	150	0.2	12.25	6.51	0.539	0	0.03	-35	
13:20	8.01	150	0.2	12	6.5	0.534	0	0	-38	
13:25	8.34	200	0.26	12	6.48	0.541	0	0	-43	
13:30	8.65	150	0.2	12.02	6.5	0.55	0	0	-50	
13:35	9.04	150	0.2	12.01	6.51	0.556	0	0	-54	
13:40	9.35	200	0.26	12.12	6.5	0.574	0	0	-70	
13:45	9.66	200	0.26	12.16	6.56	0.591	0	0	-72	
13:47	9.86	200	0.26	12.23	6.6	0.595	0	0	-75	

Sample Collection Information

Well ran dry to tubing depth at 1347. Allowed to recharge to 80%, which is 7.08. Sampled next morning at 0807, dtw 6.50'





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW130A
Screen Interval: 9'-14'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

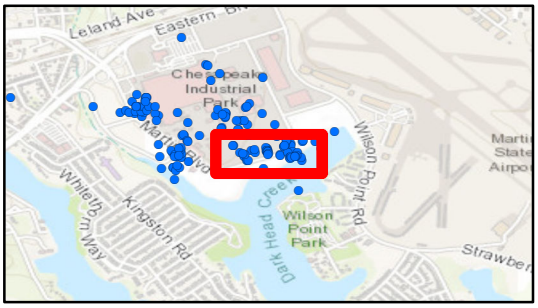
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

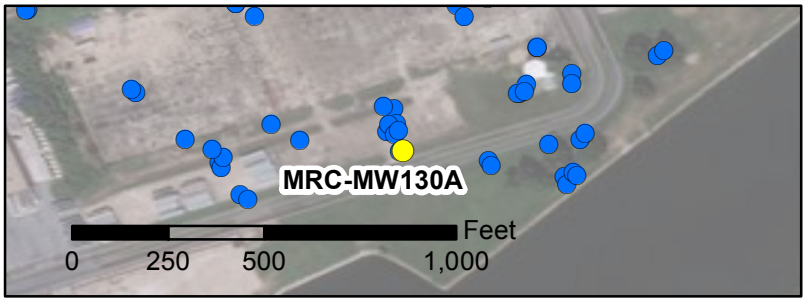
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:35	3.9	0.25	0.25	14.84	6.22	0.442	30.9	2.65	125	
13:40	3.85	100	0.25	14.86	6.17	0.444	27.5	2.19	129	
13:45	3.98	100	0.5	14.85	6.11	0.448	23.6	2.24	132	
13:50	4.21	100	0.75	14.79	5.85	0.453	20.8	2.14	147	
13:55	4.25	100	1	14.94	5.82	0.452	18.6	2.08	147	
14:00	4.23	100	1.25	15.31	5.95	0.452	18.8	2.05	140	
14:05	4.24	100	1.5	15.69	6.19	0.455	27.7	2.02	126	
14:10	4.23	100	1.5	15.67	6.17	0.457	24.5	1.93	128	
14:15	4.23	100	1.75	16	6.15	0.458	19.1	1.87	129	
14:20	4.18	100	1.75	16.03	6.15	0.461	21.4	1.87	0.462	
14:25	4.16	100	1.75	15.78	6.14	0.467	14	1.69	131	
14:30	4.18	100	2	15.8	6.11	0.467	13.5	3.82	133	
14:35	4.25	100	2.25	15.6	6.11	0.469	13.2	1.72	133	
14:40	4.24	100	2.5	15.65	6.11	0.468	12.4	1.69	133	
14:45	4.25	100	2.75	15.86	6.05	0.47	12.2	1.7	136	
14:50	4.26	100	2.75	15.96	6.04	0.474	9.6	1.69	137	

Sample Collection Information

Dup collected @ 1500





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW58A
Screen Interval: 8'-18'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

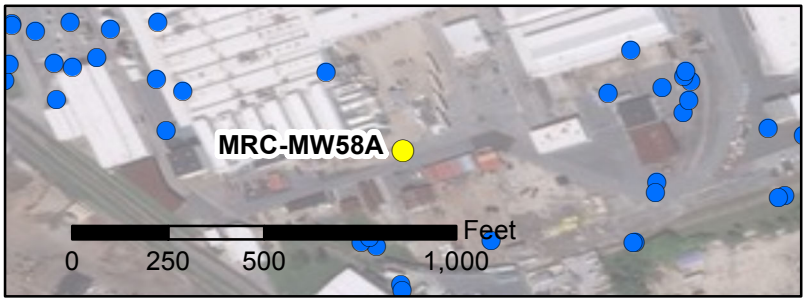
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:05	5.21	100	0.13	14.76	6.66	0.875	180	3.15	194	
14:10	5.45	100	0.26	14.84	6.84	0.886	159	2.56	182	
14:15	5.55	100	0.39	15.3	6.9	0.878	123	2.08	169	
14:20	6.03	100	0.52	15.44	6.91	0.892	96.3	1.82	164	
14:25	6.52	100	0.65	15.78	6.92	0.89	91.2	1.42	159	
14:30	7.12	100	0.78	15.53	6.91	0.896	63.4	1.6	152	
14:35	7.96	100	0.91	15.73	6.9	0.893	73.5	1.21	143	
14:40	8.35	100	1.04	15.8	6.87	0.89	74.4	1.22	126	
14:45	8.62	100	1.17	15.9	6.81	0.884	55.1	1.19	85	
14:50	8.7	100	1.3	16.03	6.77	0.877	57.5	1.11	66	
14:55	8.87	100	1.43	15.9	6.74	0.876	50.7	1	55	
15:00	8.04	100	1.57	15.89	6.71	0.874	53.5	1.05	51	
15:05	9.24	100	1.7	15.88	6.6	0.868	56.6	0.95	52	
15:10	9.4	100	1.83	15.8	6.48	0.849	43.2	0.79	49	
15:15	9.58	100	1.96	16.02	6.41	0.822	25.9	0.55	47	
15:20	9.73	100	2.09	16.28	6.38	0.799	20.4	0.44	47	
15:25	9.92	100	2.22	15.93	6.43	0.795	14.5	0.38	43	
15:30	10.08	100	2.35	16.29	6.5	0.79	14.4	0.35	41	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW34C
Screen Interval: 45'-55'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Bladder

Sampled for

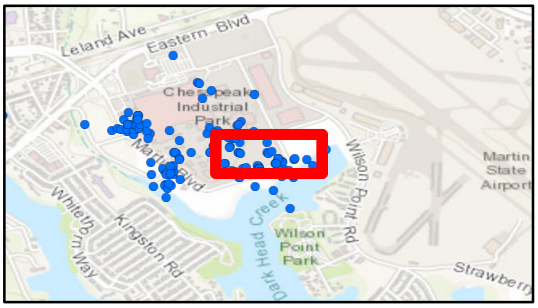
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

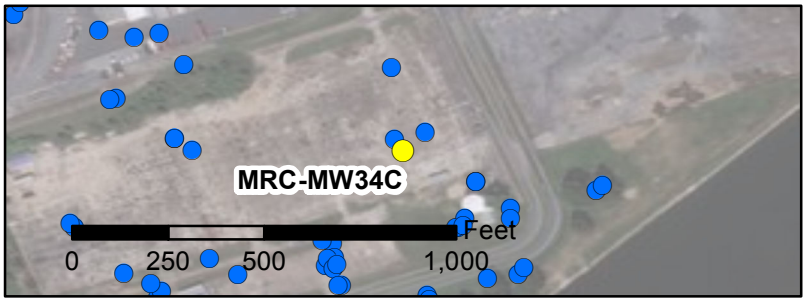
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:00	4.17	100	0.13	17.78	6.07	0.065	359	4.76	123	
15:05	4.2	100	0.26	17.12	5.85	0.061	643	2.29	134	
15:10	4.2	200	0.45	16.86	5.53	0.053	879	0.18	146	
15:15	4.3	300	0.79	16.95	5.52	0.05	436	0	143	
15:20	4.3	300	1.19	16.89	5.53	0.052	268	0	142	
15:25	4.3	300	1.59	15.83	5.63	0.052	143	0	141	
15:30	4.3	300	1.98	16.05	5.55	0.053	136	0	142	
15:35	4.3	300	2.38	16.76	5.61	0.053	105	0	143	
15:40	4.3	300	2.77	16.86	5.59	0.051	74.5	0	145	
15:45	4.3	300	3.17	16.64	5.56	0.05	58.5	0	152	
15:50	4.3	300	3.57	16.54	5.47	0.048	49.6	0	153	
15:55	4.3	300	3.96							
16:00	4.3	300	4.36	16.6	5.52	0.047	33.7	0	160	
16:05	4.3	300	4.76	15.69	5.5	0.046	28.9	0	160	
16:10	4.3	300	5.15	16.43	5.49	0.047	29.1	0	163	
16:15	4.3	300	5.55	16.55	5.4	0.047	27.4	0	171	
16:20	4.3	300	5.94	16.48	5.5	0.046	23.9	0	173	
16:25	4.3	300	6.34	16.46	5.49	0.046	22.8	0	175	

Sample Collection Information

Removed 17' old perri tubing. Water color light brown, murky. Total drawdown <0.2'. Sample depth 50'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW18A
Screen Interval: 16'-26'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

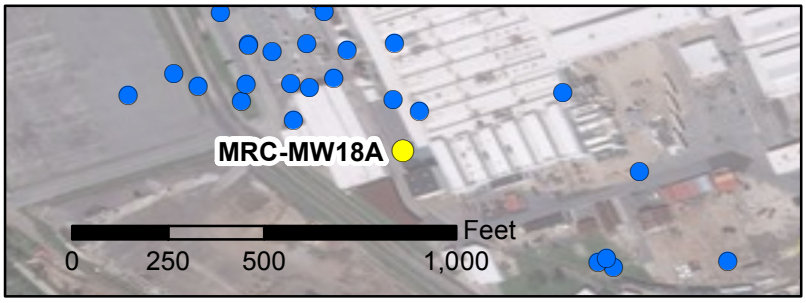
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:15	5.68	100	0.13	15.98	7.24	2.21	132	2.1	14	
16:20	5.95	100	0.26	15.83	7.29	2.21	108	1.89	18	
16:25	6.99	100	0.39	15.89	7.34	2.2	58.7	1.03	33	
16:30	7.82	100	0.52	15.97	7.35	2.2	53.6	0.77	40	
16:35	9.06	100	0.65	16.1	7.36	2.2	13.5	0.68	47	
16:40	10.03	100	0.78	16.19	7.36	2.21	9.4	0.62	52	
16:45	11.1	100	0.91	16.25	7.39	2.21	5.7	0.59	54	
16:50	12.17	100	1.04	16.27	7.4	2.21	2	0.62	56	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW130B
Screen Interval: 25'-30'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Bladder

Sampled for

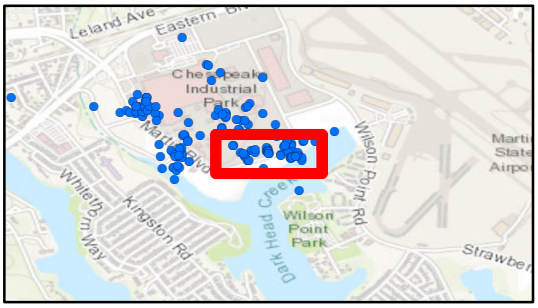
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

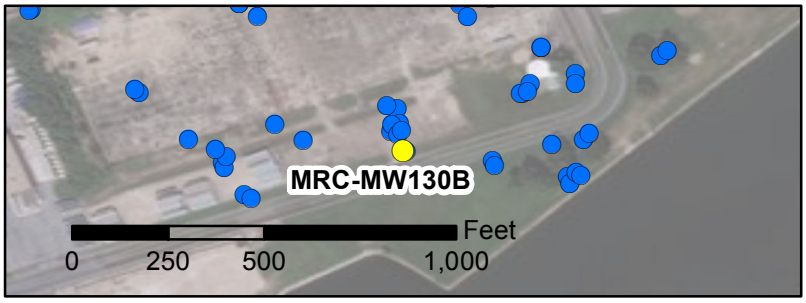
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:30	7.3	100	0.25	16.64	6.83	0.388	4.6	1.94	-61	
16:35	8.3	100	0.5	16.64	6.89	0.388	4.5	1.44	-78	
16:40	9.06	100	0.75	16.71	6.89	0.388	5.1	1.3	-84	
16:45	10.02	100	1	16.76	6.89	0.389	4.6	1.01	-90	
16:50	10.93	100	1.25	16.7	6.9	0.395	4.1	0.74	-94	
16:55		100	1.5	16.78	6.89	0.393	4.1	0.65	-96	
17:00	12.62	100	1.75	16.78	6.89	0.393	3.9	0.65	-97	
17:05	13.43	100	0.03	16.52	6.89	0.395	3.9	0.63	-99	

Sample Collection Information

Tubing too short





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW38A
Screen Interval: 4'-14'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/11/2018
Pump Method: Peristaltic

Sampled for

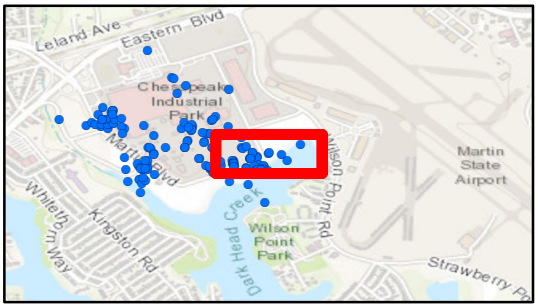
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

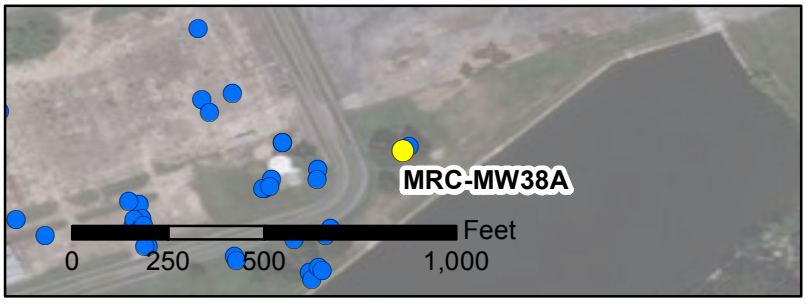
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:55	6.02	200	0.05	16.69	4.93	0.137	106	4.91	178	
17:00	6.31	150	0.13	14.25	4.73	0.145	128	3.66	127	
17:05	7.04	120	0.4	14.61	4.74	0.145	105	3.17	206	
17:10	17.08	120	0.56	14.65	4.76	0.151	88.1	2.76	213	
17:15	7.08	120	0.7	14.59	4.7	0.148	70.4	2.35	220	
17:20	7.1	120	0.85	14.41	4.66	0.149	66.4	2.19	226	
17:25	7.1	120	1	14.26	4.63	0.151	48	1.86	230	
17:30	7.14	120	1.15	14.13	4.65	0.152	46.5	1.66	232	
17:35	7.17	120	1.3	14.05	4.61	0.151	37.1	1.54	235	
17:40	7.11	120	1.4	14	4.7	0.151	28.7	1	231	
17:45	17.02	120	1.55	13.94	4.71	0.151	27.8	0.9	233	
17:50	16.96	120	1.7	13.65	4.69	0.152	20.3	0.61	235	
17:55	16.96	150	1.85	13.59	4.71	0.152	21.3	0.59	236	
18:00	17.01	150	2.05	13.25	4.67	0.154	15.2	0.54	240	
18:05	17.04	150	2.26	12.94	4.65	0.155	13.6	0.32	243	
18:10	17.05	150	2.45	12.88	4.63	0.155	13.2	0.3	245	
18:15	7.05	2.6	0.04	12.52	4.63	0.157	10.6	0.17	250	
18:20	17.05	150	2.75	12.45	4.63	0.157	9.1	0.18	246	

Sample Collection Information

Found well cap open. Replaced old discolored perri tubing. Black substance at tip of perri tubing, odor. Total drawdown 1.03'. Sample depth 9.5'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW96A
Screen Interval: 10'-20'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

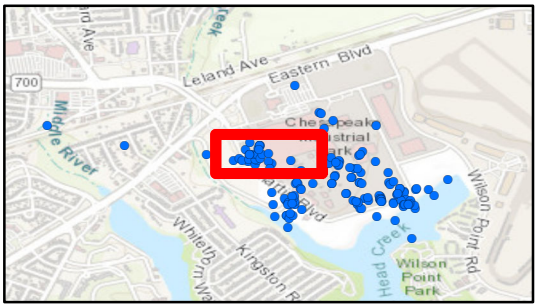
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

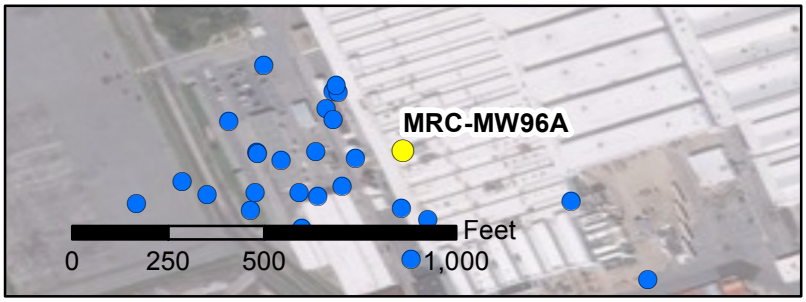
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:30	13.34	150	1.14	9.51	4.03	1.27	0	1.54	384	
08:35	13.55	140	0.26	10.05	4.02	1.27	0	0	394	
08:40	13.72	0.43	120	10.68	3.73	1.25	0	0	398	
08:45	13.89	120	0.58	11.49	3.74	1.22	0	0	376	
08:50	14.13	100	0.7	11.59	3.76	1.22	0.1	0	372	
08:55	14.36	100	0.85	11.68	3.77	1.21	0	0	363	

Sample Collection Information

Removed old discolored perri tubing. Parameters stabilized. Total drawdown 1.02'. Sample depth 16'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW73A
Screen Interval: 7'-17'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

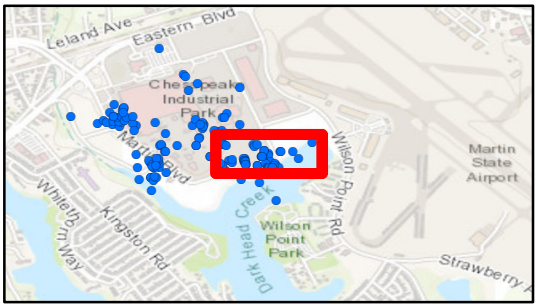
VOCs: No
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: No

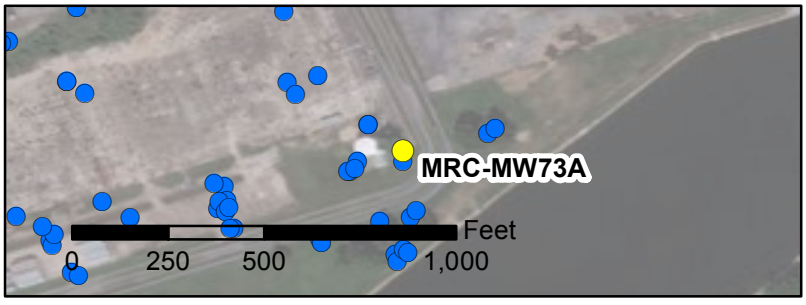
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:15	7.22	100	0.25	13.49	6.26	1.21	7.9	6.12	155	
08:20	7.73	100	0.5	13.57	6.37	1.18	7	4.63	144	
08:25	8.2	120	0.75	13.61	6.41	1.17	3.7	4.26	140	
08:30	8.62	120	1	13.71	6.41	1.16	3.2	4.05	140	

Sample Collection Information

I wish all wells could be this great!





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW98A
Screen Interval: 5'-15'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

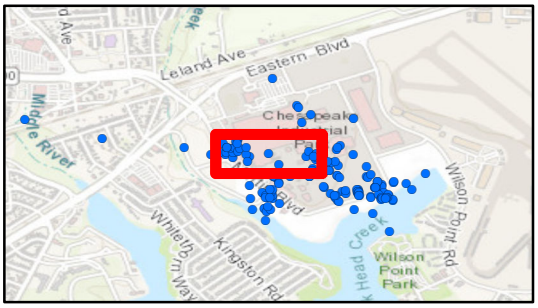
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

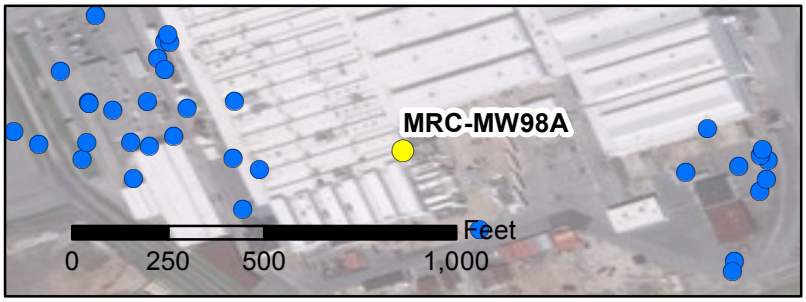
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
16:22	6.41	250	0.33	14.34	6.87	0.817	70.4	6.26	-28	
16:27	6.74	150	0.2	13.79	7.01	0.83	30.5	5.74	9	
16:32	7.02	150	0.2	13.28	7.04	0.885	50	6.15	27	
16:37	7.3	150	0.2	13.91	7.24	0.903	57.6	6.35	-4	
16:42	7.55	150	0.2	14.26	7.09	0.92	57.7	5.08	37	
16:47	7.83	150	0.2	14.19	7.08	0.935	54.9	5.47	49	
16:52	7.97	150	0.2	14.06	7.08	0.95	49.9	5.6	58	
17:02	8.2	150	0.2	14.01	7.08	0.959	45.8	5.32	74	
17:07	8.48	150	0.2	13.88	7.08	0.983	46.3	5.28	78	
17:12	8.7	150	0.2	13.88	7.08	0.983	46.3	5.28	78	
17:17	8.91	150	0.2	13.83	7.09	0.954	45.5	5.16	83	
17:27	9.02	200	0.26	13.21	7.08	0.932	72.4	4.86	37	
17:32	9.69	150	0.2	13.37	7.08	0.895	65	4.56	58	
17:37	9.89	150	0.2	13.68	7.1	0.876	48.3	4.2	55	
17:42	9.99	150	0.2	13.92	7.06	0.861	48.2	4.11	59	

Sample Collection Information

Tried to troubleshoot turbidity issues, high TSS visible in purge water. Could not reduce flow below 150. Ran dry at 1747. Allowed to recharge overnight, DTW 5.84, sampled





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW73B
Screen Interval: 24'-34'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Bladder

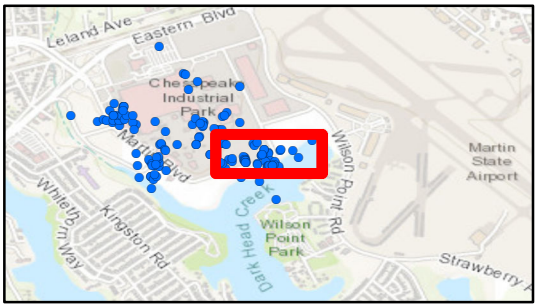
Sampled for

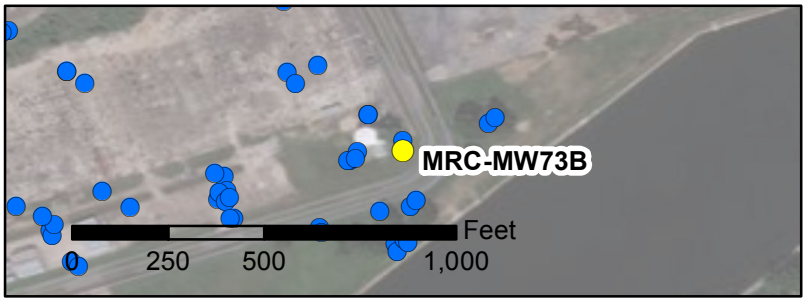
VOCs: Yes
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:55	7.2	120	0.25	15.94	4.81	0.142	12.3	2.2	196	
09:00	7.21	120	0.5	16.2	4.77	0.143	11.1	1.83	225	
09:05	7.21	120	0.75	16.46	4.75	0.14	8.9	1.63	244	
09:10	7.23	120	1	16.74	4.74	0.137	7.6	1.51	256	
09:15	7.24	120	1.25	16.85	4.73	0.136	6.8	1.45	265	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW96B
Screen Interval: 39'-49'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Bladder

Sampled for

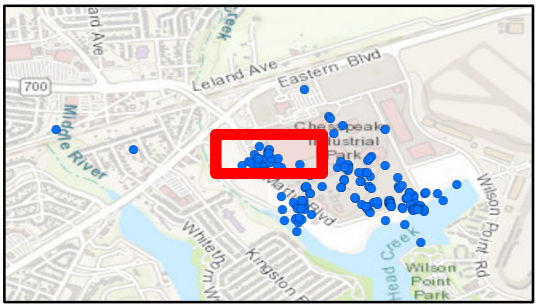
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

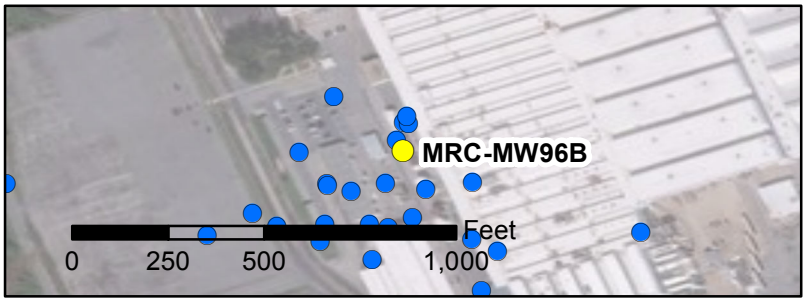
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:05	15.91	100	0.13	14.7	4.69	1.36	6.4	5.23	261	
10:10	16.04	200	0.3	15.7	4.6	1.65	3.8	1.36	305	
10:15	15.93	200	0.56	16.35	4.4	2.52	23.2	0	331	
10:20	15.95	200	0.8	16.21	4.16	1.24	20.8	0	313	
10:25	15.98	300	1.1	17.01	4.35	3.6	20.4	0	329	
10:30	16.05	250	1.4	17.12	4.32	3.68	19.5	0	329	
10:35	16.06	250	1.7	17.17	4.3	3.87	11.7	0	321	
10:40	16.06	250	2	17.16	4.33	3.92	10	0	313	
10:45	16.06	300	2.4	17.17	4.29	3.69	9.5	0	315	
10:50	16.06	300	2.85	17.19	4.3	3.82	7.3	0	311	
10:55	16.06	300	3.25	17.21	4.29	3.78	6	0	310	

Sample Collection Information

Removed 50' perri tubing. Parameters stabilized. Total drawdown <0.2'. Sample depth 44'. Collected MS/MSD and DUP @1120.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW111B
Screen Interval: 35'-45'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Bladder

Sampled for

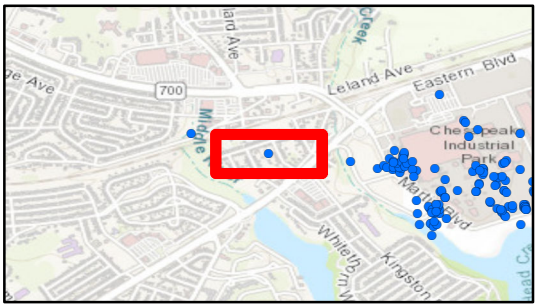
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

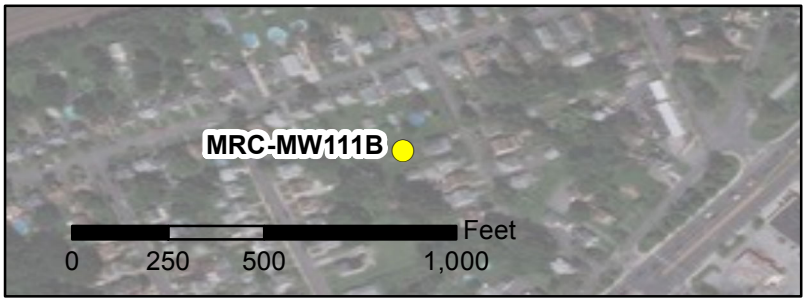
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:20	15.74	200	0.26	15.54	5.01	0.818	2.4	0.52	174	
09:25	17.11	200	0.26	16.01	5.09	0.811	0.5	0.27	168	
09:30	17.84	150	0.2	15.85	5.09	0.809	0	0.26	169	
09:35	18.78	150	0.2	15.95	5.1	0.808	0	0.18	170	
09:40	19.71	150	0.2	16.17	5.09	0.807	0	0.07	171	
09:45	20.8	150	0.2	16.22	5.1	0.806	0	0.07	171	
09:50		150	0.2	16.09	5.09	0.806	0	0.08	173	

Sample Collection Information

Collected MS/MSD and DUP





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW124A
Screen Interval: 8'-18'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

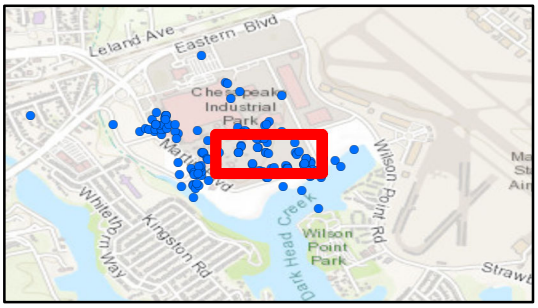
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

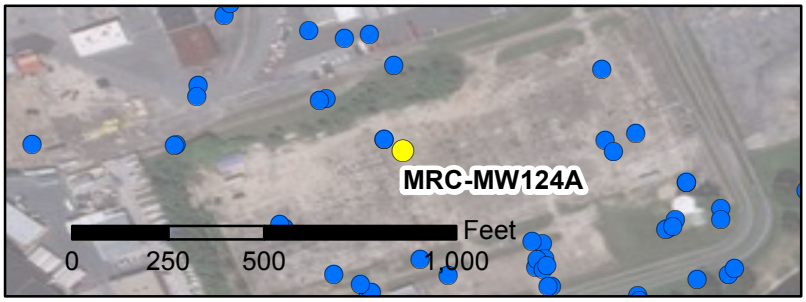
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:05	1.84	120	0.25	17.72	6.79	0.631	17.9	1	37	
10:10	2.53	120	0.5	17.46	7.06	0.634	19.6	0.74	0.634	
10:15	3	120	0.75	17.25	7.16	0.636	20.8	0.64	-50	
10:20	3.25	120	1	16.96	7.01	0.642	18.8	0.61	-62	
10:25	3.58	120	1.25	16.38	6.47	0.64	19	0.59	-37	
10:30	3.85	120	1.5	16.36	6.13	0.63	13.2	0.56	-18	
10:35	4.01	120	1.75	16.46	5.88	0.631	11.1	0.56	4	
10:40	4.2	120	2	16.53	5.8	0.625	12.7	0.55	16	
10:45	4.35	12	2.25	16.51	5.78	0.619	9.8	0.54	20	
10:50	4.52	120	2.5	16.58	5.69	0.624	8	0.52	26	
10:55	4.7	120	2.75	16.53	5.66	0.623	6.7	0.5	28	
11:00	4.8	120	3	16.52	5.67	0.624	6.1	0.5	35	
11:05	4.83	120	3.25	16.45	5.6	0.619	6.5	0.48	36	
11:10	4.92	120	0.03	16.43	5.6	0.618	5.8	0.47	37	

Sample Collection Information

MS/MSD collected





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW02A
Screen Interval: 17'-27'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

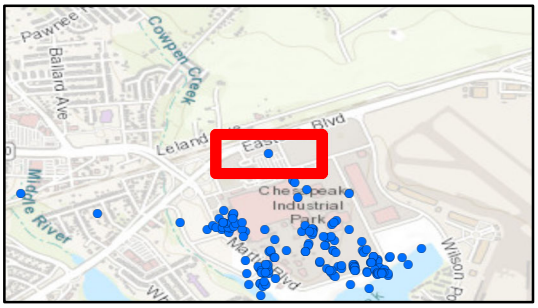
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

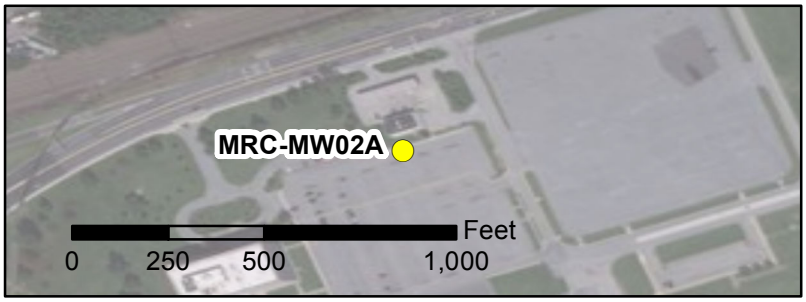
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:27	9.46	150	0.2	18.24	6.32	5.63	80.1	4.03	82	
12:37	9.4	150	0.2	17.87	6.42	5.6	56.3	3.65	118	
12:42	9.39	150	0.2	17.98	6.41	5.51	45.3	3.29	115	
12:47	9.37	150	0.2	18.02	6.39	5.47	38.3	3.05	118	
12:57	9.39	150	0.2	17.56	6.34	5.43	112	2.82	121	
13:02	9.88	200	0.26	17.14	6.29	5.32	84.4	2.48	128	
13:07	9.81	200	0.26	17.13	6.26	5.33	64.7	2.14	135	
13:17	9.68	150	0.2	17.1	6.22	5.53	39.5	1.7	148	
13:22	9.54	150	0.2	17.22	6.2	5.71	29.8	1.48	153	
13:27		150	0.2	17.18	6.2	5.63	32.4	1.48	5.62	
13:32	9.68	150	0.2	17.2	6.17	5.58	28.6	1.44	162	
13:37	9.55	150	0.2	17.29	6.16	5.7	22.1	1.33	164	
13:42	9.63	150	0.2	17.35	6.15	5.6	19	1.35	167	
13:47	9.68	150	0.2	17.35	6.13	5.58	14.7	1.32	170	
13:52	9.65	150	0.2	17.39	6.12	5.65	13.1	1.27	171	

Sample Collection Information

TT tubing fell down well approx 8', due to insufficient length. It was recovered and replaced.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW104A
Screen Interval: 5'-15'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

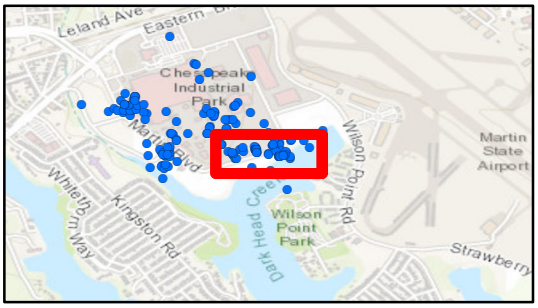
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

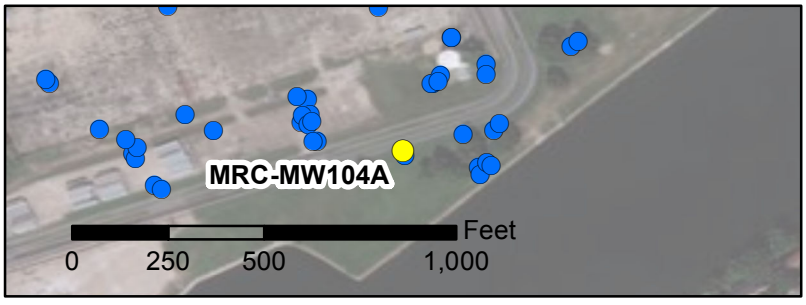
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:55	5.66	200	0.05	20.21	5.74	1.78	62.4	7.06	216	
14:00	6.04	150	0.25	18.55	5.71	1.69	53.6	5.12	208	
14:05	6.34	120	0.4	16.69	5.71	1.74	39.9	4.63	208	
14:10	6.62	120	0.55	19.03	5.8	1.62	35.8	4.22	209	
14:15	6.96	120	0.7	20.02	5.86	1.59	32.6	3.8	211	
14:20	7.14	100	0.83	20.33	5.78	1.59	31.6	4.21	210	
14:25	7.22	100	0.96	20.66	5.91	1.59	30.2	3.54	208	
14:30	7.37	100	1.1	20.91	5.8	1.6	28.1	4.15	209	
14:35	7.67	100	1.23	21.01	5.8	1.54	26.6	4.11	210	
14:40	7.83	100	1.36	21.16	6.08	1.46	20.1	4.08	208	
14:45	7.98	100	1.5	21.4	6.05	1.43	18.2	4.44	206	
14:50	8.35	100	1.63	21.46	5.96	1.42	21.2	3.6	201	
14:55	8.54	100	1.77	21.48	5.92	1.38	18.4	3.32	198	
15:00	8.89	100	1.9	21.65	6.01	1.39	12.9	2.79	198	
15:05	8.95	100	2.03	21.76	6.01	1.4	10.6	2.43	196	
15:10	9.11	100	2.16	21.78	5.87	1.42	11	2.63	197	
15:15	9.35	100	2.3	21.81	5.87	1.4	11.2	2.32	196	
15:20	9.67	100	2.45	21.78	5.82	1.4	11.9	3.65	194	

Sample Collection Information

90-minute purging condition met. Total drawdown 4.01'. Sample depth 10'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW38B
Screen Interval: 16'-26'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

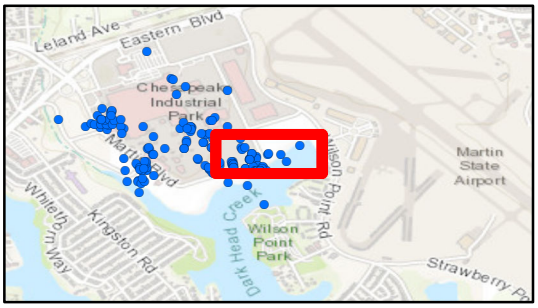
Sampled for

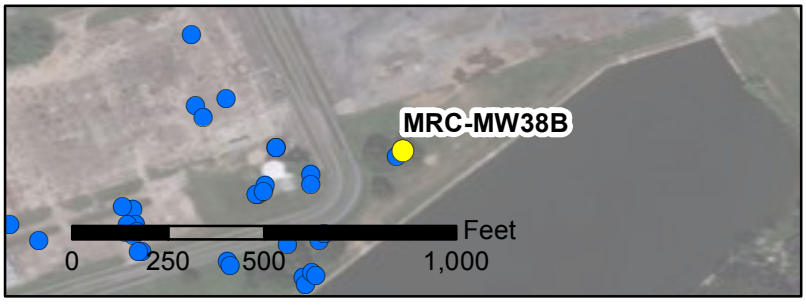
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:52	7.22	200	0.26	14.37	5.14	0.053	11.3	4.11	278	
14:57	6.89	150	0.2	14.71	4.99	0.053	12.5	4	304	
15:02	6.71	150	0.2	14.73	4.95	0.053		3.9	316	
15:07	7.15	300	0.4	14.25	4.92	0.057	9.9	3.81	330	
15:12	7.19	200	0.26	14.34	4.86	0.057	8.3	3.7	337	
15:17	7.2	150	0.2	14.33	4.85	0.057	8.6	3.6	345	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW07A
Screen Interval: 12'-22'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

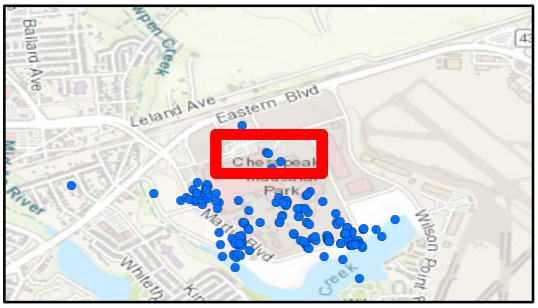
Sampled for

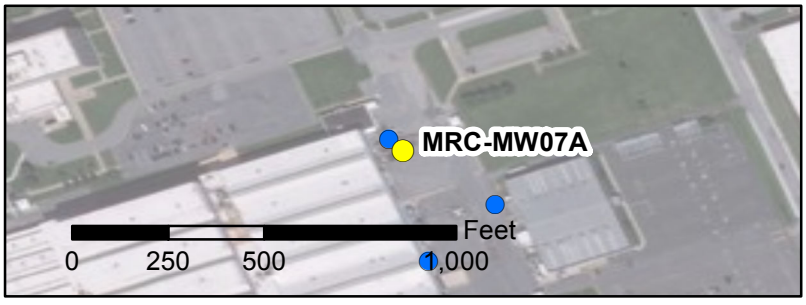
VOCs: No
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: Yes
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:50	12.75	100	0.13	24.23	5.74	1.9	20.8	2.91	167	
14:55	12.87	100	0.26	23.58	5.72	1.91	21.7	2.8	170	
15:00	13.03	100	0.39	22.37	5.69	1.94	20.6	2.77	180	
15:05	13.2	100	0.52	22.07	5.68	1.95	18.9	2.76	184	
15:10	13.36	100	0.65	21.85	5.67	1.96	17.7	2.79	189	
15:15	13.56	100	0.78	21.83	5.66	1.97	17.5	2.75	192	
15:20	13.78	100	0.91	21.54	5.65	1.98	14	2.77	195	
15:25	13.95	100	1.04	21.28	5.64	2	10.6	2.8	198	
15:30	14.25	100	1.17	20.95	5.62	2.03	5.4	2.8	200	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW104B
Screen Interval: 20'-25'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

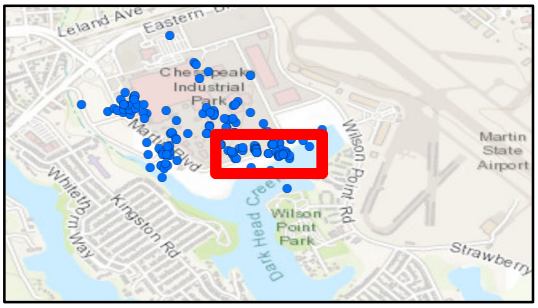
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

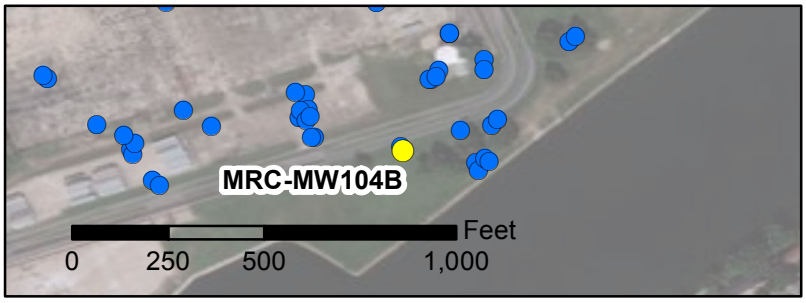
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:45	5.72	100	0.13	23.49	5.28	1.95	17.7	1.79	206	
15:50	5.73	100	0.26	23.39	5.25	1.94	12.4	0.09	226	
15:55	5.78	180	0.4	15.96	5.18	2.28	4.2	0	238	
16:00	5.78	200	0.66	15.68	5.12	2.28	5.3	0	250	
16:05	5.77	200	0.82	15.56	5.16	2.22	1.9	0	256	

Sample Collection Information

Parameters stabilized. Total drawdown <0.2'. Sample depth 20'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW34A
Screen Interval: 4'-14'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

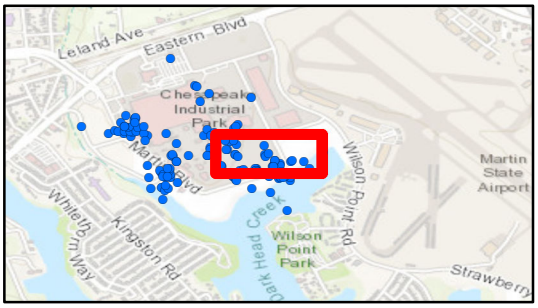
Sampled for

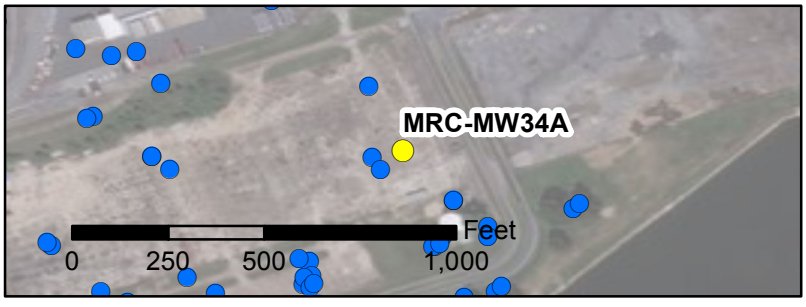
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:40	4.96	170	0.25	20.19	6.42	0.157	3.2	5.42	71	
15:45	5.03	170	0.5	18.31	6.34	0.263	6	5.51	85	
15:50	5.02	170	0.75	17.86	6.03	0.16	3.3	5.47	112	
15:55	5.02	170	0.75	17.6	5.79	0.158	0.9	5.42	127	
16:00	5.03	170	1.25	17.4	5.74	0.158	1.4	5.34	135	
16:05		170	1.5	17.33	5.71	0.155	0.8	5.28	139	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW124B
Screen Interval: 25'-30'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

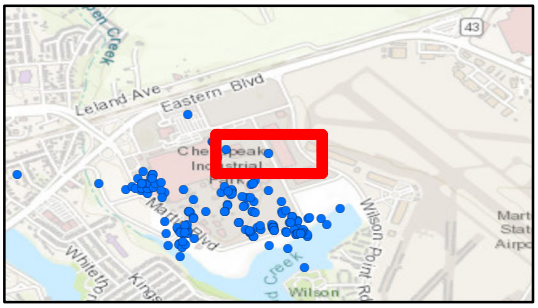
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: Yes
PCBs: Yes
MEE/MNA: No

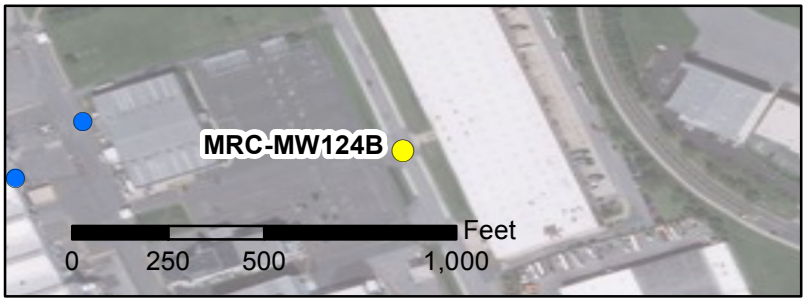
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:10	3.7	140	0.25	20.48	6.77	0.542	16	2.39	6	
13:15	4.18	120	0.5	20.07	6.79	0.545	18.5	1.1	-8	
13:20	4.53	120	0.75	20.15	6.59	0.544	18.4	0.84	-6	
13:25	4.93	120	1	20.34	6.52	0.538	15.4	0.68	-13	
13:30	5.17	120	1.25	20.49	6.5	0.53	11.2	0.63	-18	
13:35	5.4	120	1.5	20.89	6.54	0.519	9.8	0.58	-26	
13:40	5.62	120	1.75	20.79	6.42	0.511	7.3	0.55	-22	
13:45	5.82	120	2	20.75	6.34	0.503	5.4	0.52	-20	
13:50	6.202	120	2.25	20.87	6.31	0.495	5.3	0.5	-20	

Sample Collection Information

Dup collected at 1400





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW37B
Screen Interval: 21'-31'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

Sampled for

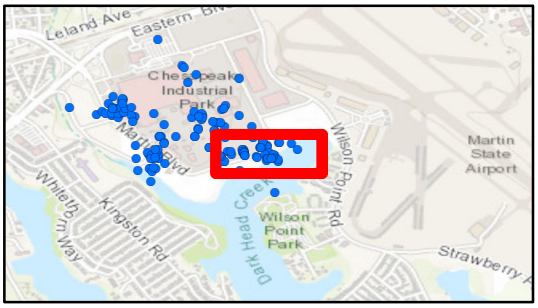
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: Yes

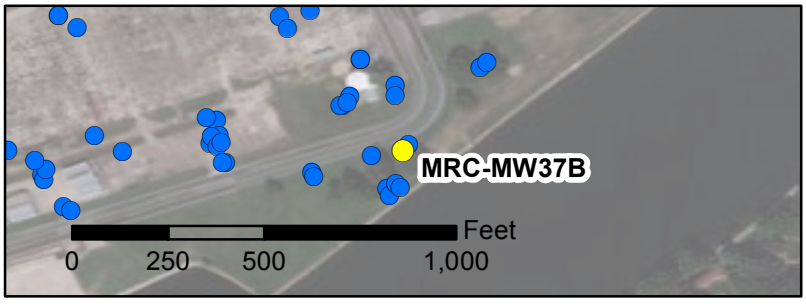
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:15	5.75	120	0.25	16.88	5.02	0.261	8.6	4.55	208	
08:20	5.96	120	0.5	16.55	5.22	0.235	14.2	3.04	205	
08:25	5.97	120	0.75	16.46	5.19	0.23	14	2.55	209	
08:30	5.97	120	1	16.42	5.08	0.219	10.9	2.49	216	
08:35	6.12	160	1.25	16.64	5.02	0.213	11.2	2.31	221	
08:40	6.25	160	1.5	16.77	4.95	0.21	9.2	2.21	227	

Sample Collection Information

Tubing fell back down well when replacing following sampling :(





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW74A
Screen Interval: 8'-18'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Peristaltic

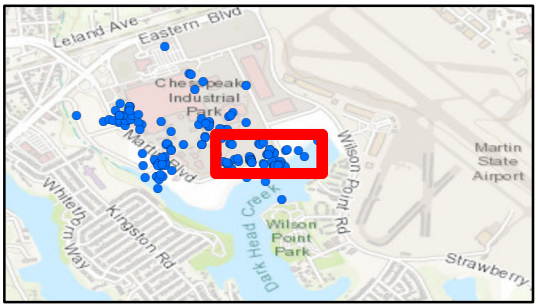
Sampled for

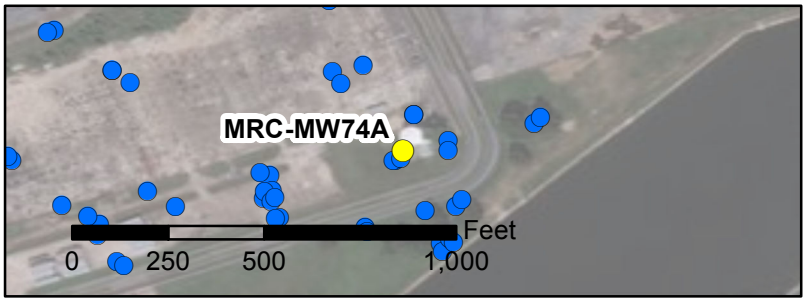
VOCs: Yes
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:47	7.78	300	0.4	12.81	6.64	0.743	33.3	3.09	193	
08:52	7.85	200	0.26	13.25	6.68	0.738	25.2	2.76	193	
08:57	7.91	150	0.2	13.49	6.7	0.737	17.9	2.83	191	
09:07	8	150	0.2	13.62	6.72	0.733	11.7	2.75	190	
09:12	8.04	150	0.2	13.75	6.73	0.734	12.2	2.77	187	
09:17	8.1	150	0.2	13.92	6.74	0.731	13.4	2.6	186	
09:22	8.13	150	0.2	13.83	6.74	0.732	9.8	2.61	186	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW72B
Screen Interval: 25'-35'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

Sampled for

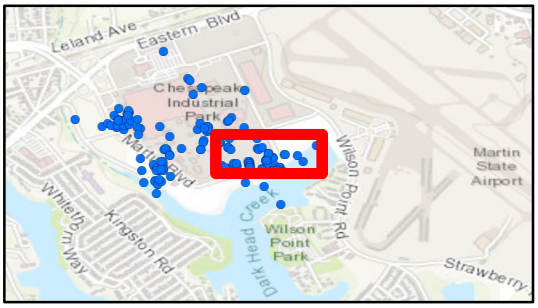
VOCs: Yes
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: Yes

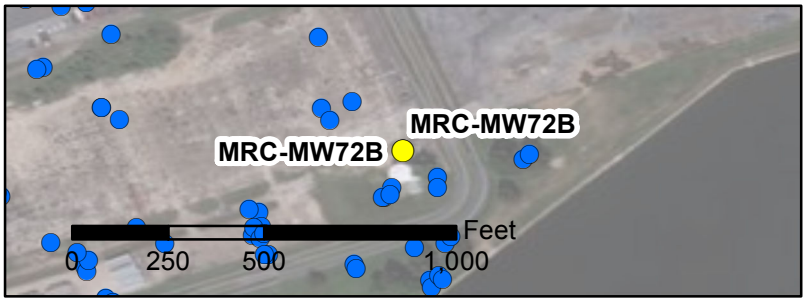
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:35	6.63	100	0.13	16.05	4.81	0.056	34.8	2.06	250	
08:40	6.8	100	0.26	16	5.01	0.052	35.2	1.8	250	
08:45	6.86	100	0.39	15.83	5.02	0.051	28.9	1.68	256	
08:50	6.88	100	0.52	15.56	4.99	0.052	23	1.62	259	
08:55	6.89	100	0.65	15.44	4.99	0.051	22.4	1.57	262	
09:00	6.87	100	0.78	15.44	4.98	0.051	22.3	1.52	264	
09:05	6.86	100	0.91	15.64	5	0.051	19.5	1.48	265	
09:10	6.85	100	1.04	15.75	5	0.051	18.6	1.45	264	
09:15	6.87	100	1.17	16	5.05	0.051	17.2	1.42	263	
09:20	6.88	100	1.3	16.32	5.07	0.05	11.1	1.36	262	
09:25	6.89	100	1.43	16.6	5.1	0.05	10.4	1.31	262	
09:30	6.9	100	1.56	16.76	5.11	0.049	7.5	1.28	261	

Sample Collection Information

Drop of sheen observed, see photo





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW74B
Screen Interval: 22'-32'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

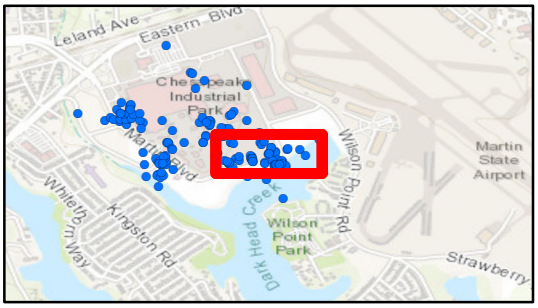
Sampled for

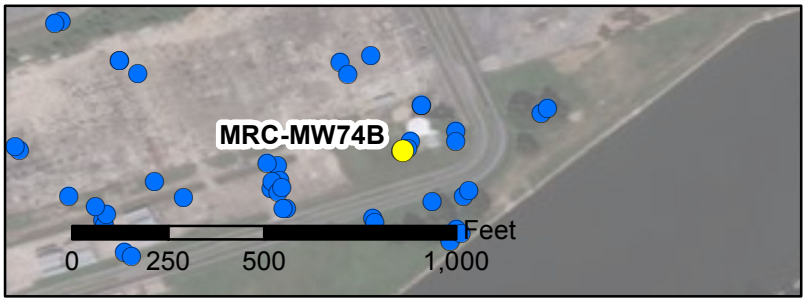
VOCs: Yes
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:07	8.61	200	0.26	16	6.14	0.244	10.8	2.59	239	
10:12	9.02	200	0.26	16.25	6.11	0.243	9.3	2.53	241	
10:17	9.23	200	0.26	16.34	6.1	0.243	9.6	2.51	245	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW72B
Screen Interval: 25'-35'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

Sampled for

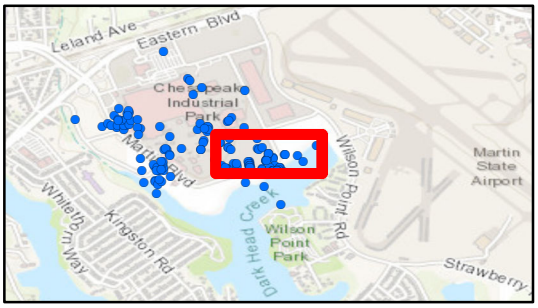
VOCs: Yes
1,4-Dioxane: No
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: Yes

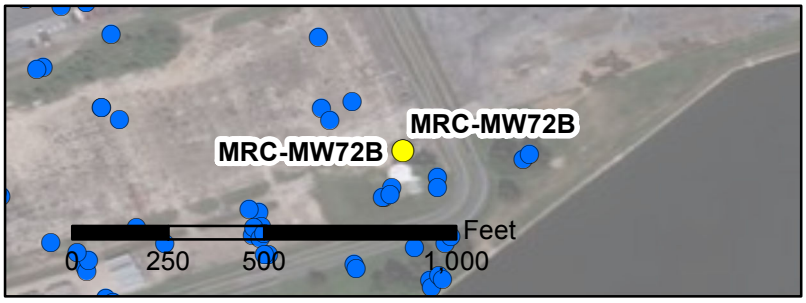
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
08:35	6.63	100	0.13	16.05	4.81	0.056	34.8	2.06	250	
08:40	6.8	100	0.26	16	5.01	0.052	35.2	1.8	250	
08:45	6.86	100	0.39	15.83	5.02	0.051	28.9	1.68	256	
08:50	6.88	100	0.52	15.56	4.99	0.052	23	1.62	259	
08:55	6.89	100	0.65	15.44	4.99	0.051	22.4	1.57	262	
09:00	6.87	100	0.78	15.44	4.98	0.051	22.3	1.52	264	
09:05	6.86	100	0.91	15.64	5	0.051	19.5	1.48	265	
09:10	6.85	100	1.04	15.75	5	0.051	18.6	1.45	264	
09:15	6.87	100	1.17	16	5.05	0.051	17.2	1.42	263	
09:20	6.88	100	1.3	16.32	5.07	0.05	11.1	1.36	262	
09:25	6.89	100	1.43	16.6	5.1	0.05	10.4	1.31	262	
09:30	6.9	100	1.56	16.76	5.11	0.049	7.5	1.28	261	

Sample Collection Information

Drop of sheen observed, see photo





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW74C
Screen Interval: 45'-55'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

Sampled for

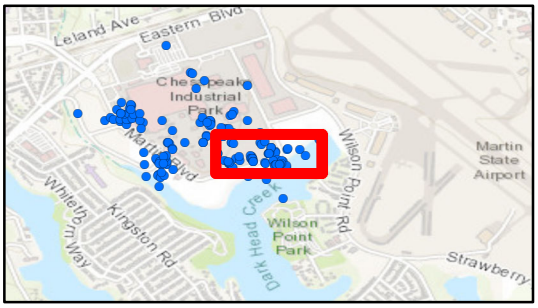
VOCs: Yes
1,4-Dioxane: No
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

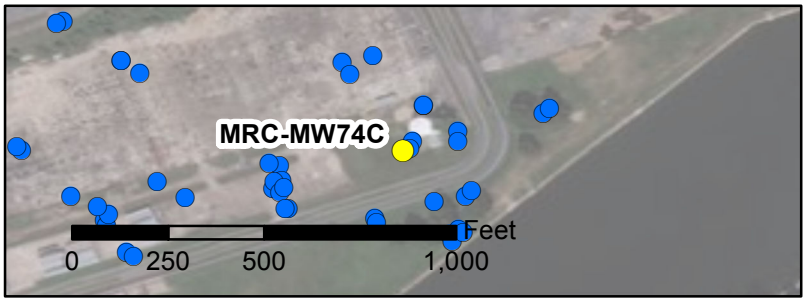
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:15	8.29	200	0.13	18.43	5.54	0.069	38	2.93	155	
10:20	9.2	180	0.3	17.33	5.42	0.054	172	1.52	140	
10:25	10.35	180	0.5	16.62	5.6	0.052	180	1.41	137	
10:30	11.12	180	0.7	16.57	5.66	0.05	207	1.81	148	
10:35	12.93	180	0.9	16.8	5.62	0.047	128	2.04	142	
10:40	14.67	180	1.1	17.2	5.65	1.82	109	1.7	144	
10:45	15.34	100	1.3	17.98	5.67	0.051	89	3.1	142	
10:50	16.05	100	1.43	17.89	5.71	0.05	50.8	2.56	146	
10:55	16.99	100	1.57	17.87	5.69	0.049	40.6	1.48	144	
11:00	17.7	100	1.7	18	5.71	0.048	38.2	1.38	143	
11:05	18.3	100	1.83	17.73	5.71	0.05	40.2	1.29		
11:10	18.7	100	1.85							
11:15	19.12	100	2	17.79	5.72	0.05	39.5	1.45	143	
11:20	19.78	100	2.15	17.87	5.63	0.049	37.6	1.47	143	
11:25	20.36	100	2.3	17.92	5.74	0.049	36.1	1.5	144	
11:30	21.44	100	2.45	18.29	5.64	0.049	35.9	1.43	143	
11:35	22.21	100	2.6	18.2	5.72	0.049	36.4	1.21	144	
11:40	23.19	100	2.75	18.03	5.73	0.05	35.9	1.19	145	

Sample Collection Information

Removed 55' perri tubing. Little to no recharge in well. Severe drawdown of 15'+. Sample depth 50'. No odor.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW37C
Screen Interval: 60'-70'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

Sampled for

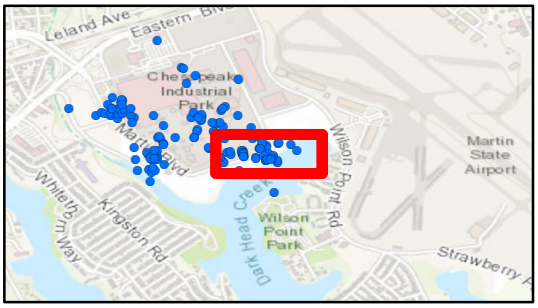
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

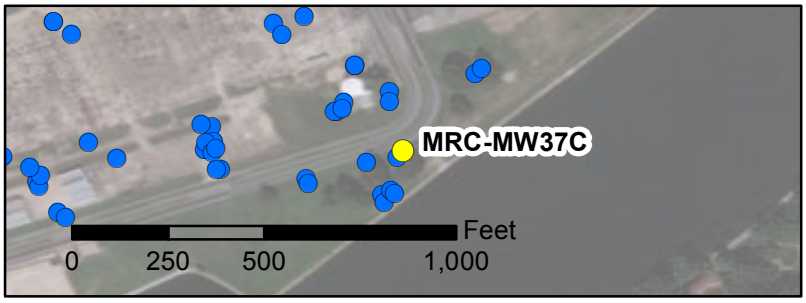
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:00	6.23	200	0.5	17.91	6.04	0.084	11.9	3.57	146	
10:05	7.9	200	0.75	17.68	5.99	0.084	12.6	2.74	137	
10:10	8.88	100	1	18.34	5.77	0.086	13.7	3.44	133	
10:15	9.78	100	1.25	18.19	6.04	0.086	132	3.9	133	
10:20	10.4	100	1.5	17.97	6.08	0.085	13	4.76	133	
10:25	11.35	100	1.75	17.74	5.94	0.084	13.3	4.95	137	
10:30	12.01	100	2	17.7	5.91	0.085	13.3	5.24	137	
10:35	12.8	100	2.25	17.96	6.16	0.084	12.8	5.7	137	
10:40	13.5	100	2.5	18.15	6.18	0.084	12.7	5.67	136	
10:45	14.2	100	2.75	18.52	6.21	0.084	12.5	5.65	148	
10:50	15.12	100	3	18.78	6.24	0.083	12.5	5.94	146	
10:55	15.85	100	3.25	18.56	6.24	0.084	12.6	5.79	140	
11:00	16.63	100	3.5	18.77	6.26	0.084	12	5.6	152	
11:05	17.42	100	3.75	18.55	6.27	0.084	11.9	5.58	155	
11:10	18.31	100	4	18.96	6.27	0.084	11	5.54	154	
11:15	18.88	100	4.25	19.14	6.28	0.084	11	5.56	157	
11:20	19.65	100	4.5	19.29	6.29	0.084	11.4	5.64	159	
11:25	20.15	100	4.75	19.2	6.29	0.084	11.3	5.61	146	

Sample Collection Information

Replaced peristaltic tubing in well with bladder pump tubing





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SEMW-7I
Screen Interval: 20'-30'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

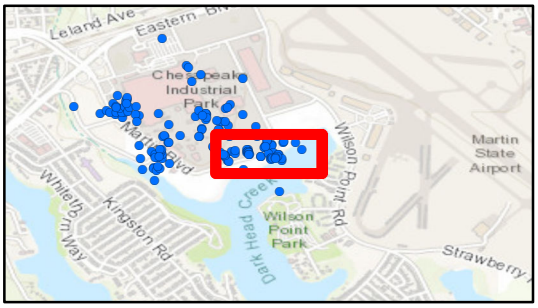
Sampled for

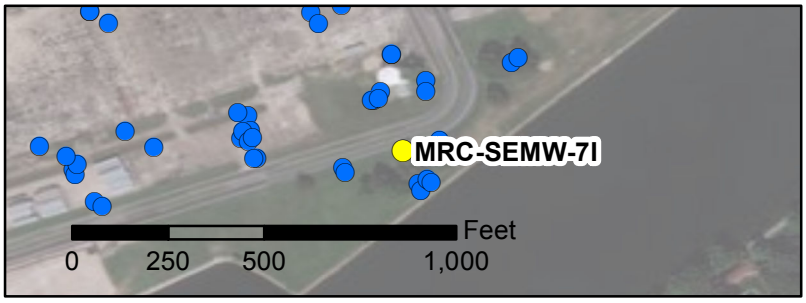
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:15	5.7	150	0.2	21.67	4.79	0.12	0	1.91	241	
11:20	5.71	150	0.4	20.74	4.71	0.121	0	1.86	248	
11:25	5.72	150	0.6	20.05	4.67	0.122	0	1.83	255	
11:30	5.74	150	0.8	19.59	4.65	0.124	0	1.84	259	
11:35	5.74	150	1	19.52	4.63	0.124	0	1.84	261	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SEMW-8S
Screen Interval: 8'-18'
Sampled By: victoria.kirkpatrick@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Peristaltic

Sampled for

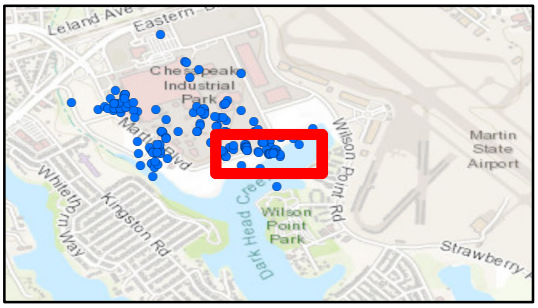
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

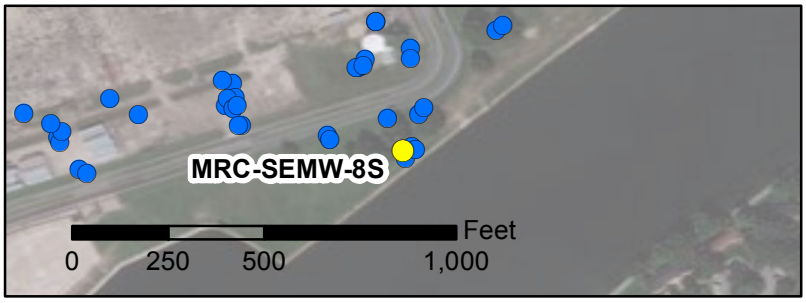
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:35	5.65	120	0.25	16.67	5.08	1.17	17.5	2.55	192	
12:40	5.75	120	0.5	16.36	5.02	1.17	17.9	2.1	200	
12:45	5.81	120	0.75	16.24	4.9	1.18	17.9	2	205	
12:50	5.85	100	1	16.23	4.92	1.18	16.2	1.93	210	
12:55	5.92	100	1.25	16.37	4.8	1.2	17.8	1.87	220	
13:00	5.97	100	1.5	16.27	4.71	1.21	16	1.79	227	
13:05	6.02	100	1.5	16.32	4.66	1.23	14	1.73	233	
13:10	6.08	100	1.75	16.1	4.62	1.29	12.1	1.63	237	
13:15	6.17	100	2	16.16	4.59	1.34	11.3	1.57	241	
13:20	6.17	100	2.25	16.16	4.58	1.37	10.5	1.56	243	
13:25	6.23	10	2.5	16.04	4.55	1.47	9	1.47	248	
13:30	6.28	100	2.75	16.14	4.5	1.47	8.9	1.59	246	
13:35	6.34	100	3.25	16.12	4.54	1.5	9.2	1.44	249	

Sample Collection Information

No tubing; slight sheen





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SEMW-9I
Screen Interval: 20'-30'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

Sampled for

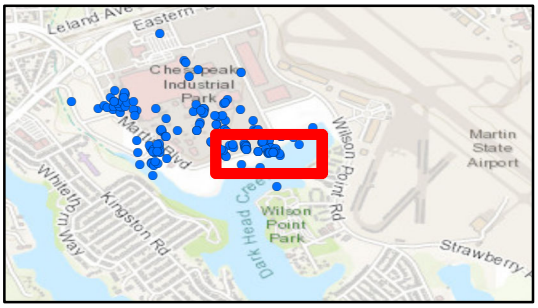
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

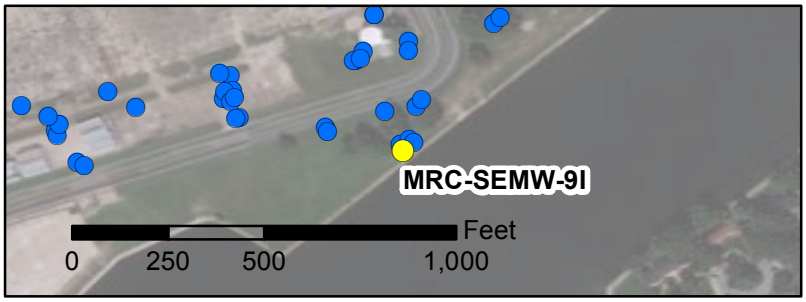
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:10	4.85	150	0.1	18.77	4.89	0.236	27.8	2.42	205	
13:15	4.75	150	0.26	17.85	4.7	0.242	18.4	1.89	247	
13:20	4.75	150	0.45	17.06	4.64	0.243	14.6	1.36	268	
13:25	4.78	150	0.5	16.96	4.64	0.243	11.5	1.15	278	
13:30	4.75	150	0.7	16.85	4.64	0.243	10	1.09	281	
13:35	4.75	150	0.9	16.85	4.62	0.243	10	0.99	284	
13:40	4.75	150	1.1	16.77	4.62	0.242	9	0.96	290	

Sample Collection Information

We'll stabilized. Sample depth 25'.





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SEMW-9S
Screen Interval: 6'-16'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Peristaltic

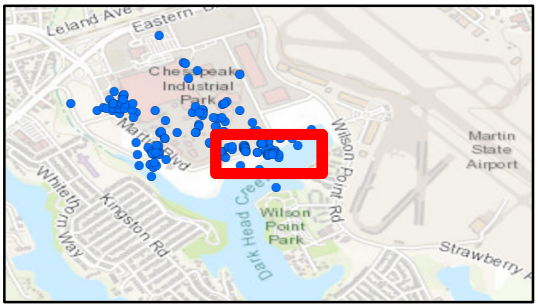
Sampled for

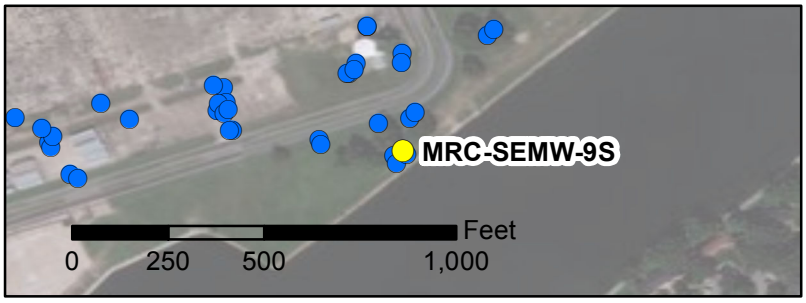
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:50	5.46	100	0.13	22.95	5.42	0.385	39.6	1.71	231	
12:55	5.49	100	0.26	21.56	5.35	0.403	41	1.66	228	
13:00	5.5	100	0.39	21.41	5.34	0.403	42.2	1.61	225	
13:05	5.6	100	0.52	20.88	5.37	0.41	38.4	1.55	221	
13:10	5.65	100	0.65	20.45	5.41	0.417	31.1	1.56	217	
13:15	5.67	100	0.78	20.11	5.43	0.423	28.7	1.54	214	
13:20	5.74	100	0.91	19.94	5.45	0.431	22.3	1.53	211	
13:25	5.8	100	1.04	19.8	5.47	0.448	23.7	1.51	209	
13:30	5.85	100	1.17	19.66	5.46	0.467	21.3	1.51	208	
13:35	5.9	100	1.3	19.69	5.45	0.479	20.8	1.51	207	
13:40	5.92	100	1.43	19.69	5.48	0.494	17.5	1.5	205	
13:45	5.96	100	1.57	19.73	5.51	0.505	11.8	1.44	204	
13:50	7	100	1.7	19.62	5.5	0.509	9.8	1.42	203	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SEMW-8I
Screen Interval: 18'-28'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Bladder

Sampled for

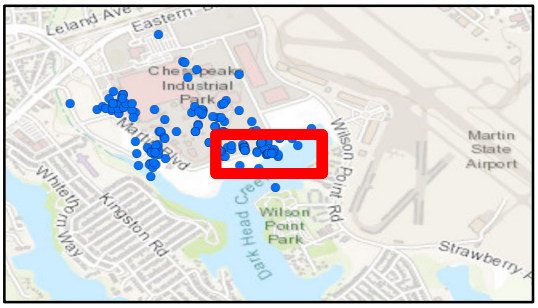
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

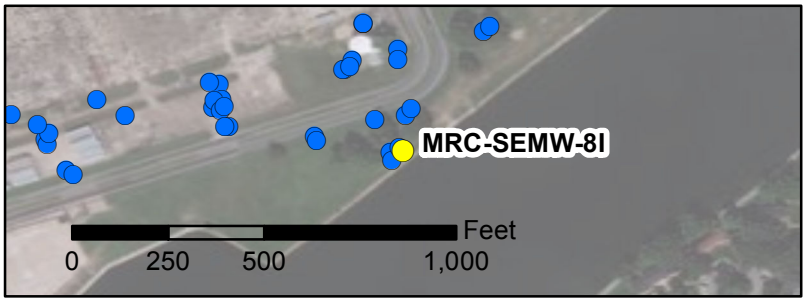
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:22	6.3	250	0.33	17.36	6.82	0.48	0.3	1.97	-113	
12:27	6.71	250	0.33	16.99	6.86	0.483	6.7	1.64	-116	
12:32	7.34	150	0.2	17.39	6.85	0.478	7.2	0.42	-115	
12:42	6.11	150	0.2	17.65	6.84	0.473	4.3	0.43	-111	
12:47	6.05	150	0.2	17.82	6.81	0.462	3.7	0.34	-107	
12:52	6	150	0.2	17.87	6.79	0.452	1.3	0.33	-102	
12:57	5.96	150	0.2	18.03	6.78	0.449	0.9	0.35	-101	

Sample Collection Information

No tubing in well





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW37A
Screen Interval: 7'-17'
Sampled By: zachary.neigh@aecom.com

Sampling Data

Date: 4/13/2018
Pump Method: Peristaltic

Sampled for

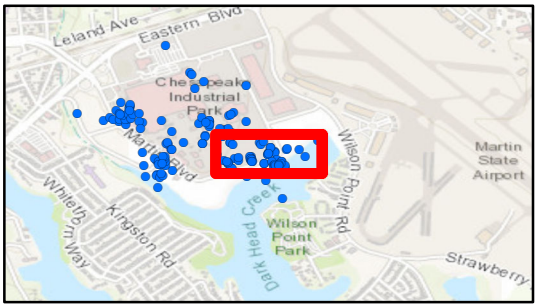
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: Yes
MEE/MNA: Yes

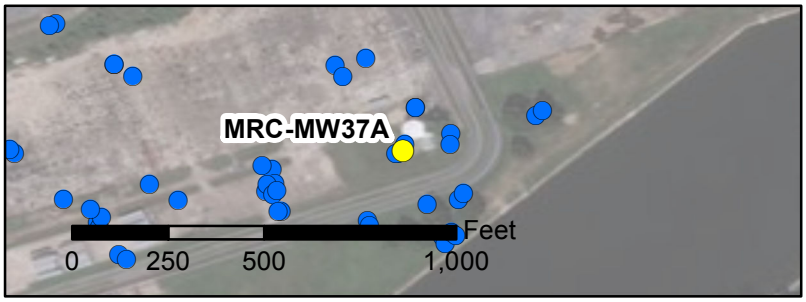
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:05	8.18	150	0.4	18.88	6.18	702	196	4.18	242	

Sample Collection Information

Severe drawdown at <150 ml/min with very unstable parameters. Well was run dry to 11.92' at 1124. Recharged to 7.88 and sampled





June 2018 Groundwater Sampling Event

AECOM

GROUNDWATER SAMPLE LOG SHEET

Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SMW3I
Screen Interval: '-'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

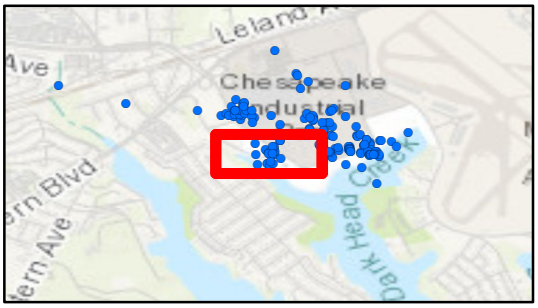
VOCs:
1,4-Dioxane:
Total Metals:
Hexachromium:
PCBs:
MEE/MNA:

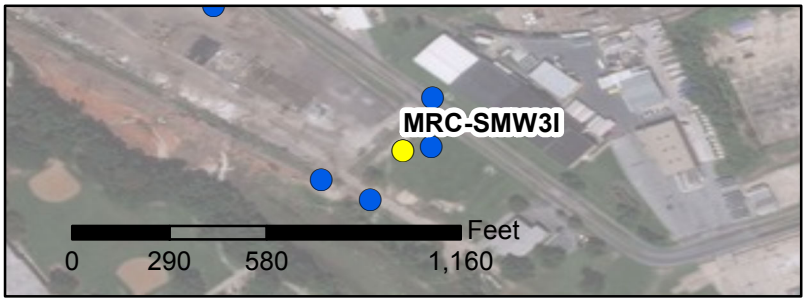
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
07:50	3.45	100	0.13	9.4	6.11	0.932	312	0.61	53	
07:55	4.1	100	0.26	9.49	6.28	0.937	261	0.28	21	
08:00	4.15	100	0.39	9.55	6.27	0.934	195	0.09	16	
08:05	4.11	100	0.52	9.63	6.26	0.931	130	0	13	
08:10	4.19	100	0.65	9.7	6.24	0.931	52.2	0	12	
08:15	4.55	100	0.78	9.77	6.24	0.931	37.2	0	11	
08:20	4.79	100	0.91	9.84	6.25	0.93	25.7	0	11	
08:25	4.9	100	1.04	9.91	6.25	0.93	24.4	0	11	
08:30	5	100	1.17	10.01	6.26	0.93	14.8	0	11	
08:35	5.07	100	1.3	10.09	6.26	0.931	9.8	0	11	

Sample Collection Information

SWMW-3I, MS/MSD @ 0850, DUP @ 0855, see handwritten nfor final 2 readings





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SMW2I
Screen Interval: '-'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

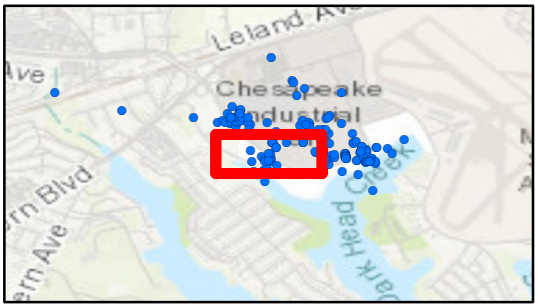
VOCs:
1,4-Dioxane:
Total Metals:
Hexachromium:
PCBs:
MEE/MNA:

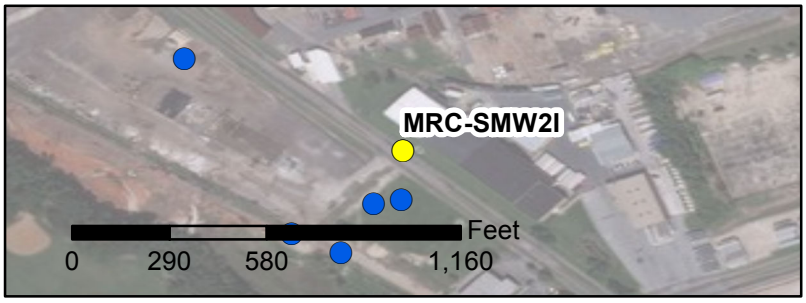
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
09:50	5.04	100	0.13	14.01	7	0.434	22.7	0.59	-70	
09:55	5.3	100	0.26	13.69	6.96	0.433	22.2	0.17	-71	
09:00	5.49	100	0.39	13.66	6.91	0.433	21.3	0.11	-71	
10:05	5.7	100	0.52	13.84	6.92	0.432	19.7	0.02	-74	
10:10	5.79	100	0.65	13.98	6.92	0.431	15.3	0.02	-76	
10:15	5.86	100	0.78	14.11	6.92	0.431	15.2	0.04	-76	
10:20	5.91	100	0.91	14.19	6.9	0.431	16.9	0.04	-77	
10:25	5.95	100	1.04	14.26	6.93	0.433	18.5	0.06	-79	
10:30	5.99	100	1.17	14.38	6.93	0.433	11.9	0.07	-79	
10:35	5.99	100	1.3	14.37	6.94	0.436	13.2	0.08	-81	
10:40	5.99	100	1.43	14.45	6.93	0.439	12.9	0.1	-81	
10:40	5.99	100	1.56	14.47	6.92	0.439	14.3	0.1	-80	
10:45	5.99	100	1.69	14.55	6.94	0.439	14.7	0.11	-82	
10:50	5.9	100	1.82	14.77	6.92	0.443	14.9	0.36	-84	
10:55	5.86	100	1.95	14.71	6.94	0.442	14.8	0.2	-83	
11:00	5.75	100	2.08	14.8	6.96	0.441	17.1	0.18	-83	
11:05	5.72	100	2.21	14.82	6.94	0.443	17.7	0.17	-81	
11:10	5.77	100	2.35	14.75	6.92	0.449	16.8	0.17	-83	

Sample Collection Information

SWMW-2I, new tubing (old stained on inside)





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-SMW1I
Screen Interval: '-'
Sampled By: adam.dec@aecom.com

Sampling Data

Date: 4/12/2018
Pump Method: Peristaltic

Sampled for

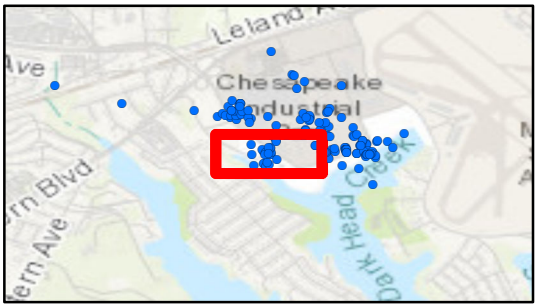
VOCs:
1,4-Dioxane:
Total Metals:
Hexachromium:
PCBs:
MEE/MNA:

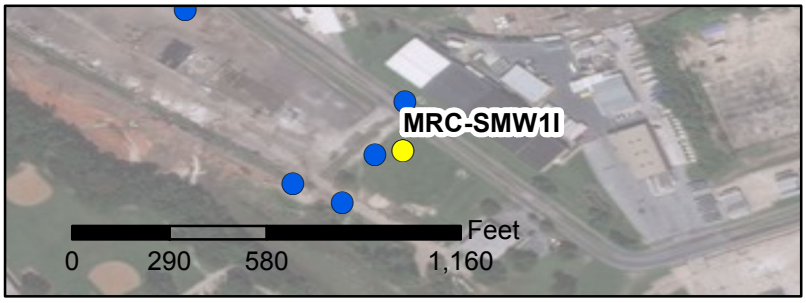
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
11:35	6.33	100	0.13	15.84	6.85	0.494	103	0.74	-62	
11:40	6.57	100	0.26	15.73	6.83	0.496	90.8	0.54	-61	
11:45	7.13	100	0.39	15.65	6.82	0.499	82.4	0.27	-62	
11:50	7.65	100	0.52	15.73	6.81	0.499	79.4	0.28	-64	
11:55	8.11	100	0.65	16.04	6.82	0.497	37	0.17	-66	
12:00	8.4	100	0.78	16.31	6.82	0.497	31.8	0.18	-67	
12:05	8.65	100	0.91	16.33	6.8	0.498	26.8	0.16	-67	
12:10	8.86	100	1.04	16.49	6.83	0.494	19.2	0.17	-68	
12:15	9.1	100	1.17	16.43	6.82	0.496	20.8	0.16	-68	
12:20	1.3	100	1.3	16.61	6.82	0.496	22.3	0.16	-68	
12:25	9.47	100	1.43	16.97	6.82	0.498	19.7	0.18	-70	
12:30	9.58	100	1.56	17.23	6.82	0.496	24.7	0.18	-70	
12:35	9.71	100	1.69	17.4	6.78	0.496	22.3	0.19	-68	
12:40	9.85	100	1.82	17.7	6.84	0.494	18.2	0.19	-72	
12:45	9.97	100	1.95	17.84	6.82	0.493	21.4	0.19	-71	
12:50	10.08	100	2.08	18.22	6.84	0.491	37.9	0.19	-73	
12:55	10.14	100	2.21	18.39	6.86	0.491	29.1	0.19	-74	
13:00	10.14	100	2.34	18.84	6.84	0.488	32.5	0.2	-74	

Sample Collection Information

SWMW-1I





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW11A
Screen Interval: 3'-13'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 6/25/2018
Pump Method: Peristaltic

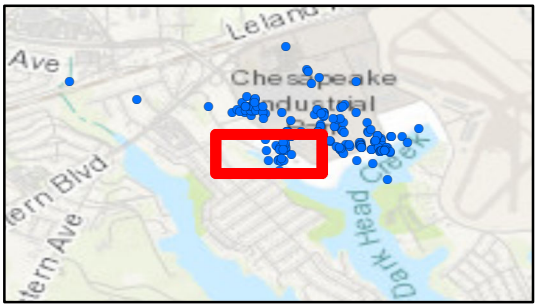
Sampled for

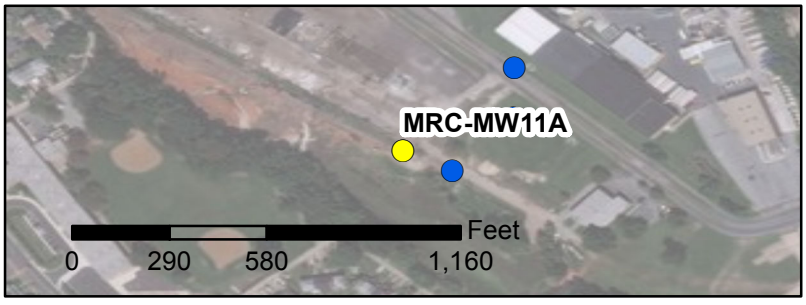
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: Yes
Hexachromium: No
PCBs: No
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
13:20	2.8	300	0	30.83	6.48	0.99	9.4	5.28	-65	
13:25	3.4	200	0.26	27.05	6.61	0.876	5.5	1.13	-86	
13:30	3.73	200	0.52	26.09	6.63	0.889	4	1.04	-88	
13:35	4.39	200	0.78	26.03	6.72	0.902	8.4	0.91	-91	
13:40	4.92	200	1.04	25.9	6.75	0.909	6.75	0.8	-93	
13:45	5.28	200	1.3	26	6.75	0.902	6.7	0.74	-92	
13:50	5.71	200	1.6	26.05	6.72	0.9	6.3	0.73	-91	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW16A
Screen Interval: 3'-13'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 6/25/2018

Pump Method: Peristaltic

Sampled for

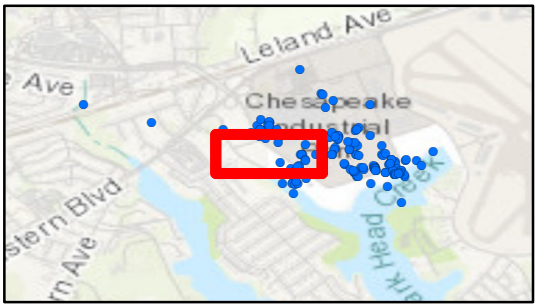
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

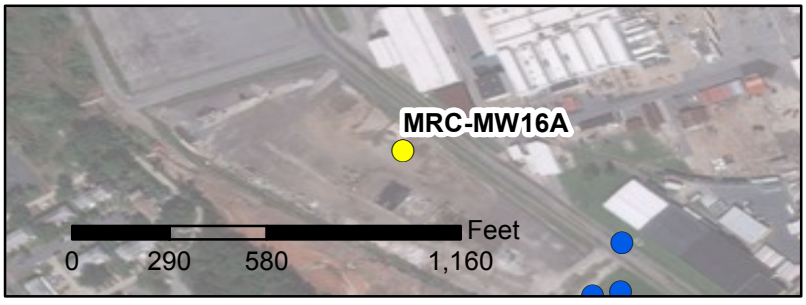
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
14:55	3.25	150	0.1	29.62	4.46	1.16	3.4	1.86	260	
15:00	3.31	150	0.25	28.53	4.41	1.18	3.3	1.13	278	
15:05	3.44	150	0.4	27.98	4.35	1.21	3.8	0.68	290	
15:10	3.55	150	0.55	27.85	4.34	1.22	4.7	0.52	298	
15:15	3.68	150	0.7	27.69	4.27	1.29	3.1	0.38	306	
15:20	3.81	150	0.85	27.66	4.24	1.25	3.5	0.36	311	
15:25	4.13	150	1	27.67	4.25	1.31	3.3	0.39	320	

Sample Collection Information

MS/MSD 1530, DUP 1550





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: EW-2
Screen Interval: 15'-30'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 6/26/2018
Pump Method: Peristaltic

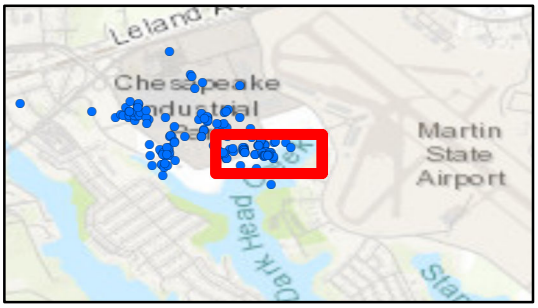
Sampled for

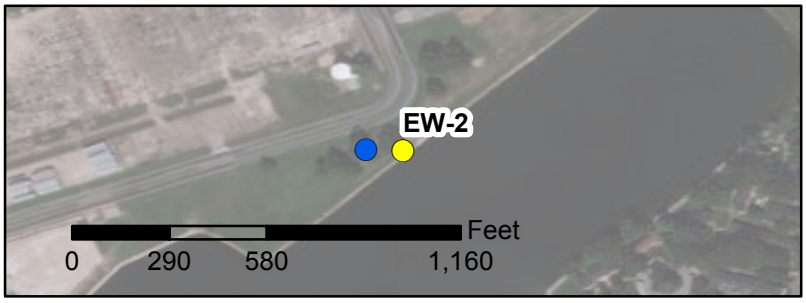
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
10:50	4.35	200	0.3	19.92	4.66	0.271	0.1	1.38	360	
10:55	4.37	210	0.56	19.42	4.65	0.269	0.3	1.39	368	
11:00	4.38	210	0.85	19.1	4.64	0.267	0.2	1.31	376	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: EW-1
Screen Interval: 15'-30'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 6/26/2018
Pump Method: Peristaltic

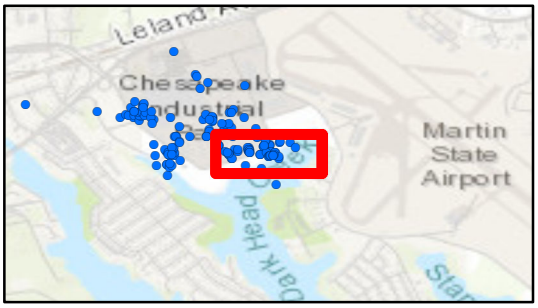
Sampled for

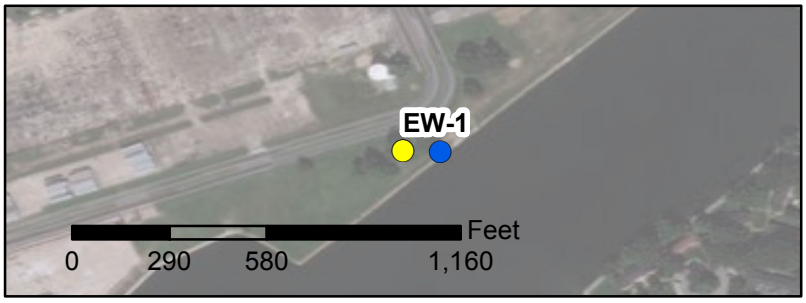
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: Yes
MEE/MNA: No

Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
12:15	5.54	200	0.3	20.61	7.01	0.632	39.1	4.25	-41	
12:20	5.71	200	0.56	20.81	7.02	0.628	37.7	2.55	-50	
12:25	5.93	200	0.8	19.94	7.04	0.64	29.4	1.25	-71	
12:30	6.09	200	1.06	19.75	7.05	1.04	27.6	1.03	-77	
12:35	6.23	200	1.32	19.77	7.06	0.644	25.9	0.95	-81	
12:40	6.42	200	1.57	19.95	7.1	0.44	19.3	0.43	-92	
12:45	6.51	200	1.8	19.91	7.11	0.642	18.6	0.4	-94	
12:50	6.51	200	2.1	19.87	7.11	0.642	18.5	0.34	-95	
12:55	6.52	200	2.4	19.87	7.11	0.31	17.8	0.31	-96	
13:00	6.52	200	2.7	19.62	7.12	0.647	16.9	0.25	-98	
13:05	6.51	200	3	19.71	7.12	0.649	16.5	0.23	-99	
13:10	6.53	200	3.2	19.76	7.12	0.648	16.2	0.22	-100	

Sample Collection Information





Project Name: Lockheed Martin Corporation – Middle River Complex
Project Number: 60555202

Sample Location/ID: MRC-MW107BC
Screen Interval: 45'-55'
Sampled By: antonio.zarrelli@aecom.com

Sampling Data

Date: 6/26/2018
Pump Method: Bladder

Sampled for

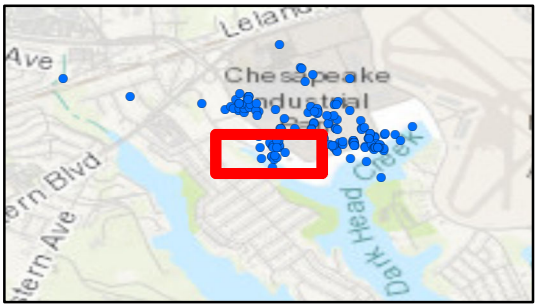
VOCs: Yes
1,4-Dioxane: Yes
Total Metals: No
Hexachromium: No
PCBs: No
MEE/MNA: No

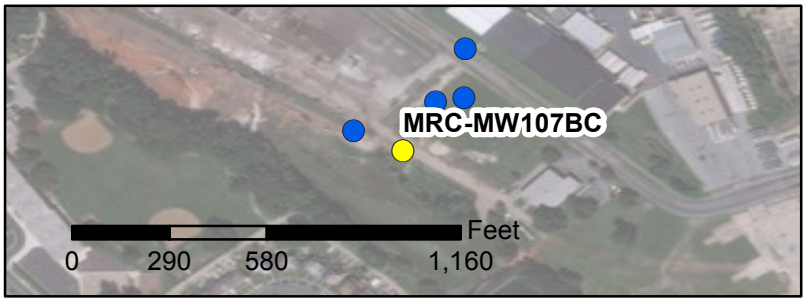
Purge Data

Time	DTW (ft. below TOC)	Purge Rate (mL/min)	V (gallons)	T (Celsius)	pH	Specific Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Salinity (ppt)
15:20	1.4	150	0.1	23.9	6.65	0.718	45.4	1.39	-40	
15:25	1.91	150	0.3	23.08	6.46	0.366	54.2	3.48	-25	
15:30	2.12	150	150	23.96	6.44	0.001	109	5.1	-33	
15:35	2.2	150	0.5	26.29	6.44	0.001	99	4.91	-36	
15:40	2.8	150	0.7	27.62	6.45	0.001	99.7	4.99	-27	
15:45	2.92	150	1	28.82	6.49	0.001	98.9	4.95	-10	
15:50	3.14	150	1.2	21.93	6.72	0.574	57.4	2.89	-33	
15:55	3.32	150	1.4	21.99	6.73	0.689	56	2.91	-39	
16:00	3.46	150	1.6	21.42	6.72	0.504	51.6	3.36	-30	
16:05	3.68	150	0	21.67	6.73	0.462	48.2	3.79	-24	
16:10	3.89	150	0	22.4	6.57	0.545	44.1	4.56	-31	
16:15	4.1	150	0	2.39	6.75	0.584	41.4	4.7	-24	
16:30	5.56	150	1.2	23.04	6.64	0.663	106	2.96	-19	
16:40	7	200	1.7	21.6	6.66	0.503	123	4.25	-13	

Sample Collection Information

Well unstable. Many attempts to clean Horiba, and bladder pump issue of inconsistent purge flow. Debris collected in groundwater





APPENDIX C
Investigative Derived Waste Documentation

D4 1803115585 SC PPW 10/10/2017

Form Approved. OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MDR000524413
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 009514263 FLE

GENERATOR

5. Generator's Name and Mailing Address: ~~Middle River Complex~~ ~~12420 Milestone Center Drive Suite 150~~ ~~Germantown, MD 20876~~ 195 Chesapeake Park Plaza Baltimore, MO 21224
Generator's Phone: ~~(301) 674-3199~~ ATTN: Chris Keller

Generator's Site Address (if different than mailing address): 2323 Eastern Blvd Middle River, MD 21220

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc.
U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: SJ Transportation Co
U.S. EPA ID Number: WID071629576

8. Designated Facility Name and Site Address: Clean Harbors El Dorado LLC, 309 American Circle, El Dorado, AR 71730
Facility's Phone: (870) 863-7173
U.S. EPA ID Number: ARD069748192

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., (TRICHLOROETHENE), 9, PG III	1	DM	550	P	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 1. CH1654407 ERG#171 1. 1x DM 55gal

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: Michael Mushenо
Signature: Michael Mushenо
Month/Day/Year: 06/26/18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Bernard Stewart
Signature:
Month/Day/Year: 06/26/18

Transporter 2 Printed/Typed Name: Gregg Beal
Signature:
Month/Day/Year: 07/16/18

DESIGNATED FACILITY

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. H040 2. 3. 4.

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: Michelle Blackwell
Signature: Michelle Blackwell
Month/Day/Year: 7/25/18

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

EPA Form 8700-22 (Rev. 1-06) Previous editions are obsolete.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: MDR000524413

22. Page 2 of 2

23. Manifest Tracking Number: 009514263 FLE

24. Generator's Name: Middle River Complex

25. Transporter 3 Company Name: Clean Harbors Environmental Services Inc.

U.S. EPA ID Number: MAD039322250

26. Transporter _____ Company Name

U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
	T P O							

32. Special Handling Instructions and Additional Information

GENERATOR

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name: Stephanie Matheny
Signature: Stephanie Matheny
Month: 07 Day: 18 Year: 18

34. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

CleanHarbors
ENVIRONMENTAL SERVICES®

Land Disposal Restriction Notification Form

Printed Date :Jun 22, 2018

MANIFEST INFORMATION

Generator : Middle River Complex
Address: 2323 Eastern Blvd
Middle River,MD 21220

EPA ID #: M D R 0 0 0 5 2 4 4 1 3

Manifest Tracking Info.
0009514263FLE

Sales Order No: 1803115585

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category
1.	1	CH1654407	WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
F001	NONE

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
METHYLENE CHLORIDE	N	Y	N
TRICHLOROETHYLENE	N	Y	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 : Michael Muskeno Print Name Michael Muskeno

Title : Senior Staff ESH Engineer Date : 6-26-18

Site Address: 2323 Eastern Blvd
Middle River, MD 21220

644162

SC PPW 10/10/2017
WORK ORDER NO. 04 1903115595

DOCUMENT NO. 0131030

STRAIGHT BILL OF LADING

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID # 641028

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 Robbie D Wood VEHICLE ID #

EPA ID # ALD 067138891 TRANS. 2 PHONE

DESIGNATED FACILITY Clean Harbors Environmental Services, Inc.	SHIPPER ATTN: Chris Keller Middle River Complex
FACILITY EPA ID # OHD000724153	SHIPPER EPA ID # MDR000524413
ADDRESS 2900 Rockefeller Avenue	ADDRESS 195 Chesapeake Park Plaza ~~12420 Milestone Center Drive Suite 150~~
CITY Cleveland STATE OH ZIP 44115	CITY Baltimore ~~Germantown~~ STATE MD ZIP ~~20876~~ 21220

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
8	DM		A. NON D.O.T. REGULATED, (PURGE WATER)	4,000	P
			B.		
			C.		
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800) 483-3718 GENERATOR: Middle River Complex
A.CH1647022

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	Michael Musheno	Michael Musheno	6-26-18
TRANSPORTER 1	Bernard Stewart	[signature]	6/26/18
TRANSPORTER 2	Kenneth Broxton	[signature]	7-16-18
RECEIVED BY	John Mertz	[signature]	07/27/18

1

CHI 107

STRAIGHT BILL OF LADING CONTINUATION FORM PAGE 2 OF 2

DOCUMENT #: BOL0131030

Shipper Middle River Complex

EPA ID# MDR000524413

Transporter# 3 : CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.

EPA ID# MAD039322250

asagent Melea Clark

NAME

SIGNATURE

DATE: 7/17/18

Transporter#_____: _____

EPA ID# _____

_____ _____

NAME SIGNATURE

DATE: _____

Transporter#_____: _____

EPA ID# _____

_____ _____

NAME SIGNATURE

DATE: _____

Transporter#_____: _____

EPA ID# _____

_____ _____

NAME SIGNATURE

DATE: _____

Waste Identifcation and Classification Form

Remediation Project	MRC Groundwater Sampling Event	**State Generated**	MD
Description of Waste			
Generic Name	Purge water	**Solid, Liquid, Gas**	Liquid
		Additional Info.	
Date of Waste Generation	4/13/2018-6/26/18	**Ongoing (Y/N)?**	N

Description of Process Generating Waste

1 drum of hazardous purge water generated as part of the MRC Groundwater Sampling Event from Block E wells.

Listed Waste ? (Y/N)	Y	**F,K, P or U Codes**	F001

Justification for Waste Classification (attached supporting documentation)

Waste characterization sample not collected and profiled as hazardous based on location of wells in Block E from known TCE-contaminated area. Drum removed from the site June 26, 2018.

Form completed by	Aimee Schuppin
Date	6/26/2018

Waste Identifcation and Classification Form

Remediation Project	MRC Groundwater Sampling Event	**State Generated**	MD
Description of Waste			
Generic Name	Purge water	**Solid, Liquid, Gas**	Liquid
		Additional Info.	
Date of Waste Generation	4/4/2018-6/26/18	**Ongoing (Y/N)?**	N

Description of Process Generating Waste

8 drums of nonhazardous purge water generated as part of the MRC Groundwater Sampling Event.

Listed Waste ? (Y/N)	N	**F,K, P or U Codes**	NA

Justification for Waste Classification (attached supporting documentation)

Waste characterization samples collected and drums profiled as nonhazardous based on sample analysis. Drums removed from the site June 26, 2018.

Form completed by	Aimee Schuppin
Date	6/26/2018

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1654407

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***MDR000524413*** GENERATOR NAME: ***Middle River Complex***

GENERATOR CODE (Assigned by Clean Harbors) ***MI48414*** CITY ***Middle River*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***21220***

ADDRESS ~~***2323 Eastern Blvd***~~ AS 195 Chesapeake Park Plaza PHONE: **(301) 674-3199**

CUSTOMER CODE (Assigned by Clean Harbors) ***AE12881*** CUSTOMER NAME: ***AECOM***

ADDRESS ***12420 Milestone Dr Ste 150*** CITY ***Germantown*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***20876***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Haz Purge Water***

PROCESS GENERATING WASTE: **Purge Water during well installation**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE

- SOLID WITHOUT FREE LIQUID POWDER
- MONOLITHIC SOLID
- [x] LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE
- % FREE LIQUID
- % SETTLED SOLID
- % TOTAL SUSPENDED SOLID
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS

[x] 1 2 3

% BY VOLUME (Approx.)

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)

- [x] 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

clear

ODOR

- [x] NONE
- MILD
- STRONG

Describe:

BOILING POINT °F (°C)

- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- [x] >= 130 (>54)

MELTING POINT °F (°C)

- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON

- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)

- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- [x] > 200 (>93)

pH

- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY

- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH

- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)

- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
1,1,2-TRICHLOROETHANE	0.0000000	--	1.0000000	PPB
1,1-DICHLOROETHENE	1.0000000	--	7.0000000	PPB
1,3-DICHLOROBENZENE		--		Trace
1,4-DICHLOROBENZENE	0.0000000	--	1.0000000	PPB
1,4-DIOXANE		--		Trace
ACETONE	3.0000000	--	5.0000000	PPB
CHLOROBENZENE	2.0000000	--	6.0000000	PPB
CHLOROFORM	0.0000000	--	23.0000000	PPB
CIS-1,2-DICHLOROETHENE	2.0000000	--	1830.0000000	PPB
DICHLORODIFLUOROMETHANE	1.0000000	--	1.0000000	PPB

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W113***

E. CONSTITUENTS

Are these values based on testing or knowledge? ☑ Knowledge ☐ Testing

If based on knowledge, please describe in detail, the rationale applied to identify and characterize the waste material. Please include reference to Material Safety Data Sheets (MSDS) when applicable. Include the chemical or trade-name represented by the MSDS, and or detailed process or operating procedures which generate the waste.

Prior knowledge

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

☑ YES ☐ NO USEPA HAZARDOUS WASTE?

F001

☐ YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

☐ YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

☑ YES ☐ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***This is subject to LDR.***
VARIANCE INFO:

☐ YES ☑ NO IS THIS A UNIVERSAL WASTE?

☐ YES ☐ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

☐ YES ☐ NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

☐ YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

☐ YES ☐ NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

☐ YES ☐ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

☐ YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

☐ YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

☐ YES ☑ NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHENE), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY ☑ QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

1-8 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***100***
CONTAINER TYPE:

PORTABLE TOTE TANK BOX|CARTON|CASE
CUBIC YARD BOX ☑ DRUM
OTHER:
DRUM SIZE: ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

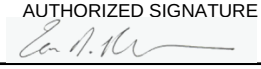
TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
	Thomas D. Blackman	Project Lead	June 12, 2018

Addendum

D. COMPOSITION

CHEMICAL	MIN	--	MAX	UOM
FREON 113	1.000000 00	--	132.00 00000	PPB
METHYL T-BUTYL ETHER	1.000000 00	--	7.0000 000	PPB
METHYLENE CHLORIDE	2.000000 00	--	5.0000 000	PPB
TRANS-1,2-DICHLOROETHENE	0.000000 00	--	11.000 0000	PPB
TRICHLOROETHENE	59.0000 000	--	34300. 000000 0	PPB
VINYL CHLORIDE	1.000000 00	--	1.0000 000	PPB
WATER	100.000 0000	--	100.00 00000	%

G. DOT/TDG INFORMATION

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1647022

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***MDR000524413*** GENERATOR NAME: ***Middle River Complex***

GENERATOR CODE (Assigned by Clean Harbors) ***MI48414*** CITY ***Middle River*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***21220***

ADDRESS ~~***2323 Eastern Blvd***~~ AS 195 Chesapeake Park Plaza PHONE: **(301) 674-3199**

CUSTOMER CODE (Assigned by Clean Harbors) ***AE12881*** CUSTOMER NAME: ***AECOM***

ADDRESS ***12420 Milestone Dr Ste 150*** CITY ***Germantown*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***20876***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Non-Haz Purge Water***

PROCESS GENERATING WASTE: **Purge Water during well installation**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE

- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- [x] LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE
- % FREE LIQUID
- % SETTLED SOLID
- % TOTAL SUSPENDED SOLID
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS

[x] 1 2 3

% BY VOLUME (Approx.)

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)

- [x] 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

clear

ODOR

- [x] NONE
- MILD
- STRONG

Describe:

BOILING POINT °F (°C)

- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- [x] >= 130 (>54)

MELTING POINT °F (°C)

- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON

- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)

- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- [x] > 200 (>93)

pH

- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY

- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH

- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)

- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
CHLOROFORM	0.0000000	--	48.0000000	PPB
TRICHLOROETHENE	0.0000000	--	268.0000000	PPB
WATER	100.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W113***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE	*4.4000*	*PPM*	

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES | EXPLOSIVE | FUMING | OSHA REGULATED CARCINOGENS
POLYMERIZABLE | RADIOACTIVE | REACTIVE MATERIAL | ☑ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Not subject to LDR***
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NON D.O.T. REGULATED

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY ☑ QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

1-8 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***100***

CONTAINER TYPE:

PORTABLE TOTE TANK BOX|CARTON|CASE

CUBIC YARD BOX ☑ DRUM

OTHER:

DRUM SIZE: ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
	Thomas D. Blackman	Project Lead	June 12, 2018

Lockheed Martin Hazardous Material/Waste Shipment Checklist 1 drum F001 GW

Date: 6-26-18
Project Site Name: LMC MRC
Shipping Document No.: 0095142 63 FLE

A. DESCRIPTION

A1. ✓ UN/NA Identification Number, Proper Shipping Name, Hazard Class/Division Number, Packing Group
A2. ✓ Subsidiary hazard class(es) or division number(s), if any, in parenthesis
A3. ✓ Total Quantity of Material
A4. ✓ 24-Hour Emergency Phone Number and Response Information ERG No.: Chris Yellers 301-528-3021
A5. ✓ Page of Pages, *for multiple shipping papers/EPA Manifest/Air Decs.*
A6. ✓ Shipper's Certification, *as applicable*
A7. N/A Small Quantity Exception/Dangerous Goods In Excepted Quantities/Diagnostic Specimen/Sample

B. ADDITIONAL DESCRIPTIONS - GENERAL

B1. N/A Exemptions "DOT-E-*ex.#*"
B2. N/A "Limited Quantity" (*not to exceed 66 lb gross weight*)
B3. N/A "X" or "RQ" (if RQ, Hazardous Substance Contact @ 1-800-424-8802)
B4. ✓ "Waste" for RCRA regulated material
B5. N/A "Mixture" or "Solution" - as appropriate.
B6. ✓ *(technical names), for poisons/mixtures/n.o.s./generic proper shipping names*
B7. N/A "Marine Pollutant" and constituent in ( ), *for bulk shipments only*
B8. ✓ *(hazardous substance names) per 172.101 appendix if not contained in proper shipping name*
B9. ✓ *(EPA waste identification numbers)- used to identify the hazardous substance*
B10. N/A "Poison" - *if not identified in proper shipping name or hazard class*
B11. N/A "Poison-Inhalation Hazard" & Zone A, Zone B, Zone C, or Zone D, as appropriate*
(**Note Special Provisions 1-6 and 13 in Column 7 of 172.101)*

C. MARKING FOR NON-BULK PACKAGINGS

C1. ✓ Proper Shipping Name, UN/NA Identification Number
C2. ✓ *(technical name)*
C3. ✓ *(EPA waste identification number)*
C4. N/A "RQ"
C5. N/A Exemption Packagings "DOT-E-*ex.#*"
C6. ✓ Consignee's Name & Address
C7. ✓ Net or Gross quantity for non-rad Dangerous Goods (adjacent to PSN & UN#)
C8. ✓ Ltd. Qty - PSN only *per 172.301(a)(1) or* UN ID# placed in square-on-point border *per 172.315*
C9. ✓ Package Orientation Arrows, *for liquids in inner packagings*
C10. ✓ "Inhalation Hazard", unless these words appear on the label prescribed in *172.416* or *172.429*
C11. N/A "Overpack" adjacent to proper shipping name marking [*see 173.25(a)(4)*]
C12. N/A TSCA PCB Marking (*for actual or source concentration greater than or equal to 50 ppm* *)
(* Note Potential Vehicle Marking Requirements in *40 CFR 761.40*)

D. MARKING FOR BULK PACKAGINGS (DUMP TRUCKS OR ROLL-OFFS)

D1. N/A UN/NA Identification Number on orange panel or placard or white square-on-point display configuration as prescribed by 172.302 and 172.332

E. LABELING

E1. ✓ Primary Hazard Label(s): NA 1710, Toxic Liquid (waste-TCE) 6.1 PG III (F001)
E2. N/A Subsidiary Hazard Label(s) with class/division: _____
E3. ✓ Hazardous Wastes Label(s) EPA ID # MDR000524413

F. PLACARDING

F1. 172.504 Table 1 Materials - Any Amount
F1.1. N/A Dangerous When Wet (4.3)
F1.2. N/A Poison (6.1, Inhalation Hazard, Zone A or B)* (Primary or Subsidiary _____
*(*Materials subject to the "Poison-Inhalation Hazard" notation must be placarded with a POISON INHALATION HAZARD or POISON GAS placard , as appropriate, and also placarded for any other hazard class required for that material in 172.504)*
F1.3. N/A Radioactive (7, LSA/SCO Exclusive Use Shipments)

F2. 172.504 Table 2 Materials - 1,001 lb:

Lockheed Martin Hazardous Material/Waste Shipment Checklist

G. PACKAGING

155 gal drum

G1. N/A Container Type: (Inner Pkg)
G2. ✓ Container Type: (Outer Pkg)
G3. ✓ Container Type: (Bulk Pkg)
G4. ✓ Loaded and Closed As Required

H. PAPERWORK AND MISCELLANEOUS ITEMS

H1. ✓ Shipping Paper/Hazardous Waste Manifest/Bill of Lading/Airway Bill/Shipper's Declaration
H2. N/A Instructions for Maintenance of Exclusive Use Shipments
H3. N/A Small Quantity/Excepted Quantity Statement on Package, *for 173.4 shipments* / **DGEQ** statement per *2.7.7.2* noted on Airway Bill
H4. ✓ Photograph, *if applicable*
H5. ✓ Vehicle Inspection
H6. ✓ Check Driver's Qualifications
H7. ✓ Emergency Telephone Number Notification, if required, see 172.604(b)
H8. ✓ LMC Notification Instructions

I. ADDITIONAL REQUREMENTS FOR RADIOACTIVE MATERIAL SHIPMENTS

I1. SHIPPING PAPER DESCRIPTIONS
- I1.1. N/A Radionuclide Symbol(s), *per 173.435*
- I1.2. ___ Physical & Chemical Form, *if not special form*
- I1.3. ___ Activity per Package
- I1.4 ___ Radioactive Labels
- I1.5. ___ Fissile Excepted, *if applicable*
- I1.6. ___ "Exclusive Use Shipment"

I2. MARKING FOR NON-BULK PACKAGINGS
- I2.1. ___ Gross Weight, *for radioactive material packages in excess of 110 lb*
- I2.2. ___ "Radioactive"; "Radioactive – LSA" ; "Radioactive – SCO"
- I2.3. ___ Package Certification Number, *for radioactive material packages, as appropriate*
- I2.4. ___ IP-1, IP-2, IP-3 markings
- I2.5. ___ "USA" on all IP and Type A packagings
- I2.6. ___ Packaging manufacturer marking on Type A

I3. LABELING
- I3.1. ___ Radioactive Labels
- I3.2. ___ "EMPTY" Label
- I3.3. ___ "Radioactive Material, Excepted Package" handling label

I4. PLACARDING (172.504 TABLE 1 MATERIALS - ANY AMOUNT)
- I4.1. ___ Radioactive (7, LSA/SCO Exclusive Use Shipments)

I5. PAPERWORK AND MISCELLANEOUS ITEMS
- H1. ___ Instructions for Maintenance of Exclusive Use Shipments
- H2. ___ Radioactive Excepted Package statement per *10.8.8.3.3* on Airway Bill
- H3. ___ Limited Quantity Radioactive Material *for multiple hazard limited quantity Class 7.*
- H4. ___ Health Physics Information
- H5. ✓ NRC Manifest #540 for radioactive waste shipment for land disposal.

Holly Braun	AECOM	6-26-18
Completed By:	**Company:**	**Date:**

Residual Waste Transportation and Disposal Contingency Plan
Lockheed Martin Middle River Complex
2323 Eastern Boulevard
Middle River, Maryland

Rejected Loads at Disposal Facility

If waste is rejected at the Lockheed Martin approved disposal facility, the following shall occur:

1. ***Immediately*** after being informed of a rejected load, the transporter (driver) ***must*** establish ***verbal contact*** with one of the below AECOM personnel ***prior*** to any further transport of the load.
   - Deputy Project Manager (DPM) Holly Brown at 301-674-3199
   - Residual Waste Coordinator (RWC) Aimee Schuppin at 434-444-0383

If Holly or Aimee are unavailable, contact:

- Project Manager (PM) Ravi Damera at 301-289-3809

After establishing verbal contact and further instruction from one of the above AECOM personnel, ***at minimum*** the following actions shall be implemented by the driver ***prior*** to leaving the disposal facility:

1. Document in Section 15 of the issued waste manifest the disposal facility's *reason* for load rejection (e.g. flash exceedance, documentation issues, facility-at-capacity, facility maintenance etc.)
2. Fill out any other required disposal facility paperwork and obtain copies
3. Ensure that existing container(s) labels and truck placards continue to be applicable to the load. Re-label and/or re-placard as appropriate.
4. Inspect load and truck (tie-downs, tires etc.)
5. After receiving transport approval from the RWC, DPM, or PM, transport the load back to the Site. Upon arrival, check-in with the AECOM DPM and submit paperwork. Place the load in an area designated by the AECOM DPM.

NOTE: After implementing the above and after *any* load is rejected by the disposal facility for *any* reason, *all* T&D operations will be immediately suspended. T&D operations will resume only *after* AECOM Residual Waste Coordinator or Project Manager approval.

Transporter Facility - Temporary Storage

If the load cannot be returned to the Site for any of the following reasons: exceedance of allowable driving hours, the Site operations closed for the day, or ***ANY*** other reason with respect to Health and Safety the following shall occur:

1. Establish ***verbal*** contact with the AECOM DPM, RWC, or PM for instruction ***prior*** to any further transport of the load
2. Only after verbal approval from AECOM DPM, RWC, or PM or, transport the load to the *Transporters Facility* for temporary storage.

Upon arrival to Transporter Facility:

1. Photograph container(s) and document load storage (e.g. on/off truck, indoors/outdoors, facility security etc.)

2. Submit all available documentation by email to AECOM DPM, RWC, or PM Transportation and Disposal – Unsafe Transportation Conditions

If unfavorable weather conditions or any other conditions exist that do not allow for the safe transport of the load during any and all phases of transportation and disposal, the following shall occur:

1. Go to a safe area (e.g. rest/truck stop) and contact AECOM DPM, RWC, or PM or for further instruction
2. If conditions improve for safe transport, contact AECOM DPM, RWC, or PM or and communicate intended designation.
3. If conditions worsen, ensure container is sealed, covered, appropriately labeled, and in good condition
   - Photograph container(s) and submit to AECOM DPM, RWC, or PM

Contact Information:

Subcontractor Supervisor
Name: Holly Brown Phone: 301-674-3199

Subcontractor Driver
Name: Bernard Skwat Phone: 4432101330

Subcontractor Driver
Name: _____ Phone: _____

AECOM Deputy Project Manager
Name: ___ Holly Brown ____ Phone: ____301-674-3199_____

AECOM Residual Management Coordinator
Name: ____Aimee Schuppin_____ Phone: ___434-444-0383_____

AECOM Project Manager
Name: ____ Ravi Damera _____ Phone: ___ 301-289-3809_____

Under no circumstances, is the transportation and disposal contractor at liberty to exercise in residual disposal decisions. Any unexpected roadblocks to the residual transportation and disposal plan must be communicated to AECOM regardless of the day or time. AECOM must receive acknowledgement of understanding the plan and the decision process from both the office personnel of the transportation and disposal contractor and the drivers who perform the transport.

Signatures:

Transporter Name: Bernard Skwat Signature: _____ Date: 6/26/18

Transporter Name: _____ Signature: _____ Date: _____

AECOM Name: Holly Brown Signature: _____ Date: 6-26-18

Date: 6-26-18

Waste Transportation and Disposal Checklist

Initials

HB Do you have a copy of the Manifest(s) or Bill of Lading(s) (BOL)?

- If NO call: Residual Waste Coordinator, Aimee Schuppin at 434-444-0383

HB Has the Manifest(s) or BOL(s) been checked by Residual Waste Coordinator or Project Manager

- If NO call: Aimee Schuppin at 434-444-0383

N/A Fill out Manifest(s) (Section 12-14) or BOL(s) (No. of Units & Container Type, Total Quantity, Weight)

HB Review Manifest(s) or BOL(s) with Transporter

- Receive verbal confirmation of disposal facility
- Ensure there are no discrepancies on Manifest(s) or BOL(s)

HB Check that the transportation container(s) are:

- Sealed
- In **CLEAN** & good condition (i.e. not damaged, leaking, or bent)
- Appropriately Labeled and Placarded

N/A Perform any additional requirements (i.e. misting of asbestos material)

N/A Print, Sign, and Date Manifest(s) (Section 16) or Print, Sign, and Date BOL(s) (Shipper)

- Signature is ***"Your Name, employed by AECOM Technical Services Inc. as an agent of Lockheed Martin"***
- Check that Transporter has printed, signed and dated the Manifests(s) or BOL(s)

HB Obtain carbon copy of Manifest(s) or BOL(s)

- Ensure transporter has original completed copy

N/A Obtain scale ticket(s) (if required)

HB Review Contingency Plan

- Reviewed By driver and has physical copy for transport
- Reviewed by AECOM Signee

Manifest # 009514263 **AECOM Signee:** _____

Bin/Truck ID: 641028 **Transporter Signee:** _____

Call Aimee Schuppin if there are any questions, problems, or issues at 434-444-0383

Call Holly Brown (DPM) or Ravi Damera (PM) if Aimee is unavailable

LMC MRC Drum Tracking Table
Aprl 2018 GWS Event

Drum ID	Contents	Label Type	Sampled	Accumulation Date	Weekly Inspection	Condition	Contents
DM-1	Purged GW	Non-Hazardous Waste	4/17/2018	4/4/2018	4/11/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW63A, 43A, 123A, 48A, 121A, 121B, 71B 14B, 70A, 70B, 44A, 62A, 62C, 125A, 125B, MRC-SWMW-4S, 4I
DM-2	Purged GW	Non-Hazardous Waste	4/17/2018	4/5/2018	4/12/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW70A, 70B, 63A, 76B, 76A, 60A, 60B, 110B, 11B, 53A, 53B, 44A, 62A, 62C, 125A, 125B
DM-3	Purged GW	Non-Hazardous Waste	4/17/2018	4/6/2018	4/13/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW90B, 120A, 120B, 119A, 119B, 126A, 126B, 113A, 103A, 103B, 106 B/C, 20A, 81A, 81B, 78B, 92C, 21A, 21B
DM-4	Purged GW	Non-Hazardous Waste	4/17/2018	4/6/2018	4/13/18, 4/18/18, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW81A, 81B, 106 B/C, 21A, 21B, 20A, 87A, 87B, 25A, 95A, 41A, 69A, 69B, 64A, 117B, 114A, 102A, 102B, 101A
DM-5	Purged GW	Non-Hazardous Waste	4/17/2018	4/10/2018	4/17/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW10A, 12C, 13A, 32A, 115A, 27A, 27B, 27C, 127A, 127B, 101B, 73B, 12A, 12B
DM-6	Purged GW	Non-Hazardous Waste	4/17/2018	4/10/2018	4/17/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW128A, 32A, 17A, 50A, 109A, 109B, 118A, 118B, 122A, 22B, 15A
DM-7	Purged GW	Non-Hazardous Waste	4/17/2018	4/11/2018	4/18/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW93A, 29A, 58A, 18A, 131B, 34A, 34B, 38A, 129A, 129B, 128B, 130A, 130B, MRC-SWMW-5I
DM-8	Purged GW	Non-Hazardous Waste	4/17/2018	4/12/2018	4/18/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-SWMW-1I, 2I, 3I, MRC-MW93A, 73B, 124A, 124B, 34A, 96A, 96B, 104A, 104B, 122A, 119A
DM-9	F001 Purged GW	Hazardous Waste	NA	4/13/2018	4/18/2018, 4/23/18, 4/30/18, 5/7/18, 5/14/18, 5/21/18, 5/28/18, 6/4/18, 6/11/18, 6/18/18	A	MRC-MW72B, 74A, 74C, 74B, 37A, MRC-SEMW-7I, 8I, 8S, 9S, 9I

NA = Not Applicable

APPENDIX D
Data Validation Report

AECOM

Data Validation and Usability Report

Lockheed Martin
Middle River Complex

April 2018 GW/SW Sampling
Project: 60555202

June 2018

IDENTIFICATION FORM

Data Validation and Data Usability Review



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Table of Contents

I. Executive Summary 4
II. PARCCS Data Quality 5
Precision 5
Accuracy 5
Representativeness 6
Comparability 6
Completeness 6
Sensitivity 6
Overall Impact on Data Usability 7
III. Data Validation Findings 8
IV. Qualified Field Sample Results 19
Appendix A : Data Validation Qualifiers and Reason Codes 27

I. Executive Summary

Data validation was performed on 100% of the groundwater and surface water field investigative samples collected from April 4th, 2018 through April 30th, 2018 at the Lockheed Martin Middle River Complex located in Middle River, Maryland. The validation was performed to a United States Environmental Protection Agency (USEPA) Region III Inorganic Level I and Organic Level I based on the specifics of the analytical methods referenced and qualified according to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic/Inorganic (January 2017) Superfund Data Review, with the exception of blank detections which were qualified according to the USEPA Region III modifications to the National Functional Guidelines defining the use of the "B" flag.

The review was assisted through the use of an electronic data management tool that compiles batch-level quality control (QC) data submitted with the laboratory deliverables and identifies anomalies for verification and qualification by the data reviewer. This information is provided in the form of a structured workbook that includes field sample analytical results, QC sample results, batch associations, and QC criteria. Prior to validation, the quality assurance procedures applied to this process include reviewing the output for data completeness based on laboratory deliverables and chain of custody reports, verification of QC criteria based on the aforementioned data validation guidelines and project-specific Quality Assurance Project Plan (QAPP), as well as strict control of data management permissions. The resulting data validation workbooks were evaluated and validated using the AECOM automated validation assistant (AVA) tool. The specific data elements that were reviewed include:

- Holding times and sample preservation
- Blanks (Method, Trip, Field, and Equipment)
- Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- Surrogate spike results
- Field duplicates
- Laboratory duplicates
- Sensitivity

Data validation qualifiers were applied to results where a QC nonconformance required qualification per USEPA guidance. All QC anomalies were assessed for their impact on data quality in regards to precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) as discussed in **II: PARCCS Data Quality**. A detailed list of the QC non-conformances can be found in **III: Data Validation Findings**. The associated field sample results that required qualification are listed in **IV: Qualified Field Sample Results**

II. PARCCS Data Quality

Precision

Precision is the degree of agreement among repeated measurements of the same characteristic on the same sample or on separate samples collected as close as possible in time and place. Field sampling precision is measured with the field duplicate relative percent differences; laboratory precision is measured with laboratory duplicate relative percent differences and/or laboratory control spike and matrix spike duplicate relative percent differences.

During the review, several matrix spike pairs displayed relative percent differences greater than the quality control limits. However, all associated field sample results were either non-detect or previously qualified due to matrix spike percent recovery anomalies; no data qualifying action was taken.

A limited number of field duplicate pairs displayed relative percent differences greater than the quality control limit of 35%. The positive associated field sample results and field duplicate results were qualified J,fd. These anomalies are considered minor and the qualified results should be considered usable as estimated values.

Accuracy

Accuracy is a measure of confidence in a measurement. The smaller the difference between the measurement of a parameter and its "true" or expected value, the more accurate the measurement. Accuracy in the field was monitored through the use of negative controls such as trip blanks, field blanks, and equipment blanks, along with adherence to the standard operating procedures and sampling plans. Analytical accuracy was assessed through the measurement of percent recoveries in the laboratory control spike pairs (LCS/LCSD) and the matrix spike pairs (MS/MSD).

Several method blanks, trip blanks, equipment blanks, and field blanks displayed detections greater than the method detection limit. Per the USEPA Region III guidelines on the qualification of blank detections, associated field sample results that displayed concentrations within five times of the blank detection were qualified “B”. The qualified field sample results should be considered usable as estimated values.

During the review, several MS/MSD displayed percent recoveries outside the quality control limits. The field sample results associated with positive biases were non-detect and did not require data qualifying action. The positive field sample results associated with negative biases were qualified J-,m. Non-detect results associated with percent recoveries less than the lower control limit, but greater than 20%, were qualified UJ,m. All qualified data should be considered usable as estimated values.

Several LCS/LCSD displayed percent recoveries outside the quality control limits. The field sample results associated with positive biases were non-detect and did not require data qualifying

action. The field sample results associated with negative biases were non-detect and were qualified UJ,l. These anomalies are considered minor since all percent recoveries less than the lower QC limits were greater than 10%. The qualified field sample results should be considered usable.

Representativeness

Representativeness qualitatively expresses the degree to which data accurately reflect site conditions. Factors that affect the representativeness of analytical data include appropriate sample population definitions, proper sample collection and preservation techniques, analytical holding times, use of standard analytical methods, and determination of matrix or analyte interferences.

A limited number of analyses and/or extractions were performed outside of the technical holding time but did not exceed twice the holding time (at which point non-detect sample results would have been rejected). These anomalies were considered minor, and the associated non-detect field sample results were qualified UJ,h while positive results were qualified J,h. These anomalies are considered minor and the qualified field sample results should be considered usable as estimated values.

Comparability

Comparability is the extent to which data from one study can be compared directly to either past data from the current project or data from another study. Using standardized sampling and analytical methods, units of reporting, and site selection procedures helps ensure comparability. Standard field sampling methods and current CLP analytical methods by an accredited laboratory were used in this investigation.

Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount of data expected under normal conditions. It is expected that laboratories will provide data meeting system quality control acceptance criteria for all samples tested. Project completeness is determined by evaluating the planned versus actual quantities of usable data. A total of 151 investigative field samples were validated, including 133 groundwater samples and 18 surface water samples. Additionally 14 field/equipment blanks and 2 investigation derived waste (IDW) samples were validated. Due to rejected data points associated with major anomalies, the overall data completeness was less than 100% at 99%.

Sensitivity

Sensitivity reflects the ability of the analytical method to detect analytes of interest below the level of concern. This goal is achieved by identifying the level of concern, choosing a method with appropriate method detection limits, and ensuring that the laboratory analyzes calibration

standards at or below the level of concern. The laboratory was able to achieve the lowest reporting limits based on the analytical methods employed and the variety of matrices encountered. Any analytes detected below the reporting limit and above the method detection limit were reported and qualified “J” as estimated values by the laboratory. The only field sample that displayed non-detect results at an elevated dilution factor (greater than 10 times) was MRC-MW27A, analyzed for Nitrite Nitrogen at a dilution factor of 25. This field sample result did not require qualification by the data reviewer and should be considered usable as reported.

Overall Impact on Data Usability

The bulk of the data was considered usable and met the completeness requirement outlined in the QAPP. During the course of the data validation, several minor anomalies were noted which is to be anticipated based on statistical predictability of standard analytical procedures. Several field sample results were qualified due to these minor anomalies. No major anomalies were identified over the course of data validation; therefore no field sample results were qualified as rejected. All data are considered usable, as qualified, for their intended purpose based on the data reviewed.

III. Data Validation Findings

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	**Detection > MDL**	2720310	Hexachloro-1,3-Butadiene	1.1 ug/l (1.0 ug/l)
		2721323	Chloroform	0.70 ug/l (0.21 ug/l)
		2721982	Chloroform	0.39 ug/l (0.21 ug/l)
		2722614	Hexachloro-1,3-Butadiene	1.1 ug/l (1.0 ug/l)
		2723836	Chloroform	0.66 ug/l (0.21 ug/l)
		2724316	Chloroform	0.31 ug/l (0.21 ug/l)
		2724316	Hexachloro-1,3-Butadiene	1.1 ug/l (1.0 ug/l)
		2724402	Chloroform	0.66 ug/l (0.21 ug/l)
		2724799	Chloroform	0.61 ug/l (0.21 ug/l)
		2725080	Chloroform	0.26 ug/l (0.21 ug/l)
		2725883	Hexachloro-1,3-Butadiene	1.3 ug/l (1.0 ug/l)
		2726611	Chloroform	0.24 ug/l (0.21 ug/l)
		2726758	Chloroform	0.35 ug/l (0.21 ug/l)
		2726758	TRICHLOROETHENE	0.59 ug/l (0.33 ug/l)
		2727495	Chloroform	0.34 ug/l (0.21 ug/l)
		2727844	Chloroform	0.28 ug/l (0.21 ug/l)
		2727879	Chloroform	0.44 ug/l (0.21 ug/l)
Trip Blanks	**Detection > MDL**	TB-041018-1	Acetone	4.6 ug/l (3.1 ug/l)
		TB-041018-2	Acetone	4.1 ug/l (3.1 ug/l)
		TB-041018-4	Acetone	5.7 ug/l (3.1 ug/l)
		TB-041018-4	Hexachloro-1,3-Butadiene	1.2 ug/l (1.0 ug/l)
		TB-041218-1	Bromoform	0.43 ug/l (0.40 ug/l)
		TB-041218-1	Acetone	9.2 ug/l (3.1 ug/l)
		TB-041718-1	Acetone	13.0 ug/l (3.1 ug/l)
		TB-041718-2	Acetone	15.5 ug/l (3.1 ug/l)
		TB-041718-2	TERT-BUTYL ALCOHOL	2.5 ug/l (2.2 ug/l)
		TB-041718-3	Acetone	11.5 ug/l (3.1 ug/l)
		TB-041718-3	Naphthalene	0.49 ug/l (0.34 ug/l)
		TB-041718-4	Acetone	13.6 ug/l (3.1 ug/l)
		TB-041718-4	TERT-BUTYL ALCOHOL	2.5 ug/l (2.2 ug/l)
		TB-041718-5	Acetone	8.3 ug/l (3.1 ug/l)
		TRIP BLANK	Dibromochloromethane	0.50 ug/l (0.45 ug/l)
		TRIP BLANK	Bromoform	0.97 ug/l (0.40 ug/l)

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
Trip Blanks	Detection > MDL	TRIP BLANK 1	Acetone	5.6 ug/l (3.1 ug/l)
		TRIP BLANK 2	Acetone	7.0 ug/l (3.1 ug/l)
		TRIP BLANK 4	Acetone	5.2 ug/l (3.1 ug/l)
		TRIP BLANK 5	Acetone	4.7 ug/l (3.1 ug/l)
		TB-041718-1	Acetone	13.0 ug/l (3.1 ug/l)
		TB-041718-2	Acetone	15.5 ug/l (3.1 ug/l)
		TB-041718-2	TERT-BUTYL ALCOHOL	2.5 ug/l (2.2 ug/l)
		TB-041718-3	Acetone	11.5 ug/l (3.1 ug/l)
		TB-041718-3	Naphthalene	0.49 ug/l (0.34 ug/l)
		TB-041718-4	Acetone	13.6 ug/l (3.1 ug/l)
		TB-041718-4	TERT-BUTYL ALCOHOL	2.5 ug/l (2.2 ug/l)
		TB-041718-5	Acetone	8.3 ug/l (3.1 ug/l)
		EB-040618-TK	TRICHLOROETHENE	0.90 ug/l (0.33 ug/l)
		EB-040618-ZN	Hexachloro-1,3-Butadiene	1.2 ug/l (1.0 ug/l)
		EB-041318-AD	Acetone	11.4 ug/l (3.1 ug/l)
LCS/LCSD	LCS % Recovery	2718917	1,2,3-Trichlorobenzene	60.4 % (61-126 %)
		2719844	Freon TF (Chlorinated fluorocarbon)	132 % (50-130 %)
		2719844	METHYLCYLOHEXANE	132 % (70-130 %)
		2720311	1,2,3-Trichlorobenzene	50.7 % (61-126 %)
		2720311	1,2,4-Trichlorobenzene	57.2 % (67-123 %)
		2720311	Freon TF (Chlorinated fluorocarbon)	131 % (50-130 %)
		2721324	METHYLCYLOHEXANE	140 % (70-130 %)
		2721780	METHYLCYLOHEXANE	133 % (70-130 %)
		2721962	1,1-Dichloroethylene	129 % (63-128 %)
		2721962	CYCLOHEXANE	135 % (66-130 %)
		2721962	Freon TF (Chlorinated fluorocarbon)	142 % (50-130 %)
		2721983	METHYLCYLOHEXANE	142 % (70-130 %)
		2722321	METHYLCYLOHEXANE	132 % (70-130 %)
		2723837	METHYLCYLOHEXANE	143 % (70-130 %)
		2723837	Naphthalene	55.2 % (56-134 %)
		2724317	1,2,3-Trichlorobenzene	143 % (61-126 %)
		2724317	Hexachloro-1,3-Butadiene	137 % (55-128 %)
		2724317	Methylene Chloride	122 % (76-121 %)
		2724317	Naphthalene	173 % (56-134 %)

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
		2724403	2-Hexanone	63.7 % (65-154 %)
		2724403	4-Methyl-2-Pentanone	69.8 % (71-146 %)
		2724403	METHYLCYLOHEXANE	150 % (70-130 %)
		2724403	Methylene Chloride	136 % (76-121 %)
		2724800	1,1-Dichloroethylene	135 % (63-128 %)
		2724800	Carbon Disulfide	148 % (57-131 %)
		2724800	CYCLOHEXANE	133 % (66-130 %)
		2724800	Freon TF (Chlorinated fluorocarbon)	147 % (50-130 %)
		2724800	METHYLCYLOHEXANE	148 % (70-130 %)
		2724800	Methylene Chloride	128 % (76-121 %)
		2725081	1,1-Dichloroethylene	134 % (63-128 %)
		2725081	Carbon Disulfide	133 % (57-131 %)
		2725081	CYCLOHEXANE	141 % (66-130 %)
		2725081	Freon TF (Chlorinated fluorocarbon)	165 % (50-130 %)
		2725884	Naphthalene	158 % (56-134 %)
		2726309	Naphthalene	140 % (56-134 %)
LCS/LCSD	**LCS % Recovery**	2726322	1,1-Dichloroethylene	129 % (63-128 %)
		2726322	CYCLOHEXANE	143 % (66-130 %)
		2726322	Freon TF (Chlorinated fluorocarbon)	157 % (50-130 %)
		2726759	Freon TF (Chlorinated fluorocarbon)	131 % (50-130 %)
		2726759	METHYLCYLOHEXANE	131 % (70-130 %)
		2726961	1,1-Dichloroethylene	130 % (63-128 %)
		2726961	CYCLOHEXANE	141 % (66-130 %)
		2726961	Freon TF (Chlorinated fluorocarbon)	161 % (50-130 %)
		2727496	1,1-Dichloroethylene	136 % (63-128 %)
		2727496	Carbon Disulfide	135 % (57-131 %)
		2727496	CYCLOHEXANE	143 % (66-130 %)
		2727496	Freon TF (Chlorinated fluorocarbon)	165 % (50-130 %)
		2727845	1,1-Dichloroethylene	141 % (63-128 %)
		2727845	2,2-Dichloropropane	130 % (64-129 %)
		2727845	Carbon Disulfide	141 % (57-131 %)
		2727845	CYCLOHEXANE	151 % (66-130 %)

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
LCS/LCSD	LCS % Recovery	2727845	Freon TF (Chlorinated fluorocarbon)	169 % (50-130 %)
		2727845	Trans-1,2-Dichloroethene	128 % (71-122 %)
		2728889	Carbon Disulfide	138 % (57-131 %)
		2728889	Freon TF (Chlorinated fluorocarbon)	134 % (50-130 %)
		2728889	Methylene Chloride	126 % (76-121 %)
		2730034	1,2,4-Trichlorobenzene	61.3 % (67-123 %)
		2730034	cis-1,3-Dichloropropene	75.3 % (81-121 %)
MS/MSD	MS % Recovery	2721513	2-Chloroethylvinylether	0 % (1-150 %)
		2721513	Bromomethane	42.6 % (45-148 %)
		2721513	METHYLCYLOHEXANE	138 % (70-130 %)
		2722135	1,1,1-Trichloroethane	141 % (66-130 %)
		2722135	1,1-Dichloroethane	132 % (78-124 %)
		2722135	1,1-Dichloroethylene	134 % (63-128 %)
		2722135	2-Chloroethylvinylether	0.46 % (1-150 %)
		2722135	2-Chlorotoluene	127 % (78-126 %)
		2722135	2-Hexanone	62.7 % (65-154 %)
		2722135	Benzene	129 % (80-124 %)
		2722135	Bromobenzene	124 % (81-119 %)
		2722135	Bromochloromethane	126 % (73-117 %)
		2722135	Carbon Tetrachloride	152 % (62-132 %)
		2722135	Chloroform	128 % (78-122 %)
		2722135	cis-1,3-Dichloropropene	71.2 % (81-121 %)
		2722135	CYCLOHEXANE	156 % (66-130 %)
		2722135	Dichloropropene, 1,3-	76.6 % (80-123 %)
		2722135	Freon TF (Chlorinated fluorocarbon)	145 % (50-130 %)
		2722135	Isopropylbenzene	130 % (73-129 %)
		2722135	Trans-1,2-Dichloroethene	124 % (71-122 %)
		2722664	1,1-Dichloroethane	126 % (78-124 %)
		2722664	1,1-Dichloroethylene	138 % (63-128 %)
		2722664	1,2-Dichloroethylene (total)	127 % (78-125 %)
		2722664	2-Chloroethylvinylether	0.31 % (1-150 %)
		2722664	Bromochloromethane	120 % (73-117 %)
		2722664	Carbon Disulfide	136 % (57-131 %)
		2722664	Carbon Tetrachloride	135 % (62-132 %)

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
		2722664	CYCLOHEXANE	136 % (66-130 %)
		2722664	Freon TF (Chlorinated fluorocarbon)	139 % (50-130 %)
		2722664	Trans-1,2-Dichloroethene	132 % (71-122 %)
		2724700	1,1-Dichloroethylene	131 % (63-128 %)
		2724700	2-Chloroethylvinylether	0.81 % (1-150 %)
		2724700	Carbon Disulfide	144 % (57-131 %)
		2724700	CYCLOHEXANE	133 % (66-130 %)
		2724700	Freon TF (Chlorinated fluorocarbon)	140 % (50-130 %)
		2724700	METHYLCYLOHEXANE	141 % (70-130 %)
		2724700	Methylene Chloride	134 % (76-121 %)
		2724700	Trans-1,2-Dichloroethene	126 % (71-122 %)
		2724873	1,1-Dichloroethane	125 % (78-124 %)
		2724873	1,1-Dichloroethylene	130 % (63-128 %)
		2724873	2-Chloroethylvinylether	0.5 % (1-150 %)
		2724873	Bromochloromethane	121 % (73-117 %)
		2724873	Carbon Disulfide	146 % (57-131 %)
MS/MSD	MS % Recovery	2724873	CYCLOHEXANE	144 % (66-130 %)
		2724873	Freon TF (Chlorinated fluorocarbon)	144 % (50-130 %)
		2724873	METHYLCYLOHEXANE	158 % (70-130 %)
		2724873	Methylene Chloride	128 % (76-121 %)
		2724873	Naphthalene	55.5 % (56-134 %)
		2726360	1,2-Dichlorobenzene	125 % (82-118 %)
		2726360	2-Chloroethylvinylether	0.36 % (1-150 %)
		2726360	cis-1,2-Dichloroethene	133 % (78-125 %)
		2726360	CYCLOHEXANE	136 % (66-130 %)
		2726360	Freon TF (Chlorinated fluorocarbon)	133 % (50-130 %)
		2726360	METHYLCYLOHEXANE	135 % (70-130 %)
		2726360	Naphthalene	206 % (56-134 %)
		2726445	Carbon Disulfide	141 % (57-131 %)
		2726445	CYCLOHEXANE	152 % (66-130 %)
		2726445	Freon TF (Chlorinated fluorocarbon)	175 % (50-130 %)
		2726445	METHYLCYLOHEXANE	152 % (70-130 %)
		2726445	Trans-1,2-Dichloroethene	129 % (71-122 %)

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
		2726827	2-Chloroethylvinylether	0.64 % (1-150 %)
		2726827	CYCLOHEXANE	133 % (66-130 %)
		2726827	Freon TF (Chlorinated fluorocarbon)	144 % (50-130 %)
		2726827	METHYLCYLOHEXANE	154 % (70-130 %)
		2726968	1,1-Dichloroethylene	135 % (63-128 %)
		2726968	1,3-Dichlorobenzene	119 % (81-118 %)
		2726968	2-Chlorotoluene	127 % (78-126 %)
		2726968	4-Chlorotoluene	126 % (78-125 %)
		2726968	Bromobenzene	121 % (81-119 %)
		2726968	CYCLOHEXANE	142 % (66-130 %)
		2726968	Freon TF (Chlorinated fluorocarbon)	146 % (50-130 %)
		2726968	Isopropylbenzene	132 % (73-129 %)
		2726968	METHYLCYLOHEXANE	140 % (70-130 %)
		2726968	Toluene	128 % (80-125 %)
		2726968	Trans-1,2-Dichloroethene	124 % (71-122 %)
		2726968	TRICHLOROETHENE	224 % (77-124 %)
MS/MSD	**MS % Recovery**	2727622	1,1-Dichloroethylene	133 % (63-128 %)
		2727622	2-Chloroethylvinylether	0.6 % (1-150 %)
		2727622	cis-1,3-Dichloropropene	80.6 % (81-121 %)
		2727622	CYCLOHEXANE	131 % (66-130 %)
		2727622	Freon TF (Chlorinated fluorocarbon)	136 % (50-130 %)
		2727622	Methyl acetate	61.4 % (70-130 %)
		2727622	METHYLCYLOHEXANE	146 % (70-130 %)
		2727622	o-Xylene	53.2 % (79-124 %)
		2727622	VINYL ACETATE	48.4 % (58-136 %)
		2727753	1,1-Dichloroethylene	139 % (63-128 %)
		2727753	2-Chloroethylvinylether	0.31 % (1-150 %)
		2727753	Carbon Disulfide	145 % (57-131 %)
		2727753	CYCLOHEXANE	148 % (66-130 %)
		2727753	Freon TF (Chlorinated fluorocarbon)	166 % (50-130 %)
		2727753	Trans-1,2-Dichloroethene	124 % (71-122 %)
		2728501	2-Chloroethylvinylether	0.56 % (1-150 %)
		2728501	CYCLOHEXANE	134 % (66-130 %)

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
MS/MSD	**MS % Recovery**	2728501	Freon TF (Chlorinated fluorocarbon)	135 % (50-130 %)
		2728501	TRICHLOROETHENE	71.5 % (77-124 %)
		2728934	1,1-Dichloroethylene	129 % (63-128 %)
		2728934	2-Chloroethylvinylether	0.61 % (1-150 %)
		2728934	CYCLOHEXANE	134 % (66-130 %)
		2728934	Freon TF (Chlorinated fluorocarbon)	134 % (50-130 %)
		2728934	METHYLCYLOHEXANE	131 % (70-130 %)
		2728934	Trans-1,2-Dichloroethene	123 % (71-122 %)
		2728943	2-Chloroethylvinylether	0.63 % (1-150 %)
Surrogate Spike	**% Recovery**	MRC-MW123A	Toluene-d8	72.9 % (76-127 %)
		MRC-MW114A	Toluene-d8	73 % (76-127 %)
		MRC-MW96A	4-Bromofluorobenzene	115 % (79-114 %)
		MRC-MW74B	4-Bromofluorobenzene	116 % (79-114 %)
		MRC-MW74B	Toluene-d8	74.9 % (76-127 %)
		MRC-SEMW-7I	4-Bromofluorobenzene	115 % (79-114 %)
		MRC-MW72B	4-Bromofluorobenzene	115 % (79-114 %)
		MRC-SEMW-8I	4-Bromofluorobenzene	115 % (79-114 %)
		MRC-SEMW-9S	4-Bromofluorobenzene	116 % (79-114 %)
Laboratory Duplicates	No Anomalies			
Field Duplicates	**RPD > 35%**	MRC-MW98B-DUP	cis-1,2-Dichloroethene	42% (35%)
		MRC-MW98B-DUP	1,2-Dichloroethylene (total)	42% (35%)

1,4-Dioxane SW846-8270D-SIM	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	**Detection > MDL**	2725743	1,4-Dioxane	0.021 ug/l (0.019 ug/l)
Field/Equipment Blanks	*No Anomalies*			
LCS/LCSD	*No Anomalies*			
MS/MSD	**MS % Recovery**	2721364	1,4-Dioxane	19% (22-75%)
Surrogate Spike	*No Anomalies*			
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	**RPD > 35%**	MRC-MW111B-DUP	1,4-Dioxane	80% (35%)

PCB Homologs

USEPA 680	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	**Collection to Extraction**	2308120 017	Method List	8 Days (7 Days)
		2308280 001	Method List	8 Days (7 Days)
		2308280 019	Method List	8 Days (7 Days)
		2308280 021	Method List	8 Days (7 Days)
Method Blanks	*No Anomalies*			
Field/Equipment Blanks	**Detection > MDL**	2308280 002	Dichlorobiphenyls, Total	0.0090 ug/l (0.0016 ug/l)
		2308280 002	Dichlorobiphenyls, Total	0.0090 ug/l (0.0016 ug/l)
		2308280 002	Monochlorobiphenyls, Total	0.0045 ug/l (0.00059 ug/l)
		2308280 002	Monochlorobiphenyls, Total	0.0045 ug/l (0.00059 ug/l)
		2308280 002	Trichlorobiphenyls, Total	0.0055 ug/l (0.0022 ug/l)
		2308280 002	Trichlorobiphenyls, Total	0.0055 ug/l (0.0022 ug/l)
LCS/LCSD	**LCS % Recovery**	312299-BS	Heptachlorobiphenyls, Total	42% (53-120%)
		312299-BS	Octachlorobiphenyls, Total	38% (57%-125)
MS/MSD	N/A			
Surrogate Spike	*No Anomalies*			
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	*No Anomalies*			

Metals

SW846-6010C, 6020A, 7470A	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	**Detection > MDL**	2720287	Antimony	0.0011 mg/l (0.00074 mg/l)
		2720287	BERYLLIUM	0.0011 mg/l (0.00037 mg/l)
		2720287	Chromium	0.0018 mg/l (0.00074 mg/l)
		2720287	LEAD	0.0013 mg/l (0.00074 mg/l)
		2720928	ZINC	0.0035 mg/l (0.0019 mg/l)
		2728307	Calcium	0.040 mg/l (0.036 mg/l)
Field/Equipment Blanks	**Detection > MDL**	EB-040618-TK	Chromium	0.0027 mg/l (0.00074 mg/l)
		EB-040618-TK	COPPER	0.0028 mg/l (0.0019 mg/l)
		EB-040618-TK	ZINC	0.014 mg/l (0.0019 mg/l)
		EB-040618-ZN	Calcium	0.26 mg/l (0.036 mg/l)
		EB-040618-ZN	Chromium	0.0012 mg/l (0.00074 mg/l)
		EB-040618-ZN	COPPER	0.0038 mg/l (0.0019 mg/l)
		EB-040618-ZN	Manganese	0.0021 mg/l (0.0020 mg/l)
		EB-040618-ZN	NICKEL	0.0029 mg/l (0.0019 mg/l)
		EB-040618-ZN	Sodium	0.25 mg/l (0.18 mg/l)
		EB-040618-ZN	ZINC	0.0037 mg/l (0.0019 mg/l)
		EB-041318-AD	Chromium	0.0015 mg/l (0.00074 mg/l)

Metals

SW846-6010C, 6020A, 7470A	Description	Sample ID	Analyte	Value (Control Limit)
Field/Equipment Blanks	**Detection > MDL**	EB-041318-AD	ZINC	0.0033 mg/l (0.0019 mg/l)
LCS/LCSD	*No Anomalies*			
MS/MSD	*No Anomalies*			
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	*No Anomalies*			

Hexavalent Chromium

USEPA Method 218.6	Description	Sample ID	Analyte	Result (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	*No Anomalies*			
Equipment/Field Blanks	**Detections > MDL**	EB-040618-AZ	Hexavalent Chromium	0.087 ug/l (0.047 ug/l)
LCS/LCSD	*No Anomalies*			
MS/MSD	*No Anomalies*			
Surrogate Spike	*No Anomalies*			

General Chemistry - MNA

Various Analytical Methods	Description	Sample ID	Analyte	Result (Control Limit)
Holding Times	**Collection to Analysis**	MRC-MW60B	Orthophosphate	5 days (2 days)
		MRC-MW21B	Orthophosphate	4 days (2 days)
		EB-040618-ZN	Orthophosphate	5 days (2 days)
Method Blanks	**Detection > MDL**	2719558	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2719566	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2719570	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2719574	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2719578	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2719582	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2719586	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2719590	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2719594	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2719794	ALKALINITY, TOTAL (AS CACO3)	1 mg/l (0.8 mg/l)
		2720414	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2720422	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2720426	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2720430	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2720434	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)

General Chemistry - MNA

Various Analytical Methods	Description	Sample ID	Analyte	Result (Control Limit)
		2720438	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2720442	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2720446	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2720454	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2720877	ALKALINITY, TOTAL (AS CACO3)	1 mg/l (0.8 mg/l)
		2721359	NITROGEN, AMMONIA (AS N)	0.014 mg/l (0.003 mg/l)
		2721997	ALKALINITY, TOTAL (AS CACO3)	5 mg/l (0.8 mg/l)
		2722005	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2722009	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2722013	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2722017	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2722021	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2722025	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2722029	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2722372	ALKALINITY, TOTAL (AS CACO3)	1 mg/l (0.8 mg/l)
		2722828	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2722837	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2722841	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
Method Blanks	**Detection > MDL**	2722845	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2722849	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2722853	ALKALINITY, TOTAL (AS CACO3)	2 mg/l (0.8 mg/l)
		2722885	ALKALINITY, TOTAL (AS CACO3)	1 mg/l (0.8 mg/l)
		2723200	NITROGEN, AMMONIA (AS N)	0.006 mg/l (0.003 mg/l)
		2723202	NITROGEN, AMMONIA (AS N)	0.004 mg/l (0.003 mg/l)
		2724157	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2724165	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2724169	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2724173	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2724177	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2724181	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2724185	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2724189	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2724193	ALKALINITY, TOTAL (AS CACO3)	4 mg/l (0.8 mg/l)
		2724197	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2724201	ALKALINITY, TOTAL (AS CACO3)	3 mg/l (0.8 mg/l)
		2724205	ALKALINITY, TOTAL (AS CACO3)	1 mg/l (0.8 mg/l)

General Chemistry - MNA

Various Analytical Methods	Description	Sample ID	Analyte	Result (Control Limit)
Method Blanks	**Detection > MDL**	2728584	NITROGEN, AMMONIA (AS N)	0.006 mg/l (0.003 mg/l)
		2728586	NITROGEN, AMMONIA (AS N)	0.004 mg/l (0.003 mg/l)
Equipment/Field Blanks	**Detections > MDL**	EB-040618-ZN	NITROGEN, AMMONIA (AS N)	0.477 mg/l (0.03 mg/l)
		EB-040618-ZN	Phosphorus	0.040 mg/l (0.017 mg/l)
		EB-040618-ZN	TDS	20 mg/l (5 mg/l)
		EB-040618-ZN	Total Organic Carbon	0.19 mg/l (0.18 mg/l)
LCS/LCSD	*No Anomalies*			
MS/MSD	**MS % Recovery**	2722241	Orthophosphate	89.8% (90-110%)
Laboratory Duplicates	**RPD > Control Limit**	MRC-MW34B	Methane	26.5% (20%)
		MRC-MW21B	TDS	8.5% (5%)
Field Duplicates	*No Anomalies*			

IV. Qualified Field Sample Results

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
EB-040618-ZN	A4500E	Orthophosphate	0.020	mg/l	**UJ**	**h**
FB-041018-ZN	A2320	ALKALINITY, TOTAL (AS CACO3)	2	mg/l	**B**	**bl**
FB-041018-ZN	E300.0	Chloride	0.18	mg/l	**B**	**bl**
MRC-MW111B	SW8270D-SIM	1,4-Dioxane	88.5	ug/l	**J**	**fd**
MRC-MW111B-DUP	SW8270D-SIM	1,4-Dioxane	37.9	ug/l	**J**	**fd**
MRC-MW124B-D	SW6020	Chromium	0.00084	mg/l	**B**	**be**
MRC-MW126A	SW6020	ZINC	0.015	mg/l	**B**	**bl**
MRC-MW127A	SW6020	Chromium	0.00082	mg/l	**B**	**be**
MRC-MW127A	SW6020	COPPER	0.0025	mg/l	**B**	**be**
MRC-MW127A	SW6020	ZINC	0.026	mg/l	**B**	**be**
MRC-MW127B	SW6020	Chromium	0.00086	mg/l	**B**	**be**
MRC-MW128A	SW6020	Chromium	0.0010	mg/l	**B**	**be**
MRC-MW128A	SW6020	COPPER	0.0038	mg/l	**B**	**be**
MRC-MW128B	SW6020	Chromium	0.0073	mg/l	**B**	**be**
MRC-MW128B	SW6020	ZINC	0.011	mg/l	**B**	**be**
MRC-MW12A	D6919-09	NITROGEN, AMMONIA (AS N)	0.230	mg/l	**B**	**be**
MRC-MW12A	E365.1	Phosphorus	0.056	mg/l	**B**	**be**
MRC-MW12A	SW6020	Chromium	0.0030	mg/l	**B**	**be**
MRC-MW12A	SW6020	COPPER	0.0031	mg/l	**B**	**be**
MRC-MW12A	SW6020	NICKEL	0.0038	mg/l	**B**	**be**
MRC-MW12A	SW6020	ZINC	0.0078	mg/l	**B**	**be**
MRC-MW12B	D6919-09	NITROGEN, AMMONIA (AS N)	0.237	mg/l	**B**	**be**
MRC-MW12B	E365.1	Phosphorus	0.032	mg/l	**B**	**be**
MRC-MW12B	SW6020	Chromium	0.0019	mg/l	**B**	**be**
MRC-MW12B	SW6020	ZINC	0.030	mg/l	**B**	**be**
MRC-MW12C	SW6020	COPPER	0.015	mg/l	**B**	**be**
MRC-MW21B	A4500E	Orthophosphate	0.020	mg/l	**UJ**	**h**
MRC-MW21B	SM2540C	TDS	296	mg/l	**J**	**ld**
MRC-MW25A	A4500E	Orthophosphate	0.020	mg/l	**UJ**	**m**
MRC-MW25A	D6919-09	NITROGEN, AMMONIA (AS N)	0.219	mg/l	**B**	**be**
MRC-MW25A	E365.1	Phosphorus	0.026	mg/l	**B**	**be**
MRC-MW27B	A2320	ALKALINITY, TOTAL (AS CACO3)	11	mg/l	**B**	**bl**
MRC-MW34B	A2320	ALKALINITY, TOTAL (AS CACO3)	5	mg/l	**B**	**bl**
MRC-MW34B	RSK175	Methane	37.0	ug/l	**J**	**ld**

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
MRC-MW37A	D6919-09	NITROGEN, AMMONIA (AS N)	0.289	mg/l	**B**	**bl**
MRC-MW37A	SW6020	Chromium	0.0068	mg/l	**B**	**be**
MRC-MW37B	A2320	ALKALINITY, TOTAL (AS CACO3)	14	mg/l	**B**	**bl**
MRC-MW48A	D6919-09	NITROGEN, AMMONIA (AS N)	0.029	mg/l	**B**	**bl**
MRC-MW48A	SW8270D-SIM	1,4-Dioxane	0.49	ug/l	**J-**	**m**
MRC-MW60B	A4500E	Orthophosphate	0.0030	mg/l	**J**	**h**
MRC-MW60B	D6919-09	NITROGEN, AMMONIA (AS N)	0.158	mg/l	**B**	**bl**
MRC-MW72B	A2320	ALKALINITY, TOTAL (AS CACO3)	8	mg/l	**B**	**bl**
MRC-MW72B	SW6020	Chromium	0.0020	mg/l	**B**	**be**
MRC-MW73A	SW6020	Chromium	0.0012	mg/l	**B**	**be**
MRC-MW73A	SW6020	ZINC	0.015	mg/l	**B**	**be**
MRC-MW73B	SW6020	Chromium	0.00091	mg/l	**B**	**be**
MRC-MW74A	SW6020	Chromium	0.0012	mg/l	**B**	**be**
MRC-MW74A	SW6020	ZINC	0.012	mg/l	**B**	**be**
MRC-MW74B	SW6020	Chromium	0.0013	mg/l	**B**	**be**
MRC-MW81A	SW6020	ZINC	0.016	mg/l	**B**	**bl**
MRC-MW98B	SW8260B	1,2-Dichloroethylene (total)	23.7	ug/l	**J**	**fd**
MRC-MW98B	SW8260B	cis-1,2-Dichloroethene	23.7	ug/l	**J**	**fd**
MRC-MW98B-DUP	SW8260B	1,2-Dichloroethylene (total)	36.3	ug/l	**J**	**fd**
MRC-MW98B-DUP	SW8260B	cis-1,2-Dichloroethene	36.3	ug/l	**J**	**fd**
2308120 017	E680	Decachlorobiphenyl	0.012	ug/l	**UJ**	**h**
2308120 017	E680	Dichlorobiphenyls, Total	0.0070	ug/l	**B**	**be**
2308120 017	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**h**
2308120 017	E680	Hexachlorobiphenyls, Total	0.0047	ug/l	**UJ**	**h**
2308120 017	E680	Monochlorobiphenyls, Total	0.019	ug/l	**B**	**be**
2308120 017	E680	Nonachlorobiphenyls, Total	0.0088	ug/l	**UJ**	**h**
2308120 017	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**h**
2308120 017	E680	Pentachlorobiphenyls, Total	0.0043	ug/l	**UJ**	**h**
2308120 017	E680	Tetrachlorobiphenyls, Total	0.0023	ug/l	**UJ**	**h**
2308120 017	E680	Total Polychlorinated biphenyls (PCBs)	0.026	ug/l	**J**	**h**
2308120 017	E680	Trichlorobiphenyls, Total	0.0022	ug/l	**UJ**	**h**
2308120 023	E680	Dichlorobiphenyls, Total	0.0050	ug/l	**B**	**be**
2308120 023	E680	Monochlorobiphenyls, Total	0.0035	ug/l	**B**	**be**
2308120 026	E680	Dichlorobiphenyls, Total	0.016	ug/l	**B**	**be**
2308120 026	E680	Monochlorobiphenyls, Total	0.017	ug/l	**B**	**be**
2308120 031	E680	Dichlorobiphenyls, Total	0.031	ug/l	**B**	**be**
2308120 031	E680	Trichlorobiphenyls, Total	0.019	ug/l	**B**	**be**
2308280 001	E680	Decachlorobiphenyl	0.012	ug/l	**UJ**	**h**

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
2308280 001	E680	Dichlorobiphenyls, Total	0.010	ug/l	**J**	**h**
2308280 001	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**h**
2308280 001	E680	Hexachlorobiphenyls, Total	0.0047	ug/l	**UJ**	**h**
2308280 001	E680	Monochlorobiphenyls, Total	0.0085	ug/l	**J**	**h**
2308280 001	E680	Nonachlorobiphenyls, Total	0.0088	ug/l	**UJ**	**h**
2308280 001	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**h**
2308280 001	E680	Pentachlorobiphenyls, Total	0.0043	ug/l	**UJ**	**h**
2308280 001	E680	Tetrachlorobiphenyls, Total	0.0023	ug/l	**UJ**	**h**
2308280 001	E680	Total Polychlorinated biphenyls (PCBs)	0.025	ug/l	**UJ**	**h**
2308280 001	E680	Trichlorobiphenyls, Total	0.0022	ug/l	**UJ**	**h**
2308280 019	E680	Decachlorobiphenyl	0.012	ug/l	**UJ**	**h**
2308280 019	E680	Dichlorobiphenyls, Total	0.0065	ug/l	**J**	**h**
2308280 019	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**h**
2308280 019	E680	Hexachlorobiphenyls, Total	0.0047	ug/l	**UJ**	**h**
2308280 019	E680	Monochlorobiphenyls, Total	0.0050	ug/l	**J**	**h**
2308280 019	E680	Nonachlorobiphenyls, Total	0.0088	ug/l	**UJ**	**h**
2308280 019	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**h**
2308280 019	E680	Pentachlorobiphenyls, Total	0.0043	ug/l	**UJ**	**h**
2308280 019	E680	Tetrachlorobiphenyls, Total	0.0023	ug/l	**UJ**	**h**
2308280 019	E680	Total Polychlorinated biphenyls (PCBs)	0.025	ug/l	**UJ**	**h**
2308280 019	E680	Trichlorobiphenyls, Total	0.0022	ug/l	**UJ**	**h**
2308280 021	E680	Decachlorobiphenyl	0.012	ug/l	**UJ**	**h**
2308280 021	E680	Dichlorobiphenyls, Total	0.0016	ug/l	**UJ**	**h**
2308280 021	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**h**
2308280 021	E680	Hexachlorobiphenyls, Total	0.0047	ug/l	**UJ**	**h**
2308280 021	E680	Monochlorobiphenyls, Total	0.0020	ug/l	**J**	**h**
2308280 021	E680	Nonachlorobiphenyls, Total	0.0088	ug/l	**UJ**	**h**
2308280 021	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**h**
2308280 021	E680	Pentachlorobiphenyls, Total	0.0043	ug/l	**UJ**	**h**
2308280 021	E680	Tetrachlorobiphenyls, Total	0.0023	ug/l	**UJ**	**h**
2308280 021	E680	Total Polychlorinated biphenyls (PCBs)	0.025	ug/l	**UJ**	**h**
2308280 021	E680	Trichlorobiphenyls, Total	0.0022	ug/l	**UJ**	**h**
2308629 001	E680	Dichlorobiphenyls, Total	0.0080	ug/l	**B**	**be**
2308629 001	E680	Monochlorobiphenyls, Total	0.011	ug/l	**B**	**be**
2308629 002	E680	Dichlorobiphenyls, Total	0.0040	ug/l	**B**	**be**
2308629 002	E680	Monochlorobiphenyls, Total	0.010	ug/l	**B**	**be**
2308629 004	E680	Monochlorobiphenyls, Total	0.011	ug/l	**B**	**be**
2308943 001	E680	Dichlorobiphenyls, Total	0.0050	ug/l	**B**	**be**
2308943 001	E680	Monochlorobiphenyls, Total	0.0040	ug/l	**B**	**be**

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
2308943 004	E680	Dichlorobiphenyls, Total	0.026	ug/l	**B**	**be**
2308943 016	E680	Dichlorobiphenyls, Total	0.0020	ug/l	**B**	**be**
2308943 028	E680	Trichlorobiphenyls, Total	0.0065	ug/l	**B**	**be**
2308943 029	E680	Dichlorobiphenyls, Total	0.0038	ug/l	**B**	**be**
2308943 029	E680	Trichlorobiphenyls, Total	0.013	ug/l	**B**	**be**
2308943 030	E680	Dichlorobiphenyls, Total	0.0020	ug/l	**B**	**be**
2308943 031	E680	Dichlorobiphenyls, Total	0.0024	ug/l	**B**	**be**
2308943 032	E680	Dichlorobiphenyls, Total	0.0020	ug/l	**B**	**be**
2308943 034	E680	Dichlorobiphenyls, Total	0.0019	ug/l	**B**	**be**
2308943 035	E680	Dichlorobiphenyls, Total	0.0045	ug/l	**B**	**be**
2309395 004	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 004	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 006	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 006	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 007	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 007	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 008	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 008	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 009	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 009	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 011	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 011	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 012	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 012	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 013	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 013	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 014	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 014	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 016	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 016	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 017	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 017	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 018	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 018	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 020	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 020	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 021	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 021	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
2309395 023	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	**UJ**	**I**
2309395 023	E680	Octachlorobiphenyls, Total	0.0099	ug/l	**UJ**	**I**
MRC-SW17A	SW8260B	Acetone	11.2	ug/l	B	bf

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
MRC-SW2A	SW8260B	Acetone	13.6	ug/l	B	bf
MRC-SW1A	SW8260B	Acetone	13.2	ug/l	B	bf
MRC-SW9A	SW8260B	Acetone	12.8	ug/l	B	bf
MRC-SW5B	SW8260B	Acetone	8.3	ug/l	B	bf
MRC-SW7A	SW8260B	Acetone	4.5	ug/l	B	bf
MRC-SW7B	SW8260B	Acetone	13.4	ug/l	B	bf
MRC-SW5A1	SW8260B	Acetone	5.0	ug/l	B	bf
MRC-SW9B	SW8260B	Acetone	5.5	ug/l	B	bf
MRC-SW15A	SW8260B	Acetone	5.5	ug/l	B	bf
MRC-SW16A	SW8260B	Acetone	9.0	ug/l	B	bf
MRC-SW13A	SW8260B	Acetone	8.1	ug/l	B	bf
MRC-SW6B	SW8260B	Acetone	7.8	ug/l	B	bf
MRC-SW8B	SW8260B	Acetone	12.6	ug/l	B	bf
MRC-SW8A-D	SW8260B	Acetone	8.3	ug/l	B	bf
MRC-SW6A	SW8260B	Acetone	11.4	ug/l	B	bf
MRC-SW8A	SW8260B	Acetone	8.0	ug/l	B	bf
2309395 004	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 004	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 006	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 006	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 007	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 007	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 008	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 008	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 009	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 009	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 011	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 011	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 012	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 012	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 013	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 013	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 014	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 014	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 016	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 016	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 017	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 017	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 018	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 018	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 020	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
2309395 020	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 021	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 021	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2309395 023	E680	Heptachlorobiphenyls, Total	0.0090	ug/l	UJ	l
2309395 023	E680	Octachlorobiphenyls, Total	0.0099	ug/l	UJ	l
2308120 017	E680	Decachlorobiphenyl		ug/l	UJ	h
2308120 017	E680	Dichlorobiphenyls, Total	0.0070	ug/l	B	be
2308120 017	E680	Heptachlorobiphenyls, Total		ug/l	UJ	h
2308120 017	E680	Hexachlorobiphenyls, Total		ug/l	UJ	h
2308120 017	E680	Monochlorobiphenyls, Total	0.019	ug/l	B	be
2308120 017	E680	Nonachlorobiphenyls, Total		ug/l	UJ	h
2308120 017	E680	Octachlorobiphenyls, Total		ug/l	UJ	h
2308120 017	E680	Pentachlorobiphenyls, Total		ug/l	UJ	h
2308120 017	E680	Tetrachlorobiphenyls, Total		ug/l	UJ	h
2308120 017	E680	Total Polychlorinated biphenyls (PCBs)	0.026	ug/l	J	h
2308120 017	E680	Trichlorobiphenyls, Total		ug/l	UJ	h
2308120 023	E680	Dichlorobiphenyls, Total	0.0050	ug/l	B	be
2308120 023	E680	Monochlorobiphenyls, Total	0.0035	ug/l	B	be
2308120 026	E680	Dichlorobiphenyls, Total	0.016	ug/l	B	be
2308120 026	E680	Monochlorobiphenyls, Total	0.017	ug/l	B	be
2308120 031	E680	Dichlorobiphenyls, Total	0.031	ug/l	B	be
2308120 031	E680	Trichlorobiphenyls, Total	0.019	ug/l	B	be
2308280 001	E680	Decachlorobiphenyl		ug/l	UJ	h
2308280 001	E680	Dichlorobiphenyls, Total	0.010	ug/l	J	h
2308280 001	E680	Heptachlorobiphenyls, Total		ug/l	UJ	h
2308280 001	E680	Hexachlorobiphenyls, Total		ug/l	UJ	h
2308280 001	E680	Monochlorobiphenyls, Total	0.0085	ug/l	J	h
2308280 001	E680	Nonachlorobiphenyls, Total		ug/l	UJ	h
2308280 001	E680	Octachlorobiphenyls, Total		ug/l	UJ	h
2308280 001	E680	Pentachlorobiphenyls, Total		ug/l	UJ	h
2308280 001	E680	Tetrachlorobiphenyls, Total		ug/l	UJ	h
2308280 001	E680	Total Polychlorinated biphenyls (PCBs)		ug/l	UJ	h
2308280 001	E680	Trichlorobiphenyls, Total		ug/l	UJ	h
2308280 019	E680	Decachlorobiphenyl		ug/l	UJ	h
2308280 019	E680	Dichlorobiphenyls, Total	0.0065	ug/l	J	h
2308280 019	E680	Heptachlorobiphenyls, Total		ug/l	UJ	h
2308280 019	E680	Hexachlorobiphenyls, Total		ug/l	UJ	h
2308280 019	E680	Monochlorobiphenyls, Total	0.0050	ug/l	J	h
2308280 019	E680	Nonachlorobiphenyls, Total		ug/l	UJ	h
2308280 019	E680	Octachlorobiphenyls, Total		ug/l	UJ	h

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
2308280 019	E680	Pentachlorobiphenyls, Total		ug/l	UJ	h
2308280 019	E680	Tetrachlorobiphenyls, Total		ug/l	UJ	h
2308280 019	E680	Total Polychlorinated biphenyls (PCBs)		ug/l	UJ	h
2308280 019	E680	Trichlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Decachlorobiphenyl		ug/l	UJ	h
2308280 021	E680	Dichlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Heptachlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Hexachlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Monochlorobiphenyls, Total	0.0020	ug/l	J	h
2308280 021	E680	Nonachlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Octachlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Pentachlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Tetrachlorobiphenyls, Total		ug/l	UJ	h
2308280 021	E680	Total Polychlorinated biphenyls (PCBs)		ug/l	UJ	h
2308280 021	E680	Trichlorobiphenyls, Total		ug/l	UJ	h
MRC-MW121A	SW8260B	1,2,3-Trichlorobenzene		ug/l	UJ	l
MRC-MW121B	SW8260B	1,2,3-Trichlorobenzene		ug/l	UJ	l
MRC-MW123A	SW6020	BERYLLIUM	0.0013	mg/l	B	bl
MRC-MW123A	SW6020	Chromium	0.0014	mg/l	B	bl
MRC-MW123A	SW8260B	1,2,3-Trichlorobenzene	98.7	ug/l	J	l
MRC-MW14B	SW8260B	1,2,3-Trichlorobenzene		ug/l	UJ	l
MRC-MW14B	SW8260B	1,2,4-Trichlorobenzene		ug/l	UJ	l
MRC-MW14B	SW8260B	Acetone	7.2	ug/l	B	bf
MRC-MW48A	SW8260B	1,2,3-Trichlorobenzene		ug/l	UJ	l
MRC-MW48A	SW8270D-SIM	1,4-Dioxane	0.49	ug/l	J-	m
MRC-MW71B	SW8260B	1,2,3-Trichlorobenzene		ug/l	UJ	l
MRC-SW13A	SW8260B	Acetone	8.1	ug/l	B	bf
MRC-SW15A	SW8260B	Acetone	5.5	ug/l	B	bf
MRC-SW16A	SW8260B	Acetone	9.0	ug/l	B	bf
MRC-SW17A	SW8260B	Acetone	11.2	ug/l	B	bf
MRC-SW1A	SW8260B	Acetone	13.2	ug/l	B	bf
MRC-SW2A	SW8260B	Acetone	13.6	ug/l	B	bf
MRC-SW5A1	SW8260B	Acetone	5.0	ug/l	B	bf
MRC-SW5B	SW8260B	Acetone	8.3	ug/l	B	bf
MRC-SW6A	SW8260B	Acetone	11.4	ug/l	B	bf
MRC-SW6B	SW8260B	Acetone	7.8	ug/l	B	bf
MRC-SW7A	SW8260B	Acetone	4.5	ug/l	B	bf
MRC-SW7B	SW8260B	Acetone	13.4	ug/l	B	bf
MRC-SW8A	SW8260B	Acetone	8.0	ug/l	B	bf
MRC-SW8A-D	SW8260B	Acetone	8.3	ug/l	B	bf

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
MRC-SW8B	SW8260B	Acetone	12.6	ug/l	B	bf
MRC-SW9A	SW8260B	Acetone	12.8	ug/l	B	bf
MRC-SW9B	SW8260B	Acetone	5.5	ug/l	B	bf

Appendix A
Data Validation Qualifiers and Reason Codes

Data Qualifying Codes

Two types of data qualifying codes or flags are applied in the course of the data review. The data validation flags indicate data that are not usable for decision-making, more than normally biased and/or variable, or not representative of field conditions. These codes and their definitions are presented below in the hierarchy stipulated in the USEPA Contract Laboratory Program National Functional Guidelines for Organic (August 2014) Data Review and the USEPA Region III Guidelines for Organic (September 1994) for blank qualifications only.

Data Validation Flags

Flag	Interpretation
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
B	The analyte was analyzed for, but not detected at a level greater than or equal to the level of the adjusted Detection Limit (DL) for sample and method.
J+	Reported value may not be accurate or precise, but the result may be biased high.
J-	Reported value may not be accurate or precise, but the result may be biased low.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.
UJ	The analyte was not detected at a level greater than or equal to the adjusted DL. However, the reported adjusted DL is approximate and may be inaccurate or imprecise.
C	This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by gas Chromatograph/Mass Spectrometer (GC/MS)
X	This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.

The other type of code used by AECOM is a “Reason Code”. The reason code indicates the type of quality control failure that led to the application of the data validation flag.

Reason Codes

Code	*Description*
a	Tracer recovery (radiochemical data only)
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bm	Missing Blank Information
c	Calibration issue
cl	Clean-up standard recovery
cp	Insufficient in growth (radiochemical data only)
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
e	Ether interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
pe	Post Extraction Spike
q	Quantitation issue
r	Dual column RPD
rp	Re-extraction precision issue [PAHs only]

June 2018 Groundwater Sampling Event

AECOM

Data Validation and Usability Report

Lockheed Martin
Middle River Complex

June 2018 GW Sampling
Project: 60555202

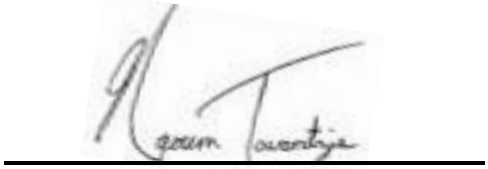
August 2018

IDENTIFICATION FORM

Data Validation and Data Usability Review



Zachary Neigh
Data Validator
AECOM
August 16, 2018



Naoum Tavantzis
Project Chemist
AECOM
August 16, 2018

Table of Contents

I. Executive Summary 4
II. PARCCS Data Quality 5
Precision 5
Accuracy 5
Representativeness 6
Comparability 6
Completeness 6
Sensitivity 6
Overall Impact on Data Usability 7
III. Data Validation Findings 8
IV. Qualified Field Sample Results 11
Appendix A : Data Validation Qualifiers and Reason Codes 13

I. Executive Summary

Data validation was performed on 100% of the groundwater field investigative samples collected on June 25th, 2018 and June 26th, 2018 at the Lockheed Martin Middle River Complex located in Middle River, Maryland. The validation was performed to a United States Environmental Protection Agency (USEPA) Region III Inorganic Level I and Organic Level I based on the specifics of the analytical methods referenced and qualified according to the USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic/Inorganic (January 2017) Superfund Data Review, with the exception of blank detections which were qualified according to the USEPA Region III modifications to the National Functional Guidelines defining the use of the "B" flag.

The review was assisted through the use of an electronic data management tool that compiles batch-level quality control (QC) data submitted with the laboratory deliverables and identifies anomalies for verification and qualification by the data reviewer. This information is provided in the form of a structured workbook that includes field sample analytical results, QC sample results, batch associations, and QC criteria. Prior to validation, the quality assurance procedures applied to this process include reviewing the output for data completeness based on laboratory deliverables and chain of custody reports, verification of QC criteria based on the aforementioned data validation guidelines and project-specific Quality Assurance Project Plan (QAPP), as well as strict control of data management permissions. The resulting data validation workbooks were evaluated and validated using the AECOM automated validation assistant (AVA) tool. The specific data elements that were reviewed include:

- Holding times and sample preservation
- Blanks (Method, Trip, Field, and Equipment)
- Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- Surrogate spike results
- Field duplicates
- Laboratory duplicates
- Sensitivity

Data validation qualifiers were applied to results where a QC nonconformance required qualification per USEPA guidance. All QC anomalies were assessed for their impact on data quality in regards to precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) as discussed in **II: PARCCS Data Quality**. A detailed list of the QC non-conformances can be found in **III: Data Validation Findings**. The associated field sample results that required qualification are listed in **IV: Qualified Field Sample Results**

II. PARCCS Data Quality

Precision

Precision is the degree of agreement among repeated measurements of the same characteristic on the same sample or on separate samples collected as close as possible in time and place. Field sampling precision is measured with the field duplicate relative percent differences; laboratory precision is measured with laboratory duplicate relative percent differences and/or laboratory control spike and matrix spike duplicate relative percent differences.

During the review, several matrix spike pairs displayed relative percent differences greater than the quality control limits. However, all associated field sample results were either non-detect or previously qualified due to matrix spike percent recovery anomalies; no data qualifying action was taken.

Accuracy

Accuracy is a measure of confidence in a measurement. The smaller the difference between the measurement of a parameter and its "true" or expected value, the more accurate the measurement. Accuracy in the field was monitored through the use of negative controls such as trip blanks, field blanks, and equipment blanks, along with adherence to the standard operating procedures and sampling plans. Analytical accuracy was assessed through the measurement of percent recoveries in the laboratory control spike pairs (LCS/LCSD) and the matrix spike pairs (MS/MSD).

Several method blanks, trip blanks, equipment blanks, and field blanks displayed detections greater than the method detection limit. Per the USEPA Region III guidelines on the qualification of blank detections, associated field sample results that displayed concentrations within five times of the blank detection were qualified “B”. The qualified field sample results should be considered as estimated values.

During the review, several MS/MSD displayed percent recoveries greater than the quality control limits. The positive parent sample results associated with positive biases were qualified J+,m and should be considered as estimated values.

Several LCS/LCSD displayed percent recoveries outside the quality control limits. The positive field sample results associated with positive biases were qualified J,l and should be considered as estimated values. The field sample results associated with negative biases were non-detect and were qualified UJ,l. These anomalies are considered minor since all percent recoveries less than the lower QC limits were greater than 10%. The qualified field sample results should be considered as estimated values.

Representativeness

Representativeness qualitatively expresses the degree to which data accurately reflect site conditions. Factors that affect the representativeness of analytical data include appropriate sample population definitions, proper sample collection and preservation techniques, analytical holding times, use of standard analytical methods, and determination of matrix or analyte interferences.

Field sample EW-1 was re-extracted outside of the technical holding time during the PCB Homolog analysis due to low LCS percent recoveries. The re-extracted sample also exhibited low LCS percent recoveries. The positive re-extracted sample results were qualified J,h, while non-detects were qualified UJ,h. Qualified results from the re-extracted sample that are greater than the results of the initial analysis were recommended as reportable results in order to maintain a conservative approach in regards to potential risk. These anomalies are considered minor, and the qualified field sample results should be considered as estimated values.

Comparability

Comparability is the extent to which data from one study can be compared directly to either past data from the current project or data from another study. Using standardized sampling and analytical methods, units of reporting, and site selection procedures helps ensure comparability. Standard field sampling methods and current CLP analytical methods by an accredited laboratory were used in this investigation.

Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount of data expected under normal conditions. It is expected that laboratories will provide data meeting system quality control acceptance criteria for all samples tested. Project completeness is determined by evaluating the planned versus actual quantities of usable data. A total of 6 investigative groundwater samples were validated. Additionally, 2 trip blanks and 4 investigation derived waste (IDW) samples were validated. All QC anomalies were considered to be minor and all data points are considered usable, as qualified. Therefore, the overall data completeness is 100%.

Sensitivity

Sensitivity reflects the ability of the analytical method to detect analytes of interest below the level of concern. This goal is achieved by identifying the level of concern, choosing a method with appropriate method detection limits, and ensuring that the laboratory analyzes calibration standards at or below the level of concern. The laboratory was able to achieve the lowest reporting limits based on the analytical methods employed and the variety of matrices encountered. Any analytes detected below the reporting limit and above the method detection limit were reported and qualified “J” as estimated values by the laboratory. Several field samples

were analyzed at elevated dilutions in order to bring concentration ranges within the linear calibration range of the instrument. These field sample results did not require qualification by the data reviewer.

Overall Impact on Data Usability

The bulk of the data was considered usable and met the completeness requirement outlined in the QAPP. During the course of the data validation, several minor anomalies were noted which is to be anticipated based on statistical predictability of standard analytical procedures. Several field sample results were qualified due to these minor anomalies. No major anomalies were identified over the course of data validation; therefore no field sample results were qualified as rejected. All data are considered usable, as qualified, for their intended purpose based on the data reviewed.

III. Data Validation Findings

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	Detection > MDL	2770696	Bromomethane	0.46 ug/L (0.39 ug/L)
		2770157	Carbon Disulfide	0.32 ug/L (0.23 ug/L)
		2769175	Chloroform	0.42 ug/L (0.21 ug/L)
		2769175	Hexachloro-1,3-Butadiene	4.4 ug/L (1.0 ug/L)
		2770858	Hexachloro-1,3-Butadiene	2.3 ug/L (1.0 ug/L)
		2771294	Hexachloro-1,3-Butadiene	1.3 ug/L (1.0 ug/L)
		2771849	Hexachloro-1,3-Butadiene	1.1 ug/L (1.0 ug/L)
Trip Blanks	**Detection > MDL**	TB-041718-1	Acetone	13.0 ug/L (3.1 ug/L)
		TB-041718-2	Acetone	15.5 ug/L (3.1 ug/L)
		TB-041718-2	TERT-BUTYL ALCOHOL	2.5 ug/L (2.2 ug/L)
		TB-041718-3	Acetone	11.5 ug/L (3.1 ug/L)
		TB-041718-3	Naphthalene	0.49 ug/L (0.34 ug/L)
		TB-041718-4	Acetone	13.6 ug/L (3.1 ug/L)
		TB-041718-4	TERT-BUTYL ALCOHOL	2.5 ug/L (2.2 ug/L)
		TB-041718-5	Acetone	8.3 ug/L (3.1 ug/L)
		TB-0626-18-06/25/18	1,3-Dichlorobenzene	0.37 ug/L (0.25 ug/L)
		TB-0626-18-06/25/18	1,4-Dichlorobenzene	0.45 ug/L (0.27 ug/L)
		TB-0626-18-06/25/18	Acetone	8.5 ug/L (3.1 ug/L)
		TB-0626-18-06/25/18	Bromomethane	0.54 ug/L (0.39 ug/L)
		TB-0626-18-06/25/18	Carbon Disulfide	0.58 ug/L (0.23 ug/L)
		TB-0626-18-06/25/18	Chlorobenzene	0.24 ug/L (0.19 ug/L)
		TB-0626-18-06/25/18	Naphthalene	0.66 ug/L (0.34 ug/L)
LCS/LCSD	**LCS % Recovery**	2769176	2,2-Dichloropropane	133 %(64-129 %)
		2769176	Freon TF	143 %(50-130 %)
		2769176	Hexachloro-1,3-Butadiene	146 %(55-128 %)
		2769176	METHYLCYLOHEXANE	139 %(70-130 %)
		2770697	1,1-Dichloroethylene	147 %(63-128 %)
		2770697	1,2-Dichloroethylene (total)	126 %(78-125 %)
		2770697	Bromochloromethane	121 %(73-117 %)
		2770697	Chloroethane	170 %(51-142 %)
		2770697	CYCLOHEXANE	132 %(66-130 %)
		2770697	Ethyl Tertiary-Butyl Ether	126 %(75-123 %)
		2770697	Freon TF	160 %(50-130 %)

Volatile Organic Compounds SW846-8260B	Description	Sample ID	Analyte	Value (Control Limit)
LCS/LCSD	LCS % Recovery	2770697	METHYLCYLOHEXANE	139 %(70-130 %)
		2770697	Methylene Chloride	122 %(76-121 %)
		2770697	Tetrachloroethene	127 %(72-124 %)
		2770697	Trans-1,2-Dichloroethene	129 %(71-122 %)
		2770697	VINYL ACETATE	143 %(58-136 %)
MS/MSD	MS % Recovery	2769376	1,1-Dichloroethylene	129 %(63-128 %)
		2769376	1,2,3-Trichlorobenzene	55.9 %(61-126 %)
		2769376	2,2-Dichloropropane	140 %(64-129 %)
		2769376	Ethylbenzene	125 %(80-124 %)
		2769376	Freon TF	148 %(50-130 %)
		2769376	Hexachloro-1,3-Butadiene	147 %(55-128 %)
		2769376	METHYLCYLOHEXANE	141 %(70-130 %)
		2769376	Naphthalene	49.1 %(56-134 %)
		2769376	Trans-1,2-Dichloroethene	126 %(71-122 %)
		2769376	Trichlorofluoromethane	126 %(38-123 %)
		2770856	1,1-Dichloroethane	141 %(78-124 %)
		2770856	1,1-Dichloroethylene	170 %(63-128 %)
		2770856	1,2-Dichloroethylene (total)	138 %(78-125 %)
		2770856	2-Chloroethylvinylether	163 %(1-150 %)
		2770856	Bromochloromethane	126 %(73-117 %)
		2770856	Carbon Disulfide	144 %(57-131 %)
		2770856	cis-1,2-Dichloroethene	136 %(78-125 %)
		2770856	CYCLOHEXANE	136 %(66-130 %)
		2770856	Ethyl Tertiary-Butyl Ether	125 %(75-123 %)
		2770856	Freon TF	163 %(50-130 %)
		2770856	Hexachloro-1,3-Butadiene	135 %(55-128 %)
		2770856	METHYLCYLOHEXANE	141 %(70-130 %)
		2770856	Methylene Chloride	133 %(76-121 %)
		2770856	Trans-1,2-Dichloroethene	140 %(71-122 %)
		2770856	TRICHLOROETHENE	129 %(77-124 %)
		2770997	2-Chloroethylvinylether	0.5 %(1-150 %)
Surrogate Spike	% Recovery	MRC-SW13A	4-Bromofluorobenzene	117 %(79-114 %)
		MRC-SW13B	4-Bromofluorobenzene	138 %(79-114 %)
		MRC-SW6B	4-Bromofluorobenzene	129 %(79-114 %)
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	*N/A*			

1,4-Dioxane

SW846-8270D-SIM	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	**Detection > MDL**	2766541	1,4-Dioxane	0.029 ug/l (0.019 ug/l)
Field/Equipment Blanks	*No Anomalies*			
LCS/LCSD	*No Anomalies*			
MS/MSD	*No Anomalies*			
Surrogate Spike	*No Anomalies*			
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	*N/A*			

PCB Homologs

USEPA 680	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	**Re-Extracted Out of Hold**	EW-1	All PCB Homologs	17 Days (7 Days)
Method Blanks	*No Anomalies*			
Field/Equipment Blanks	*N/A*			
LCS/LCSD	**LCS % Recovery**	317049-BS	Decachlorobiphenyl	27 %(29-162 %)
		317049-BS	Heptachlorobiphenyls, Total	48 %(53-120 %)
		317484-BS	Heptachlorobiphenyls, Total	49 %(53-120 %)
		317049-BS	Octachlorobiphenyls, Total	41 %(57-125 %)
		317484-BS	Octachlorobiphenyls, Total	47 %(57-125 %)
MS/MSD	N/A			
Surrogate Spike	*No Anomalies*			
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	*N/A*			

Metals

SW846-6010C, 6020A, 7470A	Description	Sample ID	Analyte	Value (Control Limit)
Holding Times	*No Anomalies*			
Method Blanks	**Detection > MDL**	2767319	Zinc	0.0022 mg/l (0.0019 mg/l)
Field/Equipment Blanks	*N/A*			
Field/Equipment Blanks	**Detection > MDL**	EB-041318-AD	ZINC	0.0033 mg/l (0.0019 mg/l)
LCS/LCSD	*No Anomalies*			
MS/MSD	*No Anomalies*			
Laboratory Duplicates	*No Anomalies*			
Field Duplicates	*N/A*			

IV. Qualified Field Sample Results

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
EW-1	E680	Decachlorobiphenyl	0.024	ug/l	**UJ**	**l**
EW-1	E680	Decachlorobiphenyl	0.025	ug/l	**UJ**	**h**
EW-1	E680	Dichlorobiphenyls, Total	0.0047	ug/l	**UJ**	**h**
EW-1	E680	Dichlorobiphenyls, Total	0.0035	ug/l	**J**	**h**
EW-1	E680	Heptachlorobiphenyls, Total	0.014	ug/l	**UJ**	**l**
EW-1	E680	Heptachlorobiphenyls, Total	0.015	ug/l	**UJ**	**l**
EW-1	E680	Hexachlorobiphenyls, Total	0.0094	ug/l	**UJ**	**h**
EW-1	E680	Hexachlorobiphenyls, Total	0.010	ug/l	**UJ**	**h**
EW-1	E680	Monochlorobiphenyls, Total	0.0047	ug/l	**UJ**	**h**
EW-1	E680	Monochlorobiphenyls, Total	0.0051	ug/l	**UJ**	**h**
EW-1	E680	Nonachlorobiphenyls, Total	0.019	ug/l	**UJ**	**h**
EW-1	E680	Nonachlorobiphenyls, Total	0.020	ug/l	**UJ**	**h**
EW-1	E680	Octachlorobiphenyls, Total	0.014	ug/l	**UJ**	**l**
EW-1	E680	Octachlorobiphenyls, Total	0.015	ug/l	**UJ**	**l**
EW-1	E680	Pentachlorobiphenyls, Total	0.0094	ug/l	**UJ**	**h**
EW-1	E680	Pentachlorobiphenyls, Total	0.010	ug/l	**UJ**	**h**
EW-1	E680	Tetrachlorobiphenyls, Total	0.0094	ug/l	**UJ**	**h**
EW-1	E680	Tetrachlorobiphenyls, Total	0.010	ug/l	**UJ**	**h**
EW-1	E680	Total Polychlorinated biphenyls (PCBs)	0.024	ug/l	**UJ**	**h**
EW-1	E680	Total Polychlorinated biphenyls (PCBs)	0.025	ug/l	**UJ**	**h**
EW-1	E680	Trichlorobiphenyls, Total	0.0047	ug/l	**UJ**	**h**
EW-1	E680	Trichlorobiphenyls, Total	0.0056	ug/l	**J**	**h**
EW-1	SW8270D-SIM	1,4-Dioxane	0.075	ug/l	**B**	**bl**
EW-2	E680	Decachlorobiphenyl	0.024	ug/l	**UJ**	**l**
EW-2	E680	Heptachlorobiphenyls, Total	0.014	ug/l	**UJ**	**l**
EW-2	E680	Octachlorobiphenyls, Total	0.014	ug/l	**UJ**	**l**
EW-2	SW8270D-SIM	1,4-Dioxane	0.13	ug/l	**B**	**bl**
MRC-MW11A	SW6020	ZINC	0.011	mg/l	**B**	**bl**
MRC-MW11A	SW8260B	1,1-Dichloroethylene	10.4	ug/l	**J**	**l**
MRC-MW11A	SW8260B	1,2-Dichloroethylene (total)	2.7	ug/l	**J**	**l**
MRC-MW11A	SW8260B	Acetone	11.3	ug/l	**B**	**bf**
MRC-MW11A	SW8260B	Bromomethane	0.50	ug/l	**B**	**bl**
MRC-MW11A	SW8260B	Carbon Disulfide	0.24	ug/l	**B**	**bf**

Field Sample ID	Analytical Method	Analyte	Result	Units	Qualifier	Reason Code
MRC-MW16A	SW8260B	1,1-Dichloroethane	28.2	ug/l	**J+**	**m**
MRC-MW16A	SW8260B	1,1-Dichloroethylene	72.7	ug/l	**J**	**l**
MRC-MW16A	SW8260B	1,2-Dichloroethylene (total)	12.3	ug/l	**J**	**l**
MRC-MW16A	SW8260B	Acetone	17.6	ug/l	**B**	**bf**
MRC-MW16A	SW8260B	cis-1,2-Dichloroethene	12.3	ug/l	**J+**	**m**
MRC-MW16A	SW8260B	CYCLOHEXANE	0.35	ug/l	**J**	**l**
MRC-MW16A	SW8260B	Tetrachloroethene	6.1	ug/l	**J**	**l**
MRC-MW16A	SW8260B	TRICHLOROETHENE	20.4	ug/l	**J+**	**m**
MRC-MW16A-DUP	SW8260B	1,1-Dichloroethylene	79.0	ug/l	**J**	**l**
MRC-MW16A-DUP	SW8260B	1,2-Dichloroethylene (total)	13.7	ug/l	**J**	**l**
MRC-MW16A-DUP	SW8260B	Acetone	8.8	ug/l	**B**	**bf**
MRC-MW16A-DUP	SW8260B	CYCLOHEXANE	0.37	ug/l	**J**	**l**
MRC-MW16A-DUP	SW8260B	Tetrachloroethene	6.3	ug/l	**J**	**l**
TB-062518	SW8260B	Hexachloro-1,3-Butadiene	1.7	ug/l	**B**	**bl**
TB-0626-18	SW8260B	Bromomethane	0.54	ug/l	**B**	**bl**

Appendix A
Data Validation Qualifiers and Reason Codes

Data Qualifying Codes

Two types of data qualifying codes or flags are applied in the course of the data review. The data validation flags indicate data that are not usable for decision-making, more than normally biased and/or variable, or not representative of field conditions. These codes and their definitions are presented below in the hierarchy stipulated in the USEPA Contract Laboratory Program National Functional Guidelines for Organic (August 2014) Data Review and the USEPA Region III Guidelines for Organic (September 1994) for blank qualifications only.

Data Validation Flags

Flag	Interpretation
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
B	The analyte was analyzed for, but not detected at a level greater than or equal to the level of the adjusted Detection Limit (DL) for sample and method.
J+	Reported value may not be accurate or precise, but the result may be biased high.
J-	Reported value may not be accurate or precise, but the result may be biased low.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the Limit of Detection (LOD).
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.
UJ	The analyte was not detected at a level greater than or equal to the adjusted DL. However, the reported adjusted DL is approximate and may be inaccurate or imprecise.
C	This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by gas Chromatograph/Mass Spectrometer (GC/MS)
X	This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.

The other type of code used by AECOM is a “Reason Code”. The reason code indicates the type of quality control failure that led to the application of the data validation flag.

Reason Codes

Code	*Description*
a	Tracer recovery (radiochemical data only)
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bm	Missing Blank Information
c	Calibration issue
cl	Clean-up standard recovery
cp	Insufficient in growth (radiochemical data only)
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
e	Ether interference
fd	Field duplicate RPDs
g	Chromatographic pattern match issue
h	Holding times
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
m	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
pe	Post Extraction Spike
q	Quantitation issue
r	Dual column RPD
rp	Re-extraction precision issue [PAHs only]

APPENDIX E
2018 Groundwater Analytical Results

Appendix E – 2018 Groundwater Analytical Results

Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

				Sample ID	MRC-MW02A					MRC-MW07A					MRC-MW100A					MRC-MW100B					MRC-MW101A					MRC-MW101B				
				Collection Date	4/12/2018					4/12/2018					4/11/2018					4/11/2018					4/13/2018					4/9/2018				
				Block ID	I					I					G					G					I					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL		Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	0.5	J	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	1.7	-	-	1	26-36	34	-	-	1	8-18	0.43	J	-	1	25-35	6.2	-	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	1.5	-	-	1	26-36	89	-	-	5	8-18	0.6	J	-	1	25-35	2.3	-	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	17-27	< 7.0	U	-	7		-	-	-	-	-	9-19	< 7.0	U	-	7	26-36	< 7.0	U	-	7	8-18	< 7.0	U	-	7	25-35	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	0.98	J	-	2	26-36	46.9	-	-	2	8-18	23.2	-	-	2	25-35	2.2	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	17-27	< 10.0	U	-	10		-	-	-	-	-	9-19	< 10.0	U	-	10	26-36	< 10.0	U	-	10	8-18	< 10.0	U	-	10	25-35	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	17-27	< 5.0	U	-	5		-	-	-	-	-	9-19	< 5.0	U	-	5	26-36	< 5.0	U	-	5	8-18	< 5.0	U	-	5	25-35	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	17-27	< 5.0	U	-	5		-	-	-	-	-	9-19	< 5.0	U	-	5	26-36	< 5.0	U	-	5	8-18	< 5.0	U	-	5	25-35	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	17-27	6.2	J	-	10		-	-	-	-	-	9-19	5.8	J	-	10	26-36	6.9	J	-	10	8-18	12.8	-	-	10	25-35	6.3	J	-	10
Benzene	71-43-2	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	0.27	J	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	0.98	J	-	1	26-36	46.9	-	-	1	8-18	22.1	-	-	1	25-35	2.2	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	17-27	0.54	J	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	17-27	< 5.0	U	-	5		-	-	-	-	-	9-19	< 5.0	U	-	5	26-36	< 5.0	U	-	5	8-18	< 5.0	U	-	5	25-35	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	17-27	< 10.0	U	-	10		-	-	-	-	-	9-19	< 10.0	U	-	10	26-36	< 10.0	U	-	10	8-18	< 10.0	U	-	10	25-35	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	17-27	< 2.0	U	-	2		-	-	-	-	-	9-19	< 2.0	U	-	2	26-36	< 2.0	U	-	2	8-18	< 2.0	U	-	2	25-35	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	1	-	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	1.1	-	-	1	25-35	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	6	-	-	1	26-36	203	-	-	5	8-18	2.6	-	-	1	25-35	2.1	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	17-27	1.9	-	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	< 1.0	U	-	1	8-18	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	17-27	< 5.0	U	-	5		-	-	-	-	-	9-19	< 5.0	U	-	5	26-36	< 5.0	U	-	5	8-18	< 5.0	U	-	5	25-35	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	17-27	< 1.0	U	-	1		-	-	-	-	-	9-19	< 1.0	U	-	1	26-36	0.39	J	-	1	8-18	1.9	-	-	1	25-35	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	17-27	< 3.0	U	-	3		-	-	-	-	-	9-19	< 3.0	U	-	3	26-36	< 3.0	U	-	3	8-18	< 3.0	U	-	3	25-35	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-		12-22	1.6	-	-	0.096	-	-	-	-	-	26-36	51.7	-	-	2.1	8-18	1.8	-	-	0.1	25-35	2.9	-	-	0.11
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																	
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																	
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-		12-22	0.56	-	-	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																	
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite as N	14797-65-0	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E365.1																																	
Phosphorus	7723-14-0	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A2320																																	
Total Alkalinity (as CaCO3)	ALK	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A4500E																																	
Orthophosphate	14265-44-2	NE	mg/l	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - D6919-09																																	
Nitrogen, ammonia (as N)	7664-41-7	N

Sample ID				MRC-MW102A					MRC-MW103A					MRC-MW103B					MRC-MW104A					MRC-MW104B					MRC-MW106B/C				
Collection Date				4/9/2018					4/5/2018					4/5/2018					4/12/2018					4/12/2018					4/6/2018				
Block ID				I					I					I					I					I					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	0.36	J	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	6-16	< 7.0	U	-	7	7-17	< 7.0	U	-	7	27-37	< 7.0	U	-	7	5-15	< 7.0	U	-	7	20-25	< 7.0	U	-	7	40-50	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	6-16	< 1.0	U	-	1	7-17	19.7	-	-	1	27-37	0.44	J	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	6-16	1.6	J	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	0.55	J	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	6-16	< 10.0	U	-	10	7-17	< 10.0	U	-	10	27-37	< 10.0	U	-	10	5-15	< 10.0	U	-	10	20-25	< 10.0	U	-	10	40-50	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	27-37	< 5.0	U	-	5	5-15	< 5.0	U	-	5	20-25	< 5.0	U	-	5	40-50	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	27-37	< 5.0	U	-	5	5-15	< 5.0	U	-	5	20-25	< 5.0	U	-	5	40-50	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	6-16	5.4	J	-	10	7-17	5.1	J	-	10	27-37	6.4	J	-	10	5-15	4.5	J	-	10	20-25	10.2	-	-	10	40-50	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	6-16	< 1.0	U	-	1	7-17	0.94	J	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	6-16	1.6	-	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	0.55	J	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	6-16	0.9	J	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	27-37	< 5.0	U	-	5	5-15	< 5.0	U	-	5	20-25	< 5.0	U	-	5	40-50	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Methyl acetate	79-20-9	ug/l	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	6-16	0.37	J	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	6-16	< 10.0	U	-	10	7-17	< 10.0	U	-	10	27-37	< 10.0	U	-	10	5-15	< 10.0	U	-	10	20-25	< 10.0	U	-	10	40-50	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	27-37	< 2.0	U	-	2	5-15	< 2.0	U	-	2	20-25	< 2.0	U	-	2	40-50	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	6-16	< 1.0	U	-	1	7-17	2.3	-	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	27-37	< 5.0	U	-	5	5-15	< 5.0	U	-	5	20-25	< 5.0	U	-	5	40-50	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	27-37	< 1.0	U	-	1	5-15	< 1.0	U	-	1	20-25	< 1.0	U	-	1	40-50	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	6-16	< 3.0	U	-	3	7-17	< 3.0	U	-	3	27-37	< 3.0	U	-	3	5-15	< 3.0	U	-	3	20-25	< 3.0	U	-	3	40-50	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	7-17	< 0.012	U	-	0.024	27-37	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	7-17	< 0.0016	U	-	0.0047	27-37	< 0.0016	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	7-17	< 0.0090	U	-	0.014	27-37	< 0.0090	U	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	7-17	< 0.0047	U	-	0.0094	27-37	< 0.0047	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	7-17	< 0.00059	U	-	0.0047	27-37	< 0.00059	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	7-17	< 0.0088	U	-	0.019	27-37	< 0.0088	U	-	0.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	7-17	< 0.0099	U	-	0.014	27-37	< 0.0099	U	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	7-17	< 0.0043	U	-	0.0094	27-37	< 0.0043	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	7-17	< 0.0023	U	-	0.0094	27-37	< 0.0023	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	7-17	< 0.012	U	-	0.024	27-37	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	7-17	< 0.0022	U	-	0.0047	27-37	< 0.0022	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																									

Sample ID				MRC-MW109A					MRC-MW109B					MRC-MW10A					MRC-MW110A					MRC-MW110B					MRC-MW111A				
Collection Date				4/10/2018					4/10/2018					4/10/2018					4/5/2018					4/5/2018					4/12/2018				
Block ID				I					I					I					I					I					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	0.39	J	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	5-15	0.44	J	-	1	38-48	1.6	-	-	1	3-13	< 1.0	U	-	1	12-22	0.79	J	-	1	45-55	0.7	J	-	1	5-15	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	5-15	< 2.0	U	-	2	38-48	8.7	-	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	5-15	< 2.0	U	-	2	38-48	< 2.0	U	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	5-15	< 2.0	U	-	2	38-48	12.4	-	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	0.33	J	-	1	5-15	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	5-15	< 7.0	U	-	7	38-48	< 7.0	U	-	7	3-13	< 7.0	U	-	7	12-22	< 7.0	U	-	7	45-55	< 7.0	U	-	7	5-15	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	5-15	37.1	-	-	2	38-48	338	-	-	10	3-13	< 2.0	U	-	2	12-22	9.6	-	-	2	45-55	9.3	-	-	2	5-15	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	5-15	< 2.0	U	-	2	38-48	< 2.0	U	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	5-15	< 10.0	U	-	10	38-48	< 10.0	U	-	10	3-13	< 10.0	U	-	10	12-22	< 10.0	U	-	10	45-55	< 10.0	U	-	10	5-15	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	5-15	< 2.0	U	-	2	38-48	< 2.0	U	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	5-15	< 5.0	U	-	5	38-48	< 5.0	U	-	5	3-13	< 5.0	U	-	5	12-22	< 5.0	U	-	5	45-55	< 5.0	U	-	5	5-15	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	5-15	< 1.0	U	-	1	38-48	0.4	J	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	5-15	< 5.0	U	-	5	38-48	< 5.0	U	-	5	3-13	< 5.0	U	-	5	12-22	< 5.0	U	-	5	45-55	< 5.0	U	-	5	5-15	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	5-15	9.2	J	-	10	38-48	5.7	J	-	10	3-13	5.7	J	-	10	12-22	12.4	-	-	10	45-55	6.8	J	-	10	5-15	10.5	-	-	10
Benzene	71-43-2	5	ug/l	5-15	< 1.0	U	-	1	38-48	46.6	-	-	1	3-13	< 1.0	U	-	1	12-22	1.3	-	-	1	45-55	81.4	-	-	1	5-15	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	0.3	J	-	1
Carbon tetrachloride	56-23-5	5	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	0.9	J	-	1	5-15	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	5-15	36	-	-	1	38-48	314	-	-	5	3-13	< 1.0	U	-	1	12-22	9.1	-	-	1	45-55	9	-	-	1	5-15	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	5-15	< 1.0	U	-	1	38-48	0.9	J	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	1.3	-	-	1	5-15	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	2.7	-	-	1	5-15	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	5-15	< 5.0	U	-	5	38-48	< 5.0	U	-	5	3-13	< 5.0	U	-	5	12-22	< 5.0	U	-	5	45-55	< 5.0	U	-	5	5-15	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	5-15	< 1.0	U	-	1	38-48	1	-	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	0.4	J	-	1	5-15	< 1.0	U	-	1
Methyl acetate	79-20-9	ug/l	ug/l	5-15	< 2.0	U	-	2	38-48	< 2.0	U	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	5-15	< 1.0	U	-	1	38-48	5.9	-	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	7	-	-	1	5-15	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	5-15	< 2.0	U	-	2	38-48	< 2.0	U	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	3.4	-	-	2	5-15	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	5-15	< 2.0	U	-	2	38-48	2.2	-	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	0.39	J	-	2	5-15	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	5-15	< 2.0	U	-	2	38-48	< 2.0	U	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	5-15	< 1.0	U	-	1	38-48	2.3	-	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	4.3	-	-	1	5-15	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	5-15	< 10.0	U	-	10	38-48	2.2	J	-	10	3-13	< 10.0	U	-	10	12-22	< 10.0	U	-	10	45-55	< 10.0	U	-	10	5-15	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	5-15	< 2.0	U	-	2	38-48	< 2.0	U	-	2	3-13	< 2.0	U	-	2	12-22	< 2.0	U	-	2	45-55	< 2.0	U	-	2	5-15	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	0.24	J	-	1	5-15	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	5-15	1.2	-	-	1	38-48	23.5	-	-	1	3-13	< 1.0	U	-	1	12-22	0.48	J	-	1	45-55	0.33	J	-	1	5-15	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	5-15	< 1.0	U	-	1	38-48	76.8	-	-	1	3-13	< 1.0	U	-	1	12-22	17.7	-	-	1	45-55	44.7	-	-	1	5-15	< 1.0	U	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	5-15	< 1.0	U	-	1	38-48	< 1.0	U	-	1	3-13	< 1.0	U	-	1	12-22	< 1.0	U	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	5-15	< 5.0	U	-	5	38-48	< 5.0	U	-	5	3-13	< 5.0	U	-	5	12-22	< 5.0	U	-	5	45-55	< 5.0	U	-	5	5-15	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	5-15	24	-	-	1	38-48	15.6	-	-	1	3-13	< 1.0	U	-	1	12-22	0.5	J	-	1	45-55	< 1.0	U	-	1	5-15	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	5-15	< 3.0	U	-	3	38-48	2.3	J	-	3	3-13	< 3.0	U	-	3	12-22	< 3.0	U	-	3	45-55	7.7	-	-	3	5-15	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	-	-	-	-	-	3-13	0.55	-	-	0.096	12-22	2.5	-	-	0.19	45-55	2.5	-	-	0.2	5-15	0.52	-	-	0.1
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																	
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																	
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																	
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID				MRC-MW111B					MRC-MW111B-DUP					MRC-MW113A					MRC-MW113A					MRC-MW114A					MRC-MW115A				
Collection Date				4/11/2018					4/11/2018					4/5/2018					4/6/2018					4/9/2018					4/10/2018				
Block ID				I					I					I					I					E					E				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	35-45	1	-	-	1	35-45	1.2	-	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	35-45	63.5	-	-	1	35-45	65.2	-	-	1	-	-	-	-	-	6-16	1.6	-	-	1	6-16	0.29	J	-	1	25-35	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	35-45	261	-	-	10	35-45	253	-	-	10	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	38.6	-	-	2	6-16	116	-	-	40	25-35	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	35-45	0.96	J	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	188	-	-	2	6-16	447	-	-	40	25-35	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	35-45	< 7.0	U	-	7	35-45	< 7.0	U	-	7	-	-	-	-	-	6-16	< 7.0	U	-	7	6-16	< 7.0	U	-	7	25-35	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	10.5	-	-	1	6-16	44.4	-	-	1	25-35	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	1	-	-	1	6-16	819	-	-	20	25-35	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	35-45	61.8	-	-	2	35-45	62.8	-	-	2	-	-	-	-	-	6-16	7.2	-	-	2	6-16	0.95	J	-	2	25-35	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	6.2	-	-	1	25-35	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	27	-	-	1	6-16	12.4	-	-	1	25-35	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	40.9	-	-	1	6-16	71.8	-	-	1	25-35	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	35-45	< 10.0	U	-	10	35-45	< 10.0	U	-	10	-	-	-	-	-	6-16	< 10.0	U	-	10	6-16	< 10.0	U	-	10	25-35	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	35-45	< 5.0	U	-	5	35-45	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	6-16	< 5.0	U	-	5	25-35	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	35-45	< 5.0	U	-	5	35-45	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	6-16	< 5.0	U	-	5	25-35	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	35-45	8.6	J	-	10	35-45	3.7	J	-	10	-	-	-	-	-	6-16	7.2	J	-	10	6-16	7.7	J	-	10	25-35	6.3	J	-	10
Benzene	71-43-2	5	ug/l	35-45	3.5	-	-	1	35-45	3.9	-	-	1	-	-	-	-	-	6-16	0.76	J	-	1	6-16	7.1	-	-	1	25-35	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	0.34	J	-	1	25-35	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	1.5	-	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	48	-	-	1	6-16	373	-	-	20	25-35	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	35-45	2	-	-	1	35-45	2.2	-	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	1.3	-	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	35-45	61.8	-	-	1	35-45	62.8	-	-	1	-	-	-	-	-	6-16	6.9	-	-	1	6-16	0.95	J	-	1	25-35	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	35-45	< 5.0	U	-	5	35-45	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	6-16	< 5.0	U	-	5	25-35	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	35-45	0.28	J	-	1	35-45	0.27	J	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	35-45	< 10.0	U	-	10	35-45	< 10.0	U	-	10	-	-	-	-	-	6-16	< 10.0	U	-	10	6-16	< 10.0	U	-	10	25-35	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	35-45	< 2.0	U	-	2	35-45	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	6-16	< 2.0	U	-	2	25-35	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	35-45	2.7	-	-	1	35-45	3	-	-	1	-	-	-	-	-	6-16	57.6	-	-	1	6-16	3.9	-	-	1	25-35	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	0.37	J	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	< 1.0	U	-	1	25-35	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	35-45	571	-	-	10	35-45	541	-	-	10	-	-	-	-	-	6-16	23.5	-	-	1	6-16	5.3	-	-	1	25-35	< 1.0	U	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	35-45	< 1.0	U	-	1	35-45	< 1.0	U	-	1	-	-	-	-	-	6-16	1400	-	-	100	6-16	180	-	-	20	25-35	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	35-45	< 5.0	U	-	5	35-45	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	6-16	< 5.0	U	-	5	25-35	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	35-45	2.3	-	-	1	35-45	2.5	-	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	6-16	2.2	-	-	1	25-35	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	35-45	< 3.0	U	-	3	35-45	< 3.0	U	-	3	-	-	-	-	-	6-16	< 3.0	U	-	3	6-16	< 3.0	U	-	3	25-35	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																
1,4-Dioxane	123-91-1	0.46[b]	ug/l	35-45	88.5	-	J	10.1	35-45	37.9	-	J	5.2	-	-	-	-	-	6-16	2.6	-	-	1	6-16	0.5	-	-	0.094	-	-	-	-	-
PCB Homologs - E680																																
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.012	U	-	0.024	-	-	-	-	-	6-16	< 0.012	U,*	UJ	0.025	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	0.0094	-	-	0.0047	-	-	-	-	-	6-16	0.007	*	B	0.005	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.0090	U	-	0.014	-	-	-	-	-	6-16	< 0.0090	U,*	UJ	0.015	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.0047	U	-	0.0094	-	-	-	-	-	6-16	< 0.0047	U,*	UJ	0.01	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.00059	U	-	0.0047	-	-	-	-	-	6-16	0.019	*	B	0.005	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.0088	U	-	0.019	-	-	-	-	-	6-16	< 0.0088	U,*	UJ	0.02	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.0099	U	-	0.014	-	-	-	-	-	6-16	< 0.0099	U,*	UJ	0.015	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.0043	U	-	0.0094	-	-	-	-	-	6-16	< 0.0043	U,*	UJ	0.01	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.0023	U	-	0.0094	-	-	-	-	-	6-16	< 0.0023	U,*	UJ	0.01	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.012	U	-	0.024	-	-	-	-	-	6-16	0.026	*	J	0.025	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	6-16	< 0.0022	U	-	0.0047	-	-	-	-	-	6-16	< 0.0022	U,*	UJ	0.005	-	-	-	-	-
Metals - SW6010C																																
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite as N	14797-65-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E365.1																																
Phosphorus	7723-14-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A2320																																
Total Alkalinity (as CaCO3)	ALK	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A4500E																													

Sample ID				MRC-MW117B					MRC-MW118A					MRC-MW118B					MRC-MW119A					MRC-MW119B					MRC-MW120A				
Collection Date				4/9/2018					4/10/2018					4/10/2018					4/12/2018					4/6/2018					4/6/2018				
Block ID				I					I					I					I					I					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	1.6	-	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	8.1	-	-	1	8.5-13.5	0.59	J	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	0.89	J	-	2	8.5-13.5	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	40.5-50.5	< 7.0	U	-	7	8-13	< 7.0	U	-	7	45-55	< 7.0	U	-	7	8-13	< 7.0	U	-	7	50-60	< 7.0	U	-	7	8.5-13.5	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	40.5-50.5	1.1	J	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	376	-	-	20	8.5-13.5	4.1	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	40.5-50.5	< 10.0	U	-	10	8-13	< 10.0	U	-	10	45-55	< 10.0	U	-	10	8-13	3.4	J	-	10	50-60	< 10.0	U	-	10	8.5-13.5	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	40.5-50.5	< 5.0	U	-	5	8-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	8-13	< 5.0	U	-	5	50-60	< 5.0	U	-	5	8.5-13.5	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	40.5-50.5	< 5.0	U	-	5	8-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	8-13	< 5.0	U	-	5	50-60	< 5.0	U	-	5	8.5-13.5	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	40.5-50.5	16.3	-	-	10	8-13	11.1	-	-	10	45-55	7.9	J	-	10	8-13	82.4	-	-	10	50-60	5.6	J	-	10	8.5-13.5	15.7	-	-	10
Benzene	71-43-2	5	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	246	-	-	10	8.5-13.5	8.7	-	-	1
Bromobenzene	108-86-1	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	0.25	J	-	1	8-13	1.2	-	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	1.2	-	-	1	45-55	< 1.0	U	-	1	8-13	0.75	J	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	40.5-50.5	1.1	-	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	342	-	-	10	8.5-13.5	4.1	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	1.7	-	-	1	8.5-13.5	10	-	-	1
Cymene	99-87-6	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	1.4	-	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	1	-	-	1	8.5-13.5	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	40.5-50.5	< 5.0	U	-	5	8-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	8-13	< 5.0	U	-	5	50-60	< 5.0	U	-	5	8.5-13.5	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	1.2	-	-	1	8.5-13.5	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	17.1	-	-	1	8.5-13.5	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	4.4	-	-	1
Methylene chloride	75-09-2	5	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	4.4	-	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	1.3	J	-	2	8.5-13.5	2.6	-	-	2
Naphthalene	91-20-3	0.65	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	8.6	-	-	1	8.5-13.5	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	40.5-50.5	5.5	J	-	10	8-13	< 10.0	U	-	10	45-55	4.5	J	-	10	8-13	4.2	J	-	10	50-60	< 10.0	U	-	10	8.5-13.5	5	J	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	40.5-50.5	< 2.0	U	-	2	8-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	8-13	< 2.0	U	-	2	50-60	< 2.0	U	-	2	8.5-13.5	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	0.44	J	-	1	8.5-13.5	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	33.4	-	-	1	8.5-13.5	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	40.5-50.5	8.2	-	-	1	8-13	4.8	-	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	260	-	-	10	8.5-13.5	1.6	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	2.5	-	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	< 1.0	U	-	1	8.5-13.5	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	40.5-50.5	< 5.0	U	-	5	8-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	8-13	< 5.0	U	-	5	50-60	< 5.0	U	-	5	8.5-13.5	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	40.5-50.5	< 1.0	U	-	1	8-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	8-13	< 1.0	U	-	1	50-60	12.7	-	-	1	8.5-13.5	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	40.5-50.5	< 3.0	U	-	3	8-13	< 3.0	U	-	3	45-55	< 3.0	U	-	3	8-13	< 3.0	U	-	3	50-60	9.9	-	-	3	8.5-13.5	2.6	J	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	40.5-50.5	0.35	-	-	0.094	8-13	0.11	-	-	0.1	45-55	< 0.097	U	-	0.097	-	-	-	-	-	50-60	4.4	-	-	0.98	8.5-13.5	2.8	-	-	1.1
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440

Appendix E – 2018 Groundwater Analytical Results

Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Sample ID				MRC-MW120B					MRC-MW121A					MRC-MW121B					MRC-MW122A					MRC-MW123A					MRC-MW124A				
Collection Date				4/6/2018					4/4/2018					4/4/2018					4/13/2018					4/4/2018					4/12/2018				
Block ID				I					I					I					I					E					E				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	40-50	1.1	-	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	40-50	210	-	-	50	19-29	< 1.0	U	-	1	32-42	2.5	-	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	98.7	-	J	2	8-18	214	-	-	100
1,2,3-Trichloropropane	96-18-4	NE	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	399	-	-	40	8-18	885	-	-	100
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	40-50	< 7.0	U	-	7	19-29	< 7.0	U	-	7	32-42	< 7.0	U	-	7	10-15	< 7.0	U	-	7	11-21	< 7.0	U	-	7	8-18	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	53.9	-	-	1	8-18	75.4	-	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	40-50	121	-	-	2	19-29	< 2.0	U	-	2	32-42	2	J	-	2	10-15	< 2.0	U	-	2	11-21	29.3	-	-	2	8-18	27.7	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	424	-	-	20	8-18	263	-	-	50
1,3-Dichloropropane	142-28-9	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	261	-	-	20	8-18	238	-	-	50
2,2-Dichloropropane	594-20-7	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	40-50	< 10.0	U	-	10	19-29	< 10.0	U	-	10	32-42	< 10.0	U	-	10	10-15	< 10.0	U	-	10	11-21	< 10.0	U	-	10	8-18	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	40-50	< 5.0	U	-	5	19-29	< 5.0	U	-	5	32-42	< 5.0	U	-	5	10-15	< 5.0	U	-	5	11-21	< 5.0	U	-	5	8-18	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	40-50	< 5.0	U	-	5	19-29	< 5.0	U	-	5	32-42	< 5.0	U	-	5	10-15	< 5.0	U	-	5	11-21	< 5.0	U	-	5	8-18	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	40-50	9.3	J	-	10	19-29	24.5	-	-	10	32-42	10	-	-	10	10-15	6.2	J	-	10	11-21	4.2	J	-	10	8-18	7.8	J	-	10
Benzene	71-43-2	5	ug/l	40-50	4.8	-	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	15.9	-	-	1	8-18	17.1	-	-	1
Bromobenzene	108-86-1	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	40-50	0.33	J	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	996	-	-	20	8-18	542	-	-	50
Chloroethane	75-00-3	3.6	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	0.49	J	-	1	10-15	0.47	J	-	1	11-21	0.24	J	-	1	8-18	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	40-50	121	-	-	1	19-29	< 1.0	U	-	1	32-42	2	-	-	1	10-15	< 1.0	U	-	1	11-21	27.8	-	-	1	8-18	26.3	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	40-50	< 5.0	U	-	5	19-29	< 5.0	U	-	5	32-42	< 5.0	U	-	5	10-15	< 5.0	U	-	5	11-21	< 5.0	U	-	5	8-18	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	40-50	< 2.0	U	-	2	19-29	0.36	J	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	40-50	< 10.0	U	-	10	19-29	4.5	J	-	10	32-42	< 10.0	U	-	10	10-15	< 10.0	U	-	10	11-21	< 10.0	U	-	10	8-18	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	40-50	< 2.0	U	-	2	19-29	< 2.0	U	-	2	32-42	< 2.0	U	-	2	10-15	< 2.0	U	-	2	11-21	< 2.0	U	-	2	8-18	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	0.31	J	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	1.5	-	-	1	8-18	1.3	-	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	40-50	1260	-	-	50	19-29	1.2	-	-	1	32-42	104	-	-	1	10-15	< 1.0	U	-	1	11-21	< 20.0	U	-	20	8-18	5.2	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	40-50	< 1.0	U	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	< 1.0	U	-	1	8-18	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	40-50	< 5.0	U	-	5	19-29	< 5.0	U	-	5	32-42	< 5.0	U	-	5	10-15	< 5.0	U	-	5	11-21	< 5.0	U	-	5	8-18	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	40-50	1.8	-	-	1	19-29	< 1.0	U	-	1	32-42	< 1.0	U	-	1	10-15	< 1.0	U	-	1	11-21	1.4	-	-	1	8-18	0.96	J	-	1
Total Xylenes	1330-20-7	10000	ug/l	40-50	< 3.0	U	-	3	19-29	< 3.0	U	-	3	32-42	< 3.0	U	-	3	10-15	< 3.0	U	-	3	11-21	< 3.0	U	-	3	8-18	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	40-50	21.9	-	-	0.93	19-29	0.048	J	-	0.1	32-42	1.6	-	-	0.097	10-15	0.27	-	-	0.14	11-21	0.19	-	-	0.093	8-18	0.26	-	-	0.098
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.012	U	-	0.024	8-18	< 0.012	U	-	0.025
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.012	-	-	0.0047	8-18	0.026	-	B	0.005
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0090	U	-	0.014	8-18	< 0.0090	U	-	0.015
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.0047	J	-	0.0094	8-18	< 0.0047	U	-	0.01
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.025	-	-	0.0047	8-18	0.049	-	-	0.005
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0088	U	-	0.019	8-18	< 0.0088	U	-	0.02
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0099	U	-	0.014	8-18	< 0.0099	U	-	0.015
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0043	U	-	0.0094	8-18	< 0.0043	U	-	0.01
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0023	U	-	0.0094	8-18	< 0.0023	U	-	0.01
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.042	-	-	0.024	8-18	0.074	-	-	0.025
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0022	U	-	0.0047	8-18	< 0.0022	U	-	0.005
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0022	U	-	0.0022	8-18	< 0.0022	U	-	0.0022
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.0014	J	-	0.0033	8-18	0.0023	J	-	0.0033
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.0013	-	B	0.0011	8-18	0.0029	-	-	0.0011
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0011	U	-	0.0011	8-18	< 0.0011	U	-	0.0011
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.0014	J	B	0.0022	8-18	< 0.0022	U	-	0.0022
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.043	-	-	0.0056	8-18	0.031	-	-	0.0056
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.0025	J	-	0.0056	8-18	< 0.0056	U	-	0.0056
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0022	U	-	0.0022	8-18	< 0.0022	U	-	0.0022
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	0.038	-	-	0.0056	8-18	0.052	-	-	0.0056
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11-21	< 0.0056	U	-	0.0056	8-18	< 0.0056	U	-	0.0056
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID				MRC-MW124B					MRC-MW124B-D					MRC-MW125A					MRC-MW125A					MRC-MW125B					MRC-MW125B				
Collection Date				4/12/2018					4/12/2018					4/5/2018					4/6/2018					4/5/2018					4/6/2018				
Block ID				E					E					E					E					E					E				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	25-30	14.7	-	-	2	25-30	14.5	-	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	25-30	< 2.0	U	-	2	25-30	< 2.0	U	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	25-30	66	-	-	2	25-30	65.3	-	-	2	-	-	-	-	-	5-15	1.9	J	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	25-30	< 7.0	U	-	7	25-30	< 7.0	U	-	7	-	-	-	-	-	5-15	< 7.0	U	-	7	-	-	-	-	-	25-35	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	25-30	7.7	-	-	1	25-30	7.5	-	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	5.8	-	-	1	-	-	-	-	-	25-35	11.3	-	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	25-30	6.1	-	-	2	25-30	5.8	-	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	1.4	-	-	1	-	-	-	-	-	25-35	1.5	-	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	25-30	57.9	-	-	1	25-30	56	-	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	25-30	< 2.0	U	-	2	25-30	< 2.0	U	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	25-30	38.2	-	-	1	25-30	37.2	-	-	1	-	-	-	-	-	5-15	0.54	J	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	25-30	< 10.0	U	-	10	25-30	< 10.0	U	-	10	-	-	-	-	-	5-15	< 10.0	U	-	10	-	-	-	-	-	25-35	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	25-30	< 2.0	U	-	2	25-30	< 2.0	U	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	25-30	< 5.0	U	-	5	25-30	< 5.0	U	-	5	-	-	-	-	-	5-15	< 5.0	U	-	5	-	-	-	-	-	25-35	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	25-30	< 5.0	U	-	5	25-30	< 5.0	U	-	5	-	-	-	-	-	5-15	< 5.0	U	-	5	-	-	-	-	-	25-35	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	25-30	10.8	-	-	10	25-30	6.8	J	-	10	-	-	-	-	-	5-15	8.5	J	-	10	-	-	-	-	-	25-35	11.5	-	-	10
Benzene	71-43-2	5	ug/l	25-30	2.5	-	-	1	25-30	2.4	-	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	25-30	124	-	-	1	25-30	122	-	-	1	-	-	-	-	-	5-15	0.39	J	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	25-30	0.75	J	-	1	25-30	0.7	J	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	0.22	J	-	1
Chloromethane	74-87-3	19	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	25-30	6.1	-	-	1	25-30	5.8	-	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	25-30	1.1	-	-	1	25-30	1	-	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	25-30	< 5.0	U	-	5	25-30	< 5.0	U	-	5	-	-	-	-	-	5-15	< 5.0	U	-	5	-	-	-	-	-	25-35	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	25-30	< 2.0	U	-	2	25-30	< 2.0	U	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	25-30	2.4	-	-	2	25-30	2.3	-	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	25-30	< 2.0	U	-	2	25-30	< 2.0	U	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	25-30	< 2.0	U	-	2	25-30	< 2.0	U	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	25-30	1	-	-	1	25-30	1	-	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	25-30	6.7	J	-	10	25-30	< 10.0	U	-	10	-	-	-	-	-	5-15	< 10.0	U	-	10	-	-	-	-	-	25-35	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	25-30	< 2.0	U	-	2	25-30	< 2.0	U	-	2	-	-	-	-	-	5-15	< 2.0	U	-	2	-	-	-	-	-	25-35	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	1	-	-	1	-	-	-	-	-	25-35	1.2	-	-	1
Toluene	108-88-3	1000	ug/l	25-30	0.32	J	-	1	25-30	0.33	J	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	25-30	1.5	-	-	1	25-30	1.4	-	-	1	-	-	-	-	-	5-15	0.85	J	-	1	-	-	-	-	-	25-35	0.87	J	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	46.4	-	-	1	-	-	-	-	-	25-35	63.1	-	-	1
Vinyl acetate	108-05-4	NE	ug/l	25-30	< 5.0	U	-	5	25-30	< 5.0	U	-	5	-	-	-	-	-	5-15	< 5.0	U	-	5	-	-	-	-	-	25-35	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	25-30	< 1.0	U	-	1	25-30	< 1.0	U	-	1	-	-	-	-	-	5-15	< 1.0	U	-	1	-	-	-	-	-	25-35	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	25-30	3.4	-	-	3	25-30	3.3	-	-	3	-	-	-	-	-	5-15	< 3.0	U	-	3	-	-	-	-	-	25-35	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																
1,4-Dioxane	123-91-1	0.46[b]	ug/l	25-30	0.27	-	-	0.1	25-30	0.2	-	-	0.1	-	-	-	-	-	5-15	0.32	-	-	0.095	-	-	-	-	-	25-35	0.37	-	-	0.1
PCB Homologs - E680																																
Decachlorobiphenyl	2051-24-3	NE	ug/l	25-30	< 0.012	U	-	0.025	25-30	< 0.012	U	-	0.025	5-15	< 0.012	U	-	0.024	-	-	-	-	-	25-35	< 0.012	U	-	0.024	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	25-30	0.002	J	B	0.005	25-30	0.005	-	B	0.005	5-15	0.0024	J	-	0.0047	-	-	-	-	-	25-35	< 0.0016	U	-	0.0047	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	25-30	< 0.0090	U	-	0.015	25-30	< 0.0090	U	-	0.015	5-15	0.012	J	-	0.014	-	-	-	-	-	25-35	0.019	-	-	0.014	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	25-30	< 0.0047	U	-	0.01	25-30	< 0.0047	U	-	0.01	5-15	0.023	-	-	0.0094	-	-	-	-	-	25-35	0.036	-	-	0.0094	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	25-30	< 0.00059	U	-	0.005	25-30	0.004	J	B	0.005	5-15	< 0.00059	U	-	0.0047	-	-	-	-	-	25-35	< 0.00059	U	-	0.0047	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	25-30	< 0.0088	U	-	0.02	25-30	< 0.0088	U	-	0.02	5-15	< 0.0088	U	-	0.019	-	-	-	-	-	25-35	< 0.0088	U	-	0.019	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	25-30	< 0.0099	U	-	0.015	25-30	< 0.0099	U	-	0.015	5-15	< 0.0099	U	-	0.014	-	-	-	-	-	25-35	< 0.0099	U	-	0.014	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	25-30	< 0.0043	U	-	0.01	25-30	< 0.0043	U	-	0.01	5-15	0.0066	J	-	0.0094	-	-	-	-	-	25-35	0.0061	J	-	0.0094	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	25-30	< 0.0023	U	-	0.01	25-30	< 0.0023	U	-	0.01	5-15	< 0.0023	U	-	0.0094	-	-	-	-	-	25-35	< 0.0023	U	-	0.0094	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	25-30	< 0.012	U	-	0.025	25-30	< 0.012	U	-	0.025	5-15	0.044	-	-	0.024	-	-	-	-	-	25-35	0.062	-	-	0.024	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	25-30	< 0.0022	U	-	0.005	25-30	< 0.0022	U	-	0.005	5-15	< 0.0022	U	-	0.0047	-	-	-	-	-	25-35	< 0.0022	U	-	0.0047	-	-	-	-	-
Metals - SW6010C																																
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																
Antimony	7440-36-0	0.006	mg/l	25-30	< 0.0022	U	-	0.0022	25-30	0.0016	J	-	0.0022	-	-	-	-	-	5-15	< 0.0022	U	-	0.0022	-	-	-	-	-	25-35	< 0.0022	U	-	0.0022
Arsenic	7440-38-2	0.01	mg/l	25-30	0.0023	J	-	0.0033	25-30	0.002	J	-	0.0033	-	-	-	-	-	5-15	< 0.0033	U	-	0.0033	-	-	-	-	-	25-35	< 0.0033	U	-	0.0033
Beryllium	7440-41-7	0.004	mg/l	25-30	0.00045	J	-	0.0011	25-30	0.00042	J	-	0.0011	-	-	-	-	-	5-15	0.0015	-	-	0.0011	-	-	-	-	-	25-35	0.0024	-	-	0.0011
Cadmium	7440-43-9	0.005	mg/l	25-30	< 0.0011	U	-	0.0011	25-30	< 0.0011	U	-	0.0011	-	-	-	-	-	5-15	< 0.0011	U	-	0.0011	-	-	-	-	-	25-35	< 0.0011	U	-	0.0011
Chromium	7440-47-3	0.1	mg/l	25-30	< 0.0022	U	-	0.0022	25-30	0.00084	J	B	0.0022	-	-	-	-	-	5-15	0.0014	J	-	0.0022	-	-	-	-	-	25-35	0.0012	J	-	0.0022
Cobalt	7440-48-4	NE	mg/l	25-30	0.0093	-	-	0.0056	25-30	0.0093	-	-	0.0056	-	-	-	-	-	5-15	0.017	-	-	0.0056	-	-	-	-	-	25-35	0.027	-	-	0.0056
Copper	7440-50-8	1.3	mg/l	25-30	< 0.0056	U	-	0.0056	25-30	< 0.0056	U	-	0.0056	-	-	-	-	-	5-15	< 0.0056	U	-	0.0056	-	-	-	-	-	25-35	0.0019	J	-	0.0056
Lead	7439-92-1	0.015	mg/l	25-30	< 0.0022	U	-	0.0022	25-30	< 0.0022	U	-	0.0022	-	-	-	-	-	5-15	< 0.0022	U	-	0.0022	-	-	-	-	-	25-35	< 0.0022	U	-	0.0022
Nickel	7440-02-0	0.073	mg/l	25-30	0.012	-	-	0.0056	25-30	0.013	-	-	0.0056	-	-	-	-	-	5-15	0.038	-	-	0.0056	-	-	-	-	-	25-35	0.048	-	-	0.0056
Selenium	7782-49-2	0.05	mg/l	25-30	< 0.0056	U	-	0.0056	25-30	< 0.0056	U	-	0.0056	-	-	-	-	-	5-15	< 0.0056	U	-	0.0056	-	-	-	-	-	25-35	< 0.0056	U	-	0.0056
Silver	7440-22-4	0.1	mg/l	25-30	< 0.0022	U	-	0.0022	25-30	< 0.0022	U	-	0.0022	-	-	-	-	-	5-15	< 0.0022	U	-	0.0022	-	-	-	-	-	25-35	< 0.0022	U	-	0.0022
Thallium	7440-28-0	0.002	mg/l	25-30	< 0.0011	U	-	0.0011	25-30	< 0.0011	U	-	0.0011	-	-	-	-	-	5-15	< 0.0011	U	-	0.0011	-	-	-	-	-	25-35	< 0.0011	U	-	0.0011
Zinc	7440-66-6	5	mg/l	25-30	0.038	-	-	0.0056	25-30	0.038	-	-	0.0056	-	-	-	-	-	5-15	0.034	-	-	0.0056	-	-	-	-	-	25-35	0.061	-	-	0.0056
Mercury - SW7470A																																
Mercury	7439-97-6	0.002	mg/l	25-30	< 0.00050	U	-	0.0005	25-30	< 0.00050	U	-	0.0005	-	-	-	-	-	5-15	< 0.00050	U	-	0.0005	-	-	-	-	-	25-35	< 0.00050	U	-	0.0005
Hex Chrom - E218.6																																
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	25-30	< 0.25	U	-	0.25	25-30	< 0.25	U	-	0.25	-	-	-	-	-	5-15	0.09	J	-	0.25	-	-	-	-	-	25-35	< 0.25	U	-	0.25
MNA - E300.0																																
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite as N	14797-65-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	NE	mg/l	-	-	-	-	-	-	-	-	-

Sample ID	MRC-MW126A							MRC-MW126A							MRC-MW126A							MRC-MW126B							MRC-MW127A							MRC-MW127B						
Collection Date	4/5/2018							4/5/2018							4/6/2018							4/6/2018							4/10/2018							4/10/2018						
Block ID	E							E							E							E							E							E						
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																										
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	0.41	J	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	0.35	J	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	153	-	-	2	17.8-22.8	5.1	-	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	8.7	-	-	2	29-39	< 2.0	U	-	2	5-15	269	-	-	10	17.8-22.8	19.9	-	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 7.0	U	-	7	29-39	< 7.0	U	-	7	5-15	< 7.0	U	-	7	17.8-22.8	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	0.96	J	-	1	29-39	< 1.0	U	-	1	5-15	7.6	-	-	1	17.8-22.8	0.4	J	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	0.43	J	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	19.3	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	6.1	-	-	1	29-39	< 1.0	U	-	1	5-15	13.2	-	-	1	17.8-22.8	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	6.3	-	-	1	29-39	< 1.0	U	-	1	5-15	17.2	-	-	1	17.8-22.8	0.5	J	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 10.0	U	-	10	29-39	< 10.0	U	-	10	5-15	< 10.0	U	-	10	17.8-22.8	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 5.0	U	-	5	29-39	< 5.0	U	-	5	5-15	< 5.0	U	-	5	17.8-22.8	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 5.0	U	-	5	29-39	< 5.0	U	-	5	5-15	< 5.0	U	-	5	17.8-22.8	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 10.0	U	-	10	29-39	5.4	J	-	10	5-15	9.5	J	-	10	17.8-22.8	9	J	-	10
Benzene	71-43-2	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	0.33	J	-	1	29-39	< 1.0	U	-	1	5-15	0.48	J	-	1	17.8-22.8	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	0.56	J	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	39.7	-	-	1	29-39	0.2	J	-	1	5-15	13.4	-	-	1	17.8-22.8	0.2	J	-	1
Chloroethane	75-00-3	3.6	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	18	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 5.0	U	-	5	29-39	< 5.0	U	-	5	5-15	< 5.0	U	-	5	17.8-22.8	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	5.7	-	-	1
Methylcyclohexane	108-87-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	0.89	J	-	2	17.8-22.8	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 10.0	U	-	10	29-39	< 10.0	U	-	10	5-15	< 10.0	U	-	10	17.8-22.8	4	J	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 2.0	U	-	2	29-39	< 2.0	U	-	2	5-15	< 2.0	U	-	2	17.8-22.8	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	1.3	-	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	5.7	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	0.96	J	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 5.0	U	-	5	29-39	< 5.0	U	-	5	5-15	< 5.0	U	-	5	17.8-22.8	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 1.0	U	-	1	29-39	< 1.0	U	-	1	5-15	< 1.0	U	-	1	17.8-22.8	0.8	J	-	1
Total Xylenes	1330-20-7	10000	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 3.0	U	-	3	29-39	< 3.0	U	-	3	5-15	< 3.0	U	-	3	17.8-22.8	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																									
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	0.66	-	-	0.095	29-39	< 0.094	U	-	0.094	5-15	< 0.097	U	-	0.097	17.8-22.8	0.084	J	-	0.096
PCB Homologs - E680																																									
Decachlorobiphenyl	2051-24-3	NE	ug/l	7-17	< 0.012	U	-	0.024	7-17	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	< 0.012	U	-	0.025	17.8-22.8	< 0.012	U	-	0.025
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	7-17	0.0019	J	-	0.0047	7-17	< 0.0016	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	0.016	-	B	0.005	17.8-22.8	0.005	-	B	0.005
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	7-17	< 0.0090	U	-	0.014	7-17	< 0.0090	U	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	< 0.0090	U	-	0.015	17.8-22.8	< 0.0090	U	-	0.015
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	7-17	< 0.0047	U	-	0.0094	7-17	< 0.0047	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	< 0.0047	U	-	0.01	17.8-22.8	< 0.0047	U	-	0.01
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	7-17	< 0.00059	U	-	0.0047	7-17	< 0.00059	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	0.017	-	B	0.005	17.8-22.8	0.0035	J	B	0.005
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	7-17	< 0.0088	U	-	0.019	7-17	< 0.0088	U	-	0.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	< 0.0088	U	-	0.02	17.8-22.8	< 0.0088	U	-	0.02
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	7-17	< 0.0099	U	-	0.014	7-17	< 0.0099	U	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	< 0.0099	U	-	0.015	17.8-22.8	< 0.0099	U	-	0.015
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	7-17	< 0.0043	U	-	0.0094	7-17	< 0.0043	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	0.012	-	-	0.01	17.8-22.8	< 0.0043	U	-	0.01
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	7-17	< 0.0023	U	-	0.0094	7-17	< 0.0023	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	< 0.0023	U	-	0.01	17.8-22.8	< 0.0023	U	-	0.01
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	7-17	< 0.012	U	-	0.024	7-17	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	0.044	-	-	0.025	17.8-22.8	< 0.012	U	-	0.025
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	7-17	< 0.0022	U	-	0.0047	7-17	< 0.0022	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5-15	< 0.0022	U	-	0.005	17.8-22.8	< 0.0022	U	-	0.005
Metals - SW6010C																																									
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																									
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0022	U	-	0.0022	29-39	< 0.0022	U	-	0.0022	5-15	< 0.0022	U	-	0.0022	17.8-22.8	< 0.0022	U	-	0.0022
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0011	J	-	0.0033	29-39	0.0015	J	-	0.0033	5-15	< 0.0033	U	-	0.0033	17.8-22.8	< 0.0033	U	-	0.0033
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0011	U	-	0.0011	29-39	< 0.0011	U	-	0.0011	5-15	0.0015	-	-	0.0011	17.8-22.8	0.013	-	-	0.0011
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0011	U	-	0.0011	29-39	< 0.0011	U	-	0.0011	5-15	< 0.0011	U	-	0.0011	17.8-22.8	< 0.0011	U	-	0.0011
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0013	J	-	0.0022	29-39	0.0021	J	-	0.0022	5-15	0.00082	J	B	0.0022	17.8-22.8	0.00086	J	B	0.0022
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0051	J	-	0.0056	29-39	0.022	-	-	0.0056	5-15	0.024	-	-	0.0056	17.8-22.8	0.062	-	-	0.0056
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0044	J	-	0.0056	29-39	0.0027	J	-	0.0056	5-15	0.0025	J	B	0.0056	17.8-22.8	< 0.0056	U	-	0.0056
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0022	U	-	0.0022	29-39	< 0.0022	U	-	0.0022	5-15	< 0.0022	U	-	0.0022	17.8-22.8	< 0.0022	U	-	0.0022
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0056	U	-	0.0056	29-39	0.02	-	-	0.0056	5-15	0.015	-	-	0.0056	17.8-22.8	0.086	-	-	0.0056
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0056	U	-	0.0056	29-39	< 0.0056	U	-	0.0056	5-15	< 0.0056	U	-	0.0056	17.8-22.8	< 0.0056	U	-	0.0056
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0022	U	-	0.0022	29-39	< 0.0022	U	-	0.0022	5-15	< 0.0022	U	-	0.0022	17.8-22.8	< 0.0022	U	-	0.0022
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0011	U	-	0.0011	29-39	< 0.0011	U	-	0.0011	5-15	< 0.0011	U	-	0.0011	17.8-22.8	< 0.0011	U	-	0.0011
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.015	-	B	0.0056	29-39	0.028	-	-

Appendix E – 2018 Groundwater Analytical Results

Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Sample ID				MRC-MW128A					MRC-MW128B					MRC-MW129A					MRC-MW129B					MRC-MW12A					MRC-MW12B				
Collection Date				4/10/2018					4/11/2018					4/11/2018					4/11/2018					4/9/2018					4/9/2018				
Block ID				E					E					E					E					E					A				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	9-19	0.49	J	-	1	24.5-29.5	0.72	J	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	3.4	-	-	1	20-30	9.2	-	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	0.36	J	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	6.8	-	-	1	20-30	2.1	-	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	9-19	76.3	-	-	2	24.5-29.5	13.6	-	-	2	9-19	3.4	-	-	2	25-30	1.4	J	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	9-19	226	-	-	10	24.5-29.5	53.8	-	-	2	9-19	36.8	-	-	2	25-30	7	-	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	9-19	< 7.0	U	-	7	24.5-29.5	< 7.0	U	-	7	9-19	< 7.0	U	-	7	25-30	< 7.0	U	-	7	4-14	< 7.0	U	-	7	20-30	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	9-19	2.3	-	-	1	24.5-29.5	2.2	-	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	2.1	-	-	1	20-30	0.51	J	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	9-19	9.8	-	-	2	24.5-29.5	33.1	-	-	2	9-19	4	-	-	2	25-30	3.1	-	-	2	4-14	9.5	-	-	2	20-30	7.7	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	9-19	2.6	-	-	1	24.5-29.5	< 1.0	U	-	1	9-19	18.7	-	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	9-19	3.8	-	-	1	24.5-29.5	2.9	-	-	1	9-19	1.9	-	-	1	25-30	0.78	J	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	9-19	< 10.0	U	-	10	24.5-29.5	< 10.0	U	-	10	9-19	< 10.0	U	-	10	25-30	< 10.0	U	-	10	4-14	< 10.0	U	-	10	20-30	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	9-19	< 5.0	U	-	5	24.5-29.5	< 5.0	U	-	5	9-19	< 5.0	U	-	5	25-30	< 5.0	U	-	5	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	9-19	< 5.0	U	-	5	24.5-29.5	< 5.0	U	-	5	9-19	< 5.0	U	-	5	25-30	< 5.0	U	-	5	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	9-19	6	J	-	10	24.5-29.5	70.6	-	-	10	9-19	7.4	J	-	10	25-30	5.3	J	-	10	4-14	4.4	J	-	10	20-30	3.4	J	-	10
Benzene	71-43-2	5	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	5.5	-	-	1	20-30	2	-	-	1
Bromobenzene	108-86-1	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	0.34	J	-	1	9-19	< 1.0	U	-	1	25-30	0.27	J	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	9-19	0.25	J	-	1	24.5-29.5	< 1.0	U	-	1	9-19	0.23	J	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	15.1	-	-	1	20-30	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	0.3	J	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	9-19	9	-	-	1	24.5-29.5	31.1	-	-	1	9-19	4	-	-	1	25-30	3.1	-	-	1	4-14	8.8	-	-	1	20-30	7.4	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	9-19	< 5.0	U	-	5	24.5-29.5	< 5.0	U	-	5	9-19	< 5.0	U	-	5	25-30	< 5.0	U	-	5	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	9-19	8.1	-	-	1	24.5-29.5	16	-	-	1	9-19	2.4	-	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	9-19	2.4	J	-	10	24.5-29.5	18.3	-	-	10	9-19	< 10.0	U	-	10	25-30	< 10.0	U	-	10	4-14	< 10.0	U	-	10	20-30	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	9-19	< 2.0	U	-	2	24.5-29.5	< 2.0	U	-	2	9-19	< 2.0	U	-	2	25-30	< 2.0	U	-	2	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	0.31	J	-	1	20-30	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	9-19	0.84	J	-	1	24.5-29.5	2	-	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	0.66	J	-	1	20-30	0.28	J	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	9-19	2.6	-	-	1	24.5-29.5	7	-	-	1	9-19	< 1.0	U	-	1	25-30	2.9	-	-	1	4-14	28.7	-	-	1	20-30	9.9	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	9-19	< 1.0	U	-	1	24.5-29.5	< 1.0	U	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	9-19	< 5.0	U	-	5	24.5-29.5	< 5.0	U	-	5	9-19	< 5.0	U	-	5	25-30	< 5.0	U	-	5	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	9-19	0.53	J	-	1	24.5-29.5	1.9	-	-	1	9-19	< 1.0	U	-	1	25-30	< 1.0	U	-	1	4-14	5.1	-	-	1	20-30	10.3	-	-	1
Total Xylenes	1330-20-7	10000	ug/l	9-19	< 3.0	U	-	3	24.5-29.5	< 3.0	U	-	3	9-19	< 3.0	U	-	3	25-30	< 3.0	U	-	3	4-14	< 3.0	U	-	3	20-30	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																
1,4-Dioxane	123-91-1	0.46[b]	ug/l	9-19	0.086	J	-	0.099	24.5-29.5	0.12	-	-	0.099	9-19	0.12	-	-	0.1	25-30	0.09	J	-	0.1	4-14	140	-	-	9.3	20-30	61.9	-	-	4.9
PCB Homologs - E680																																
Decachlorobiphenyl	2051-24-3	NE	ug/l	9-19	< 0.012	U	-	0.025	24.5-29.5	< 0.012	U,*	UJ	0.025	9-19	< 0.012	U,*	UJ	0.025	25-30	< 0.012	U,*	UJ	0.025	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	9-19	0.031	-	B	0.005	24.5-29.5	0.01	*	J	0.005	9-19	0.0065	*	J	0.005	25-30	< 0.0016	U,*	UJ	0.005	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	9-19	< 0.0090	U	-	0.015	24.5-29.5	< 0.0090	U,*	UJ	0.015	9-19	< 0.0090	U,*	UJ	0.015	25-30	< 0.0090	U,*	UJ	0.015	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	9-19	0.012	-	-	0.01	24.5-29.5	< 0.0047	U,*	UJ	0.01	9-19	< 0.0047	U,*	UJ	0.01	25-30	< 0.0047	U,*	UJ	0.01	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	9-19	0.033	-	-	0.005	24.5-29.5	0.0085	*	J	0.005	9-19	0.005	*	J	0.005	25-30	0.002	J,*	J	0.005	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	9-19	< 0.0088	U	-	0.02	24.5-29.5	< 0.0088	U,*	UJ	0.02	9-19	< 0.0088	U,*	UJ	0.02	25-30	< 0.0088	U,*	UJ	0.02	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	9-19	< 0.0099	U	-	0.015	24.5-29.5	< 0.0099	U,*	UJ	0.015	9-19	< 0.0099	U,*	UJ	0.015	25-30	< 0.0099	U,*	UJ	0.015	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	9-19	0.16	-	-	0.01	24.5-29.5	< 0.0043	U,*	UJ	0.01	9-19	< 0.0043	U,*	UJ	0.01	25-30	< 0.0043	U,*	UJ	0.01	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	9-19	0.014	-	-	0.01	24.5-29.5	< 0.0023	U,*	UJ	0.01	9-19	< 0.0023	U,*	UJ	0.01	25-30	< 0.0023	U,*	UJ	0.01	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	9-19	0.27	-	-	0.025	24.5-29.5	< 0.012	U,*	UJ	0.025	9-19	< 0.012	U,*	UJ	0.025	25-30	< 0.012	U,*	UJ	0.025	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	9-19	0.019	-	B	0.005	24.5-29.5	< 0.0022	U,*	UJ	0.005	9-19	< 0.0022	U,*	UJ	0.005	25-30	< 0.0022	U,*	UJ	0.005	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4-14	11.8	-	-	0.11	20-30	10	-	-	0.11
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4-14	74.2	-	-	0.067	20-30	61.9	-	-	0.067
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4-14	12.1	-	-	0.11	20-30	9.5	-	-	0.11
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4-14	3.9	-	-	0.0056	20-30	3.4	-	-	0.0056
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4-14	2.8	-	-	0.56	20-30	3	-	-	0.56
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4-14	14.7	-	-	0.24	20-30	10.8	-	-	0.24
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4-14	29.2	-	-	0.56	20-30	19.3	-	-	0.56
Metals - SW6020																																
Antimony	7440-36-0	0.006	mg/l	9-19	< 0.0022	U	-	0.0022	24.5-29.5	< 0.0022	U	-	0.0022	9-19	< 0.0022	U	-	0.0022	25-30	< 0.0022	U	-	0.0022	4-14	< 0.0022	U	-	0.0022	20-30	< 0.0022	U	-	0.0022
Arsenic	7440-38-2	0.01	mg/l	9-19	< 0.0033	U	-	0.0033	24.5-29.5	< 0.0033	U	-	0.0033	9-19	< 0.0033	U	-	0.0033	25-30	< 0.0033	U	-	0.0033	4-14	0.0029

Sample ID				MRC-MW12C					MRC-MW130A					MRC-MW130A-D					MRC-MW130B					MRC-MW131B					MRC-MW131B-D				
Collection Date				4/10/2018					4/11/2018					4/11/2018					4/11/2018					4/11/2018					4/11/2018				
Block ID				A					E					E					E					I					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	6.4	-	-	5	28.3-38.3	5.8	-	-	5
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	65-75	< 2.0	U	-	2	9-14	14.6	-	-	2	9-14	13.9	-	-	2	25-30	3.7	-	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	65-75	< 2.0	U	-	2	9-14	80.5	-	-	2	9-14	80.7	-	-	2	25-30	11.3	-	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	65-75	< 7.0	U	-	7	9-14	< 7.0	U	-	7	9-14	< 7.0	U	-	7	25-30	< 7.0	U	-	7	28.3-38.3	< 7.0	U	-	7	28.3-38.3	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	65-75	< 1.0	U	-	1	9-14	1	-	-	1	9-14	1	-	-	1	25-30	2.1	-	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	65-75	< 2.0	U	-	2	9-14	3.3	-	-	2	9-14	3.7	-	-	2	25-30	1.3	J	-	2	28.3-38.3	317	-	-	10	28.3-38.3	276	-	-	10
1,2-Dichloropropane	78-87-5	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	65-75	< 1.0	U	-	1	9-14	10.6	-	-	1	9-14	10.6	-	-	1	25-30	1.5	-	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	65-75	< 1.0	U	-	1	9-14	2.4	-	-	1	9-14	2.5	-	-	1	25-30	10.6	-	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	65-75	< 10.0	U	-	10	9-14	< 10.0	U	-	10	9-14	< 10.0	U	-	10	25-30	< 10.0	U	-	10	28.3-38.3	< 10.0	U	-	10	28.3-38.3	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	65-75	< 5.0	U	-	5	9-14	< 5.0	U	-	5	9-14	< 5.0	U	-	5	25-30	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	65-75	< 5.0	U	-	5	9-14	< 5.0	U	-	5	9-14	< 5.0	U	-	5	25-30	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	65-75	< 10.0	U	-	10	9-14	10.8	-	-	10	9-14	3.6	J	-	10	25-30	9.4	J	-	10	28.3-38.3	4.9	J	-	10	28.3-38.3	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	2.8	-	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	1.2	-	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	65-75	< 1.0	U	-	1	9-14	3.3	-	-	1	9-14	3.3	-	-	1	25-30	1.3	-	-	1	28.3-38.3	304	-	-	5	28.3-38.3	264	-	-	5
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	65-75	< 5.0	U	-	5	9-14	< 5.0	U	-	5	9-14	< 5.0	U	-	5	25-30	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	65-75	< 1.0	U	-	1	9-14	3.2	-	-	1	9-14	3.1	-	-	1	25-30	0.96	J	-	1	28.3-38.3	0.47	J	-	1	28.3-38.3	0.46	J	-	1
Methylcyclohexane	108-87-2	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	65-75	< 10.0	U	-	10	9-14	< 10.0	U	-	10	9-14	< 10.0	U	-	10	25-30	< 10.0	U	-	10	28.3-38.3	< 10.0	U	-	10	28.3-38.3	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	65-75	< 2.0	U	-	2	9-14	< 2.0	U	-	2	9-14	< 2.0	U	-	2	25-30	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2	28.3-38.3	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	0.37	J	-	1	25-30	< 1.0	U	-	1	28.3-38.3	14.3	-	-	1	28.3-38.3	13.7	-	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	0.91	J	-	1	28.3-38.3	59.1	-	-	1	28.3-38.3	52.1	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1	28.3-38.3	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	65-75	< 5.0	U	-	5	9-14	< 5.0	U	-	5	9-14	< 5.0	U	-	5	25-30	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5	28.3-38.3	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	65-75	< 1.0	U	-	1	9-14	< 1.0	U	-	1	9-14	< 1.0	U	-	1	25-30	< 1.0	U	-	1	28.3-38.3	9	-	-	1	28.3-38.3	8.2	-	-	1
Total Xylenes	1330-20-7	10000	ug/l	65-75	< 3.0	U	-	3	9-14	< 3.0	U	-	3	9-14	< 3.0	U	-	3	25-30	< 3.0	U	-	3	28.3-38.3	< 3.0	U	-	3	28.3-38.3	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	65-75	< 0.093	U	-	0.093	9-14	0.048	J	-	0.1	9-14	0.056	J	-	0.1	25-30	0.093	J	-	0.1	28.3-38.3	6.7	-	-	0.97	28.3-38.3	6.7	-	-	0.98
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	9-14	< 0.012	U	-	0.025	9-14	< 0.012	U	-	0.025	25-30	< 0.012	U	-	0.025	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	9-14	0.004	J	B	0.005	9-14	0.008	-	B	0.005	25-30	< 0.0016	U	-	0.005	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	9-14	< 0.0090	U	-	0.015	9-14	< 0.0090	U	-	0.015	25-30	< 0.0090	U	-	0.015	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	9-14	< 0.0047	U	-	0.01	9-14	< 0.0047	U	-	0.01	25-30	0.005	J	-	0.01	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	9-14	0.01	-	B	0.005	9-14	0.011	-	B	0.005	25-30	0.011	-	B	0.005	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	9-14	< 0.0088	U	-	0.02	9-14	< 0.0088	U	-	0.02	25-30	< 0.0088	U	-	0.02	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	9-14	< 0.0099	U	-	0.015	9-14	< 0.0099	U	-	0.015	25-30	< 0.0099	U	-	0.015	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	9-14	< 0.0043	U	-	0.01	9-14	< 0.0043	U	-	0.01	25-30	< 0.0043	U	-	0.01	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	9-14	< 0.0023	U	-	0.01	9-14	< 0.0023	U	-	0.01	25-30	< 0.0023	U	-	0.01	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	9-14	< 0.012	U	-	0.025	9-14	< 0.012	U	-	0.025	25-30	< 0.012	U	-	0.025	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	9-14	< 0.0022	U	-	0.005	9-14	< 0.0022	U	-	0.005	25-30	< 0.0022	U	-	0.005	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	65-75	< 0.0022	U	-	0.0022	9-14	< 0.0022	U	-	0.0022	9-14	< 0.0022	U	-	0.0022	25-30	< 0.0022	U	-	0.0022	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	65-75	0.0016	J	-	0.0033	9-14	< 0.0033	U	-	0.0033	9-14	< 0.0033	U	-	0.0033	25-30	< 0.0033	U	-	0.0033	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	65-75	0.00072	J	-	0.0011	9-14	0.0054	-	-	0.0011	9-14	0.0054	-	-	0.0011	25-30	< 0.0011	U	-

Sample ID				MRC-MW13A					MRC-MW14B					MRC-MW15A					MRC-MW102B					MRC-MW17A					MRC-MW18A				
Collection Date				4/10/2018					4/4/2018					4/9/2018					4/9/2018					4/10/2018					4/11/2018				
Block ID				B					G					I					I					A					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	4-14	1.2	-	-	1	20-25	7.5	-	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	0.3	J	-	1	16-26	0.52	J	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	4-14	0.49	J	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	1.5	-	-	1	9-19	< 1.0	U	-	1	16-26	2.6	-	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	< 2.0	U	-	2	16-26	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	< 2.0	U	-	2	16-26	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	1.3	J	-	2	16-26	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	2.4	-	-	1	16-26	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	4-14	< 7.0	U	-	7	20-25	< 7.0	U	-	7	-	-	-	-	-	26-36	< 7.0	U	-	7	9-19	< 7.0	U	-	7	16-26	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	4-14	< 1.0	U	-	1	20-25	1.2	-	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	0.99	J	-	1	16-26	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	4-14	3.1	-	-	2	20-25	1.2	J	-	2	-	-	-	-	-	26-36	371	-	-	20	9-19	1.2	J	-	2	16-26	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	< 2.0	U	-	2	16-26	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	4-14	< 10.0	U	-	10	20-25	< 10.0	U	-	10	-	-	-	-	-	26-36	< 10.0	U	-	10	9-19	< 10.0	U	-	10	16-26	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	< 2.0	U	-	2	16-26	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	4-14	< 5.0	U	-	5	20-25	< 5.0	U	-	5	-	-	-	-	-	26-36	< 5.0	U	-	5	9-19	< 5.0	U	-	5	16-26	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	0.6	J	-	1	16-26	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	4-14	< 5.0	U	-	5	20-25	< 5.0	U	-	5	-	-	-	-	-	26-36	< 5.0	U	-	5	9-19	< 5.0	U	-	5	16-26	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	4-14	7	J	-	10	20-25	7.2	J	-	10	-	-	-	-	-	26-36	7.6	J	-	10	9-19	< 10.0	U	-	10	16-26	10.1	-	-	10
Benzene	71-43-2	5	ug/l	4-14	0.27	J	-	1	20-25	23.2	-	-	1	-	-	-	-	-	26-36	0.31	J	-	1	9-19	180	-	-	1	16-26	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	4-14	< 1.0	U	-	1	20-25	23.3	-	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	4-14	2.5	-	-	1	20-25	0.45	J	-	1	-	-	-	-	-	26-36	367	-	-	10	9-19	1.2	-	-	1	16-26	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	35.9	-	-	1	16-26	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	8.4	-	-	1	16-26	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	60.1	-	-	1	16-26	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	4-14	< 5.0	U	-	5	20-25	< 5.0	U	-	5	-	-	-	-	-	26-36	< 5.0	U	-	5	9-19	< 5.0	U	-	5	16-26	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	4-14	< 1.0	U	-	1	20-25	0.65	J	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	4.1	-	-	1	16-26	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	< 2.0	U	-	2	16-26	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	0.99	J	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	24.6	-	-	2	16-26	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	6.1	-	-	2	16-26	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	< 2.0	U	-	2	16-26	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	7.4	-	-	1	16-26	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	2	-	-	1	16-26	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	4-14	< 10.0	U	-	10	20-25	< 10.0	U	-	10	-	-	-	-	-	26-36	< 10.0	U	-	10	9-19	4.1	J	-	10	16-26	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	4-14	< 2.0	U	-	2	20-25	< 2.0	U	-	2	-	-	-	-	-	26-36	< 2.0	U	-	2	9-19	< 2.0	U	-	2	16-26	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	4-14	< 1.0	U	-	1	20-25	0.23	J	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	28.8	-	-	1	16-26	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	4-14	0.58	J	-	1	20-25	0.79	J	-	1	-	-	-	-	-	26-36	3	-	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	4-14	2.2	-	-	1	20-25	0.67	J	-	1	-	-	-	-	-	26-36	84.4	-	-	1	9-19	8	-	-	1	16-26	< 1.0	U	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	4-14	< 1.0	U	-	1	20-25	< 1.0	U	-	1	-	-	-	-	-	26-36	< 1.0	U	-	1	9-19	0.35	J	-	1	16-26	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	4-14	< 5.0	U	-	5	20-25	< 5.0	U	-	5	-	-	-	-	-	26-36	< 5.0	U	-	5	9-19	< 5.0	U	-	5	16-26	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	4-14	1.5	-	-	1	20-25	0.66	J	-	1	-	-	-	-	-	26-36	0.36	J	-	1	9-19	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	4-14	< 3.0	U	-	3	20-25	< 3.0	U	-	3	-	-	-	-	-	26-36	< 3.0	U	-	3	9-19	26.6	-	-	3	16-26	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	4-14	1.7	-	-	0.094	20-25	113	-	-	9.7	3-13	9.7	-	-	0.97	26-36	1.2	-	-	0.096	9-19	1.8	-	-	0.093	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																	
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																	
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																	
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite as N	14797-65-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E365.1																																	
Phosphorus	7723-14-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A2320																																	
Total Alkalinity (as CaCO3)	ALK	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A4500E																																	
Orthophosphate	14265-44-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - D6919-09																																	
Nitrogen, ammonia (as N)	7664-41-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID				MRC-MW20A					MRC-MW21A					MRC-MW21B					MRC-MW22B					MRC-MW25A					MRC-MW27A				
Collection Date				4/6/2018					4/6/2018					4/6/2018					4/9/2018					4/9/2018					4/10/2018				
Block ID				H					I					G					I					I					E				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	15-25	< 1.0	U	-	1	6-16	2.7	-	-	1	24-34	20	-	-	1	27-37	1.7	-	-	1	20-30	0.37	J	-	1	8.5-18.5	2.1	-	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	15-25	< 1.0	U	-	1	6-16	3.1	-	-	1	24-34	205	-	-	20	27-37	5.3	-	-	1	20-30	1	J	-	1	8.5-18.5	2.2	-	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	15-25	< 7.0	U	-	7	6-16	< 7.0	U	-	7	24-34	< 7.0	U	-	7	27-37	< 7.0	U	-	7	20-30	< 7.0	U	-	7	8.5-18.5	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	15-25	< 2.0	U	-	2	6-16	0.54	J	-	2	24-34	8.5	-	-	2	27-37	< 2.0	U	-	2	20-30	8.4	-	-	2	8.5-18.5	51.5	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	15-25	< 10.0	U	-	10	6-16	< 10.0	U	-	10	24-34	< 10.0	U	-	10	27-37	< 10.0	U	-	10	20-30	< 10.0	U	-	10	8.5-18.5	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	15-25	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24-34	< 5.0	U	-	5	27-37	< 5.0	U	-	5	20-30	< 5.0	U	-	5	8.5-18.5	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	15-25	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24-34	< 5.0	U	-	5	27-37	< 5.0	U	-	5	20-30	< 5.0	U	-	5	8.5-18.5	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	15-25	< 10.0	U	-	10	6-16	5.8	J	-	10	24-34	< 10.0	U	-	10	27-37	< 10.0	U	-	10	20-30	5.5	J	-	10	8.5-18.5	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	28.8	-	-	1	27-37	< 1.0	U	-	1	20-30	0.81	J	-	1	8.5-18.5	1.3	-	-	1
Bromobenzene	108-86-1	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	15-25	< 1.0	U	-	1	6-16	0.54	J	-	1	24-34	8.5	-	-	1	27-37	< 1.0	U	-	1	20-30	8.4	-	-	1	8.5-18.5	48.2	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	1.3	-	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	0.97	J	-	1
Cymene	99-87-6	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	0.98	J	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	15-25	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24-34	< 5.0	U	-	5	27-37	< 5.0	U	-	5	20-30	< 5.0	U	-	5	8.5-18.5	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	15	-	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	19.4	-	-	1
Methylcyclohexane	108-87-2	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	15-25	< 10.0	U	-	10	6-16	< 10.0	U	-	10	24-34	< 10.0	U	-	10	27-37	< 10.0	U	-	10	20-30	< 10.0	U	-	10	8.5-18.5	27.7	-	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	15-25	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24-34	< 2.0	U	-	2	27-37	< 2.0	U	-	2	20-30	< 2.0	U	-	2	8.5-18.5	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	15-25	< 1.0	U	-	1	6-16	0.43	J	-	1	24-34	8.7	-	-	1	27-37	0.4	J	-	1	20-30	0.44	J	-	1	8.5-18.5	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	3.3	-	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	15-25	< 1.0	U	-	1	6-16	2.8	-	-	1	24-34	522	-	-	20	27-37	2.3	-	-	1	20-30	179	-	-	1	8.5-18.5	141	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	15-25	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24-34	< 1.0	U	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	15-25	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24-34	< 5.0	U	-	5	27-37	< 5.0	U	-	5	20-30	< 5.0	U	-	5	8.5-18.5	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	15-25	< 1.0	U	-	1	6-16	0.39	J	-	1	24-34	0.88	J	-	1	27-37	< 1.0	U	-	1	20-30	< 1.0	U	-	1	8.5-18.5	15.3	-	-	1
Total Xylenes	1330-20-7	10000	ug/l	15-25	< 3.0	U	-	3	6-16	< 3.0	U	-	3	24-34	< 3.0	U	-	3	27-37	< 3.0	U	-	3	20-30	< 3.0	U	-	3	8.5-18.5	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	15-25	1.7	-	-	1	6-16	0.46	-	-	0.1	24-34	19.3	-	-	0.94	27-37	4.5	-	-	0.48	20-30	1.1	-	-	0.096	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	43.4	-	-	0.11	8.5-18.5	19.4	-	-	0.11
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	25.5	-	-	0.067	8.5-18.5	116	-	-	0.067
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	8.7	-	-	0.11	8.5-18.5	36.6	-	-	0.11
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	4.7	-	-	0.0056	8.5-18.5	41.1	-	-	0.0056
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	6	-	-	0.56	8.5-18.5	3.2	-	-	0.56
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	10.1	-	-	0.24	8.5-18.5	11.1	-	-	0.24
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	452	-	-	0.56	8.5-18.5	347	-	-	0.56
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-

Sample ID				MRC-MW27B					MRC-MW27C					MRC-MW29A					MRC-MW32A					MRC-MW33A					MRC-MW34A				
Collection Date				4/10/2018					4/10/2018					4/11/2018					4/10/2018					4/10/2018					4/12/2018				
Block ID				E					E					E					E					E					F				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	30-40	5.2	-	-	1	67-77	< 1.0	U	-	1	5-15	4.4	-	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	30-40	8.9	-	-	1	67-77	< 1.0	U	-	1	5-15	3	-	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	30-40	< 7.0	U	-	7	67-77	< 7.0	U	-	7	5-15	< 7.0	U	-	7	4-14	< 7.0	U	-	7	4-14	< 7.0	U	-	7	4-14	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	30-40	265	-	-	20	67-77	< 2.0	U	-	2	5-15	4.3	-	-	2	4-14	< 2.0	U	-	2	4-14	1.3	J	-	2	4-14	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	30-40	< 10.0	U	-	10	67-77	< 10.0	U	-	10	5-15	< 10.0	U	-	10	4-14	< 10.0	U	-	10	4-14	< 10.0	U	-	10	4-14	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	30-40	< 5.0	U	-	5	67-77	< 5.0	U	-	5	5-15	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	30-40	< 5.0	U	-	5	67-77	< 5.0	U	-	5	5-15	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	30-40	4.5	J	-	10	67-77	3.6	J	-	10	5-15	8	J	-	10	4-14	4.2	J	-	10	4-14	4.9	J	-	10	4-14	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	30-40	0.51	J	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	30-40	257	-	-	10	67-77	< 1.0	U	-	1	5-15	4.3	-	-	1	4-14	< 1.0	U	-	1	4-14	1.3	-	-	1	4-14	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	30-40	< 5.0	U	-	5	67-77	< 5.0	U	-	5	5-15	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	30-40	2.9	-	-	1	67-77	< 1.0	U	-	1	5-15	3.9	-	-	1	4-14	< 1.0	U	-	1	4-14	1.9	-	-	1	4-14	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	30-40	< 10.0	U	-	10	67-77	< 10.0	U	-	10	5-15	5.4	J	-	10	4-14	< 10.0	U	-	10	4-14	< 10.0	U	-	10	4-14	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	30-40	< 2.0	U	-	2	67-77	< 2.0	U	-	2	5-15	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2	4-14	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	30-40	0.54	J	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	30-40	3.3	-	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	30-40	590	-	-	10	67-77	< 1.0	U	-	1	5-15	10.6	-	-	1	4-14	0.74	J	-	1	4-14	1.2	-	-	1	4-14	18.4	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	30-40	< 1.0	U	-	1	67-77	< 1.0	U	-	1	5-15	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	30-40	< 5.0	U	-	5	67-77	< 5.0	U	-	5	5-15	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5	4-14	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	30-40	6.2	-	-	1	67-77	< 1.0	U	-	1	5-15	0.7	J	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	30-40	< 3.0	U	-	3	67-77	< 3.0	U	-	3	5-15	< 3.0	U	-	3	4-14	< 3.0	U	-	3	4-14	< 3.0	U	-	3	4-14	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	30-40	1.4	-	-	0.099	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	30-40	8.8	-	-	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	30-40	1.9	-	-	0.067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	30-40	3.7	-	-	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	30-40	0.13	-	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	30-40	5	-	-	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	30-40	8.6	-	-	0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	30-40	48.9	-	-	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																	
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																	
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0															

Sample ID				MRC-MW34B					MRC-MW34C					MRC-MW37A					MRC-MW37B					MRC-MW37C					MRC-MW38A				
Collection Date				4/11/2018					4/11/2018					4/13/2018					4/13/2018					4/13/2018					4/11/2018				
Block ID				F					D					D					G					G					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	20-30	0.92	J	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	20-30	< 7.0	U	-	7	45-55	< 7.0	U	-	7	7-17	< 7.0	U	-	7	21-31	< 7.0	U	-	7	60-70	< 7.0	U	-	7	4-14	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	20-30	16.6	-	-	2	45-55	< 2.0	U	-	2	7-17	18.3	-	-	2	21-31	42.9	-	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	20-30	< 10.0	U	-	10	45-55	< 10.0	U	-	10	7-17	< 10.0	U	-	10	21-31	< 10.0	U	-	10	60-70	< 10.0	U	-	10	4-14	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	20-30	< 5.0	U	-	5	45-55	< 5.0	U	-	5	7-17	< 5.0	U	-	5	21-31	< 5.0	U	-	5	60-70	< 5.0	U	-	5	4-14	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	20-30	< 5.0	U	-	5	45-55	< 5.0	U	-	5	7-17	< 5.0	U	-	5	21-31	< 5.0	U	-	5	60-70	< 5.0	U	-	5	4-14	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	20-30	< 10.0	U	-	10	45-55	3.4	J	-	10	7-17	< 10.0	U	-	10	21-31	9.4	J	-	10	60-70	7.9	J	-	10	4-14	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	20-30	3.5	-	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	20-30	1.3	-	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	9.6	-	-	1
Chloromethane	74-87-3	19	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	20-30	15.6	-	-	1	45-55	< 1.0	U	-	1	7-17	18	-	-	1	21-31	42	-	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	2	-	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	20-30	< 5.0	U	-	5	45-55	< 5.0	U	-	5	7-17	< 5.0	U	-	5	21-31	< 5.0	U	-	5	60-70	< 5.0	U	-	5	4-14	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	20-30	24.1	-	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	20-30	< 10.0	U	-	10	45-55	< 10.0	U	-	10	7-17	< 10.0	U	-	10	21-31	< 10.0	U	-	10	60-70	< 10.0	U	-	10	4-14	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	20-30	< 2.0	U	-	2	45-55	< 2.0	U	-	2	7-17	< 2.0	U	-	2	21-31	< 2.0	U	-	2	60-70	< 2.0	U	-	2	4-14	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	20-30	1	-	-	1	45-55	< 1.0	U	-	1	7-17	0.27	J	-	1	21-31	0.86	J	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	20-30	15.2	-	-	1	45-55	< 1.0	U	-	1	7-17	423	-	-	10	21-31	72	-	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	20-30	< 1.0	U	-	1	45-55	< 1.0	U	-	1	7-17	< 1.0	U	-	1	21-31	< 1.0	U	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	20-30	< 5.0	U	-	5	45-55	< 5.0	U	-	5	7-17	< 5.0	U	-	5	21-31	< 5.0	U	-	5	60-70	< 5.0	U	-	5	4-14	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	20-30	1.5	-	-	1	45-55	< 1.0	U	-	1	7-17	0.73	J	-	1	21-31	1.1	-	-	1	60-70	< 1.0	U	-	1	4-14	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	20-30	< 3.0	U	-	3	45-55	< 3.0	U	-	3	7-17	< 3.0	U	-	3	21-31	< 3.0	U	-	3	60-70	< 3.0	U	-	3	4-14	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.10	U	-	0.1	21-31	0.2	-	-	0.11	60-70	< 0.10	U	-	0.1	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.012	U	-	0.025	21-31	< 0.012	U	-	0.024	60-70	< 0.012	U	-	0.025	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0016	U	-	0.005	21-31	0.0019	J	B	0.0047	60-70	0.002	J	B	0.0049	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0090	U	-	0.015	21-31	< 0.0090	U	-	0.014	60-70	< 0.0090	U	-	0.015	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0065	-	-	0.01	21-31	< 0.0047	U	-	0.0094	60-70	< 0.0047	U	-	0.0098	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.00059	U	-	0.005	21-31	< 0.00059	U	-	0.0047	60-70	< 0.00059	U	-	0.0049	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0088	U	-	0.02	21-31	< 0.0088	U	-	0.019	60-70	< 0.0088	U	-	0.02	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0099	U	-	0.015	21-31	< 0.0099	U	-	0.014	60-70	< 0.0099	U	-	0.015	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	0.01	-	-	0.01	21-31	< 0.0043	U	-	0.0094	60-70	< 0.0043	U	-	0.0098	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0023	U	-	0.01	21-31	< 0.0023	U	-	0.0094	60-70	< 0.0023	U	-	0.0098	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.012	U	-	0.025	21-31	< 0.012	U	-	0.024	60-70	< 0.012	U	-	0.025	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0022	U	-	0.005	21-31	< 0.0022	U	-	0.0047	60-70	< 0.0022	U	-	0.0049	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	104	-	-	0.11	21-31	8.6	-	-	0.11	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	3.4	-	-	0.067	21-31	0.3	-	-	0.067	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	22.3	-	-	0.11	21-31	4	-	-	0.11	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.025	-	-	0.0056	21-31	0.14	-	-	0.0056	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	7.7	-	-	0.56	21-31	2.7	-	-	0.56	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	10.5	-	-	0.24	21-31	2.9	-	-	0.24	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	11.4	-	-	0.56	21-31	13	-	-	0.56	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0016	J	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0018	J	-	0.0033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.00041	J	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	< 0.0011	U	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0068	-	B	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0029	J	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0032	J	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.0031	J	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	7-17	0.004

Appendix E – 2018 Groundwater Analytical Results

Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Sample ID				MRC-MW38B					MRC-MW41A					MRC-MW43A					MRC-MW44A					MRC-MW48A					MRC-MW50A				
Collection Date				4/12/2018					4/9/2018					4/4/2018					4/5/2018					4/4/2018					4/10/2018				
Block ID				I					G					H					H					I					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	5.2	-	-	1	16-26	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	901	-	-	200	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	3960	-	-	200	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	16-26	< 7.0	U	-	7	6-16	< 7.0	U	-	7	3.5-13.5	< 7.0	U	-	7	3-13	< 7.0	U	-	7	11-21	< 7.0	U	-	7	16-26	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	367	-	-	100	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	5.2	-	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	354	-	-	40	16-26	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	412	-	-	100	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	16-26	< 10.0	U	-	10	6-16	< 10.0	U	-	10	3.5-13.5	< 10.0	U	-	10	3-13	< 10.0	U	-	10	11-21	< 10.0	U	-	10	16-26	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	16-26	< 5.0	U	-	5	6-16	< 5.0	U	-	5	3.5-13.5	< 5.0	U	-	5	3-13	< 5.0	U	-	5	11-21	< 5.0	U	-	5	16-26	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	0.37	J	-	1	16-26	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	16-26	< 5.0	U	-	5	6-16	< 5.0	U	-	5	3.5-13.5	< 5.0	U	-	5	3-13	< 5.0	U	-	5	11-21	< 5.0	U	-	5	16-26	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	16-26	3.5	J	-	10	6-16	6.9	J	-	10	3.5-13.5	4.6	J	-	10	3-13	< 10.0	U	-	10	11-21	< 10.0	U	-	10	16-26	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	0.69	J	-	1	3-13	< 1.0	U	-	1	11-21	0.25	J	-	1	16-26	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	6.7	-	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	354	-	-	20	16-26	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	0.35	J	-	1	16-26	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	16-26	< 5.0	U	-	5	6-16	< 5.0	U	-	5	3.5-13.5	< 5.0	U	-	5	3-13	< 5.0	U	-	5	11-21	< 5.0	U	-	5	16-26	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	0.58	J	-	1	16-26	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	3.8	-	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	16-26	< 10.0	U	-	10	6-16	< 10.0	U	-	10	3.5-13.5	< 10.0	U	-	10	3-13	< 10.0	U	-	10	11-21	< 10.0	U	-	10	16-26	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	16-26	< 2.0	U	-	2	6-16	< 2.0	U	-	2	3.5-13.5	< 2.0	U	-	2	3-13	< 2.0	U	-	2	11-21	< 2.0	U	-	2	16-26	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	0.43	J	-	1	3-13	< 1.0	U	-	1	11-21	11	-	-	1	16-26	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	0.23	J	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	3.5	-	-	1	16-26	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 100	U	-	100	3-13	1	-	-	1	11-21	842	-	-	20	16-26	6.1	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	0.48	J	-	1	3-13	< 1.0	U	-	1	11-21	< 1.0	U	-	1	16-26	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	16-26	< 5.0	U	-	5	6-16	< 5.0	U	-	5	3.5-13.5	< 5.0	U	-	5	3-13	< 5.0	U	-	5	11-21	< 5.0	U	-	5	16-26	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	16-26	< 1.0	U	-	1	6-16	< 1.0	U	-	1	3.5-13.5	< 1.0	U	-	1	3-13	< 1.0	U	-	1	11-21	33.6	-	-	1	16-26	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	16-26	< 3.0	U	-	3	6-16	< 3.0	U	-	3	3.5-13.5	< 3.0	U	-	3	3-13	< 3.0	U	-	3	11-21	< 3.0	U	-	3	16-26	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	6-16	0.28	-	-	0.1	-	-	-	-	-	3-13	0.5	-	-	0.096	11-21	0.49	-	J-	0.093	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	< 0.012	U	-	0.024	3-13	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	0.082	-	-	0.0047	3-13	0.0033	J	-	0.0047	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	< 0.0090	U	-	0.014	3-13	< 0.0090	U	-	0.014	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	0.21	-	-	0.0094	3-13	0.0052	J	-	0.0094	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	0.22	-	-	0.0047	3-13	< 0.00059	U	-	0.0047	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	< 0.0088	U	-	0.019	3-13	< 0.0088	U	-	0.019	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	< 0.0099	U	-	0.014	3-13	< 0.0099	U	-	0.014	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	0.49	-	-	0.0094	3-13	< 0.0043	U	-	0.0094	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	0.012	-	-	0.0094	3-13	< 0.0023	U	-	0.0094	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	1	-	-	0.024	3-13	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	3.5-13.5	0.018	-	-	0.0047	3-13	< 0.0022	U	-	0.0047	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample ID				MRC-MW53A					MRC-MW53B					MRC-MW58A					MRC-MW60A					MRC-MW60B					MRC-MW62A				
Collection Date				4/5/2018					4/5/2018					4/11/2018					4/5/2018					4/5/2018					4/5/2018				
Block ID				E					E					I					I					I					I				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,1,1-Trichloroethane	71-55-6	200	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,1,2-Trichloroethane	79-00-5	5	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	1.9	-	-	1	3-13	< 1.0	U		1
1,1-Dichloroethane	75-34-3	90	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,1-Dichloroethylene	75-35-4	7	ug/l	3-13	0.74	J	-	1	39-49	0.83	J	-	1	8-18	< 1.0	U	-	1	12-22	4	-	-	1	22-32	30.4	-	-	1	3-13	< 1.0	U		1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	1.1	J		2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	< 2.0	U		2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	4.8	-	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	3-13	< 1.0	U	-	1	39-49	1.6	-	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	3-13	< 7.0	U	-	7	39-49	< 7.0	U	-	7	8-18	< 7.0	U	-	7	12-22	< 7.0	U	-	7	22-32	< 7.0	U	-	7	3-13	< 7.0	U		7
1,2-Dibromoethane	106-93-4	0.05	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,2-Dichlorobenzene	95-50-1	600	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	0.48	J		1
1,2-Dichloroethane	107-06-2	5	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	3-13	0.5	J	-	2	39-49	14.2	-	-	2	8-18	< 2.0	U	-	2	12-22	571	-	-	100	22-32	235	J	-	400	3-13	0.98	J		2
1,2-Dichloropropane	78-87-5	5	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,3-Dichloropropane	142-28-9	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
1,3-Dichloropropene	542-75-6	0.44	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	< 2.0	U		2
1,4-Dichlorobenzene	106-46-7	75	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	0.66	J		1
2,2-Dichloropropane	594-20-7	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
2-Butanone	78-93-3	700	ug/l	3-13	< 10.0	U	-	10	39-49	< 10.0	U	-	10	8-18	< 10.0	U	-	10	12-22	< 10.0	U	-	10	22-32	< 10.0	U	-	10	3-13	< 10.0	U		10
2-Chloroethylvinylether	110-75-8	NE	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	< 2.0	U		2
2-Chlorotoluene	95-49-8	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
2-Hexanone	591-78-6	NE	ug/l	3-13	< 5.0	U	-	5	39-49	< 5.0	U	-	5	8-18	< 5.0	U	-	5	12-22	< 5.0	U	-	5	22-32	< 5.0	U	-	5	3-13	< 5.0	U		5
2-Phenylbutane	135-98-8	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	1.4	-	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
4-Chlorotoluene	106-43-4	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
4-Methyl-2-pentanone	108-10-1	630	ug/l	3-13	< 5.0	U	-	5	39-49	< 5.0	U	-	5	8-18	< 5.0	U	-	5	12-22	< 5.0	U	-	5	22-32	< 5.0	U	-	5	3-13	< 5.0	U		5
Acetone	67-64-1	550	ug/l	3-13	< 10.0	U	-	10	39-49	< 10.0	U	-	10	8-18	< 10.0	U	-	10	12-22	6.9	J	-	10	22-32	< 10.0	U	-	10	3-13	< 10.0	U		10
Benzene	71-43-2	5	ug/l	3-13	< 1.0	U	-	1	39-49	302	-	-	5	8-18	< 1.0	U	-	1	12-22	0.41	J	-	1	22-32	0.83	J	-	1	3-13	< 1.0	U		1
Bromobenzene	108-86-1	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Bromochloromethane	74-97-5	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Bromodichloromethane	75-27-4	80	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Bromoform	75-25-2	80	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	0.7	J	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Bromomethane	74-83-9	0.85	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Carbon disulfide	75-15-0	100	ug/l	3-13	< 1.0	U	-	1	39-49	0.39	J	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Carbon tetrachloride	56-23-5	5	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Chlorobenzene	108-90-7	100	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	0.45	J		1
Chloroethane	75-00-3	3.6	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Chloroform	67-66-3	80	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	1.9	-	-	1
Chloromethane	74-87-3	19	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	3-13	0.5	J	-	1	39-49	13.3	-	-	1	8-18	< 1.0	U	-	1	12-22	571	-	-	50	22-32	235	-	-	200	3-13	0.98	J		1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Cyclohexane	110-82-7	NE	ug/l	3-13	< 1.0	U	-	1	39-49	2.8	-	-	1	8-18	< 1.0	U	-	1	12-22	0.8	J	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Cymene	99-87-6	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Dibromochloromethane	124-48-1	80	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Dibromomethane	74-95-3	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Diisopropyl ether	108-20-3	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Ethylbenzene	100-41-4	700	ug/l	3-13	< 1.0	U	-	1	39-49	5	-	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	3-13	< 5.0	U	-	5	39-49	< 5.0	U	-	5	8-18	< 5.0	U	-	5	12-22	< 5.0	U	-	5	22-32	< 5.0	U	-	5	3-13	< 5.0	U		5
Isopropylbenzene	98-82-8	66	ug/l	3-13	< 1.0	U	-	1	39-49	1.4	-	-	1	8-18	< 1.0	U	-	1	12-22	2.3	-	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Methyl acetate	79-20-9	NE	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	< 2.0	U		2
Methyl tert-butyl ether	1634-04-4	20	ug/l	3-13	< 1.0	U	-	1	39-49	22.1	-	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Methylcyclohexane	108-87-2	NE	ug/l	3-13	< 1.0	U	-	1	39-49	2	-	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Methylene chloride	75-09-2	5	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
mp-Xylene	179601-23-1	NE	ug/l	3-13	< 2.0	U	-	2	39-49	13.7	-	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	< 2.0	U		2
Naphthalene	91-20-3	0.65	ug/l	3-13	< 2.0	U	-	2	39-49	1	J	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	1.3	J		2
n-Butylbenzene	104-51-8	NE	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	< 2.0	U		2
n-Propylbenzene	103-65-1	NE	ug/l	3-13	< 1.0	U	-	1	39-49	0.89	J	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
o-Xylene	95-47-6	NE	ug/l	3-13	< 1.0	U	-	1	39-49	18	-	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Styrene	100-42-5	100	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Tert-butyl alcohol	75-65-0	NE	ug/l	3-13	< 10.0	U	-	10	39-49	< 10.0	U	-	10	8-18	< 10.0	U	-	10	12-22	< 10.0	U	-	10	22-32	< 10.0	U	-	10	3-13	38.2	-	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	3-13	< 2.0	U	-	2	39-49	< 2.0	U	-	2	8-18	< 2.0	U	-	2	12-22	< 2.0	U	-	2	22-32	< 2.0	U	-	2	3-13	< 2.0	U		2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	81.2	-	-	1	22-32	10.7	-	-	1	3-13	3.5	-	-	1
Toluene	108-88-3	1000	ug/l	3-13	< 1.0	U	-	1	39-49	0.57	J	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	0.54	J	-	1	3-13	< 1.0	U		1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	3-13	< 1.0	U	-	1	39-49	0.89	J	-	1	8-18	< 1.0	U	-	1	12-22	2.2	-	-	1	22-32	2.9	-	-	1	3-13	< 1.0	U		1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Trichloroethene (TCE)	79-01-6	5	ug/l	3-13	11.4	-	-	1	39-49	36.5	-	-	1	8-18	< 1.0	U	-	1	12-22	1920	-	-	50	22-32	6120	-	-	200	3-13	1.4	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	3-13	< 1.0	U	-	1	39-49	< 1.0	U	-	1	8-18	< 1.0	U	-	1	12-22	< 1.0	U	-	1	22-32	< 1.0	U	-	1	3-13	< 1.0	U		1
Vinyl acetate	108-05-4	NE	ug/l	3-13	< 5.0	U	-	5	39-49	< 5.0	U	-	5	8-18	< 5.0	U	-	5	12-22	< 5.0	U	-	5	22-32	< 5.0	U	-	5	3-13	< 5.0	U		5
Vinyl chloride (VC)	75-01-4	2	ug/l	3-13	< 1.0	U	-	1	39-49	0.39	J	-	1	8-18	< 1.0	U	-	1	12-22	80.1	-	-	1	22-32	5.3	-	-	1	3-13	< 1.0	U		1
Total Xylenes	1330-20-7	10000	ug/l	3-13	< 3.0	U	-	3	39-49	31.7	-	-	3	8-18	< 3.0	U	-	3	12-22	< 3.0	U	-	3	22-32	< 3.0	U	-	3	3-13	< 3.0	U		3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	0.2	-	-	0.095	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.012	U		0.012
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0016	U		0.0016
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0090	U		0.009
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0047	U		0.0047
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.00059	U		0.00059
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0088	U		0.0088
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0099	U		0.0099
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0043	U		0.0043
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0023	U		0.0023
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.012	U		0.012
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0022	U		0.0022
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	6.4	-	-	0.11	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	13	-	-	0.067	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	5.3	-	-	0.11	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	2.1	-	-	0.0056	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	2.2	-	-	0.56	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	9.9	-	-	0.24	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22-32	34.6	-	-	0.56	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0022	U	-	0.0022	22-32	< 0.0022	U	-	0.0022	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0033	U	-	0.0033	22-32	< 0.0033	U	-	0.0033	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	0.0012	-	-	0.0011	22-32	< 0.0011	U	-	0.0011	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0011	U	-	0.0011	22-32	< 0.0011	U	-	0.0011	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0022	U	-	0.0022	22-32	< 0.0022	U	-	0.0022	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	0.071	-	-	0.0056	22-32	0.042	-	-	0.0056	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	0.0025	J	-	0.0056	22-32	< 0.0056	U	-	0.0056	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0022	U	-	0.0022	22-32	< 0.0022	U	-	0.0022	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	0.059	-	-	0.0056	22-32	0.065	-	-	0.0056	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0056	U	-	0.0056	22-32	< 0.0056	U	-	0.0056	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0022	U	-	0.0022	22-32	< 0.0022	U	-	0.0022	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12-22	< 0.0011	U	-	0.0011	22-32	< 0.0011	U	-	0.0011	-	-	-	-	-
Zinc	7

Sample ID				MRC-MW62C					MRC-MW63A					MRC-MW64A					MRC-MW64A					MRC-MW69A					MRC-MW69B				
Collection Date				4/5/2018					4/6/2018					4/5/2018					4/9/2018					4/9/2018					4/9/2018				
Block ID				I					I					I					I					I					G				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	55-65	< 1.0	U	-	1	4-14	4.2	-	-	1	-	-	-	-	-	6-16	0.68	J	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	55-65	< 1.0	U	-	1	4-14	3.3	-	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	1.1	J	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	4.8	-	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	55-65	< 7.0	U	-	7	4-14	< 7.0	U	-	7	-	-	-	-	-	6-16	< 7.0	U	-	7	7-17	< 7.0	U	-	7	25-40	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	0.48	J	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	55-65	< 2.0	U	-	2	4-14	6.5	-	-	2	-	-	-	-	-	6-16	0.98	J	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	0.66	J	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	55-65	< 10.0	U	-	10	4-14	< 10.0	U	-	10	-	-	-	-	-	6-16	< 10.0	U	-	10	7-17	< 10.0	U	-	10	25-40	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	55-65	< 5.0	U	-	5	4-14	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	25-40	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	55-65	< 5.0	U	-	5	4-14	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	25-40	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	55-65	< 10.0	U	-	10	4-14	4.8	J	-	10	-	-	-	-	-	6-16	7.7	J	-	10	7-17	4.2	J	-	10	25-40	6.5	J	-	10
Benzene	71-43-2	5	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	0.45	J	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	1.9	-	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	55-65	< 1.0	U	-	1	4-14	6.5	-	-	1	-	-	-	-	-	6-16	0.98	J	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	55-65	< 5.0	U	-	5	4-14	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	25-40	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	1.3	J	-	2	7-17	0.37	J	-	2	25-40	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	55-65	< 10.0	U	-	10	4-14	< 10.0	U	-	10	-	-	-	-	-	6-16	38.2	-	-	10	7-17	< 10.0	U	-	10	25-40	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	55-65	< 2.0	U	-	2	4-14	< 2.0	U	-	2	-	-	-	-	-	6-16	< 2.0	U	-	2	7-17	< 2.0	U	-	2	25-40	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	3.5	-	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	55-65	< 1.0	U	-	1	4-14	4.6	-	-	1	-	-	-	-	-	6-16	1.4	-	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	55-65	< 1.0	U	-	1	4-14	< 1.0	U	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	55-65	< 5.0	U	-	5	4-14	< 5.0	U	-	5	-	-	-	-	-	6-16	< 5.0	U	-	5	7-17	< 5.0	U	-	5	25-40	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	55-65	< 1.0	U	-	1	4-14	1.1	-	-	1	-	-	-	-	-	6-16	< 1.0	U	-	1	7-17	< 1.0	U	-	1	25-40	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	55-65	< 3.0	U	-	3	4-14	< 3.0	U	-	3	-	-	-	-	-	6-16	< 3.0	U	-	3	7-17	< 3.0	U	-	3	25-40	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	4-14	1.9	-	-	0.92	-	-	-	-	-	-	-	-	-	-	7-17	16.8	-	-	0.96	25-40	0.2	-	-	0.1
PCB Homologs - E680																																
Decachlorobiphenyl	2051-24-3	NE	ug/l	55-65	< 0.012	U	-	0.024	-	-	-	-	-	6-16	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	55-65	< 0.0016	U	-	0.0047	-	-	-	-	-	6-16	< 0.0016	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	55-65	< 0.0090	U	-	0.014	-	-	-	-	-	6-16	< 0.0090	U	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	55-65	< 0.0047	U	-	0.0094	-	-	-	-	-	6-16	< 0.0047	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	55-65	< 0.00059	U	-	0.0047	-	-	-	-	-	6-16	< 0.00059	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	55-65	< 0.0088	U	-	0.019	-	-	-	-	-	6-16	< 0.0088	U	-	0.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	55-65	< 0.0099	U	-	0.014	-	-	-	-	-	6-16	< 0.0099	U	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	55-65	< 0.0043	U	-	0.0094	-	-	-	-	-	6-16	< 0.0043	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	55-65	< 0.0023	U	-	0.0094	-	-	-	-	-	6-16	< 0.0023	U	-	0.0094	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	55-65	< 0.012	U	-	0.024	-	-	-	-	-	6-16	< 0.012	U	-	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	55-65	< 0.0022	U	-	0.0047	-	-	-	-	-	6-16	< 0.0022	U	-	0.0047	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite as N	14797-65-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E365.1																																
Phosphorus	7723-14-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A2320																																
Total Alkalinity (as CaCO3)	ALK	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A4500E														

Sample ID				MRC-MW70A					MRC-MW70B					MRC-MW71B					MRC-MW72B					MRC-MW73A					MRC-MW73B				
Collection Date				4/5/2018					4/5/2018					4/4/2018					4/13/2018					4/12/2018					4/12/2018				
Block ID				G					I					I					I					I					E				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	4-14	< 1.0	U	-	1	20-30	5.4	-	-	1	20-30	4.5	-	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	61.9	-	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	4-14	< 7.0	U	-	7	20-30	< 7.0	U	-	7	20-30	< 7.0	U	-	7	25-35	< 7.0	U	-	7	-	-	-	-	-	24-34	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	4-14	0.69	J	-	2	20-30	< 2.0	U	-	2	20-30	7.7	-	-	2	25-35	189	-	-	100	-	-	-	-	-	24-34	0.91	J	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	4-14	< 10.0	U	-	10	20-30	< 10.0	U	-	10	20-30	< 10.0	U	-	10	25-35	< 10.0	U	-	10	-	-	-	-	-	24-34	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	25-35	< 5.0	U	-	5	-	-	-	-	-	24-34	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	25-35	< 5.0	U	-	5	-	-	-	-	-	24-34	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	4-14	6.3	J	-	10	20-30	5.7	J	-	10	20-30	< 10.0	U	-	10	25-35	4	J	-	10	-	-	-	-	-	24-34	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	4-14	< 1.0	U	-	1	20-30	1.7	-	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	4-14	< 1.0	U	-	1	20-30	4.5	-	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	4-14	0.69	J	-	1	20-30	< 1.0	U	-	1	20-30	7.7	-	-	1	25-35	189	-	-	50	-	-	-	-	-	24-34	0.91	J	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	0.76	J	-	1	25-35	1.2	-	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	25-35	< 5.0	U	-	5	-	-	-	-	-	24-34	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	4-14	< 10.0	U	-	10	20-30	< 10.0	U	-	10	20-30	< 10.0	U	-	10	25-35	< 10.0	U	-	10	-	-	-	-	-	24-34	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	4-14	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	25-35	< 2.0	U	-	2	-	-	-	-	-	24-34	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	0.57	J	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	9.8	-	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	55.4	-	-	1	25-35	3390	-	-	50	-	-	-	-	-	24-34	24.9	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	4-14	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	25-35	< 5.0	U	-	5	-	-	-	-	-	24-34	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	4-14	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	25-35	< 1.0	U	-	1	-	-	-	-	-	24-34	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	4-14	< 3.0	U	-	3	20-30	< 3.0	U	-	3	20-30	< 3.0	U	-	3	25-35	< 3.0	U	-	3	-	-	-	-	-	24-34	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	20-30	25.6	-	-	9.3	20-30	13.5	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	2.3	-	-	0.11	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.55	-	-	0.067	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	1.1	-	-	0.11	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.063	-	-	0.0056	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	1.6	-	-	0.56	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	8.4	-	-	0.24	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	9.7	-	-	0.56	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	< 0.0022	U	-	0.0022	7-17	0.001	J	-	0.0022	24-34	< 0.0022	U	-	0.0022
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	< 0.0033	U	-	0.0033	7-17	< 0.0033	U	-	0.0033	24-34	< 0.0033	U	-	0.0033
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.00066	J	-	0.0011	7-17	< 0.0011	U	-	0.0011	24-34	0.002	-	-	0.0011
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	< 0.0011	U	-	0.0011	7-17	< 0.0011	U	-	0.0011	24-34	< 0.0011	U	-	0.0011
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.002	J	B	0.0022	7-17	0.0012	J	B	0.0022	24-34	0.00091	J	B	0.0022
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.007	-	-	0.0056	7-17	0.0027	J	-	0.0056	24-34	0.015	-	-	0.0056
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.0022	J	-	0.0056	7-17	0.0022	J	-	0.0056	24-34	0.006	-	-	0.0056
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.00075	J	-	0.0022	7-17	< 0.0022	U	-	0.0022	24-34	< 0.0022	U	-	0.0022
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.011	-	-	0.0056	7-17	< 0.0056	U	-	0.0056	24-34	0.02	-	-	0.0056
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	< 0.0056	U	-	0.0056	7-17	< 0.0056	U	-	0.0056	24-34	< 0.0056	U	-	0.0056
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	< 0.0022	U	-	0.0022	7-17	< 0.0022	U	-	0.0022	24-34	< 0.0022	U	-	0.0022
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	< 0.0011	U	-	0.0011	7-17	< 0.0011	U	-	0.0011	24-34	< 0.0011	U	-	0.0011
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	0.08	-	-	0.0056	7-17	0.015	-	B	0.0056	24-34	0.037	-	-	0.0056
Mercury - SW7470A																																	
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25-35	< 0.00050	U	-	0.0005	7-17	< 0.00050	U	-	0.0005	24-34	< 0.00050	U	-	0.0005
Hex Chrom - E218.6																																	
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																	
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	20-30	148	-	-	2	25-35	20.4	-	-	2	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	20-30	0.06	J	-	0.2	25-35	0.44	-	-	0.2	-	-	-

Sample ID				MRC-MW74A						MRC-MW74B						MRC-MW74C						MRC-MW76A						MRC-MW76B						MRC-MW78B					
Collection Date				4/13/2018						4/13/2018						4/13/2018						4/5/2018						4/5/2018						4/6/2018					
Block ID				E						E						E						E						E						E					
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL		Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL		Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL		Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL		Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL		Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	
VOCs - SW8260B																																							
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,1,1-Trichloroethane	71-55-6	200	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,1,2-Trichloroethane	79-00-5	5	ug/l	8-18	< 1.0	U	-	1		22-32	1.2	-	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,1-Dichloroethane	75-34-3	90	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	2.1	-	-	1		24-34	< 1.0	U	-	1	
1,1-Dichloroethylene	75-35-4	7	ug/l	8-18	< 1.0	U	-	1		22-32	6.9	-	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	1.3	-	-	1		24-34	< 1.0	U	-	1	
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
1,2,3-Trichloropropane	96-18-4	NE	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	8-18	< 7.0	U	-	7		22-32	< 7.0	U	-	7		45-55	< 7.0	U	-	7		9-19	< 7.0	U	-	7		24-34	< 7.0	U	-	7		24-34	< 7.0	U	-	7	
1,2-Dibromoethane	106-93-4	0.05	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,2-Dichlorobenzene	95-50-1	600	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,2-Dichloroethane	107-06-2	5	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	8-18	2.3	-	-	2		22-32	946	J	-	1000		45-55	1.5	J	-	2		9-19	< 2.0	U	-	2		24-34	1.6	J	-	2		24-34	0.59	J	-	2	
1,2-Dichloropropane	78-87-5	5	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	8-18	< 1.0	U	-	1		22-32	0.36	J	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,3-Dichloropropane	142-28-9	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
1,3-Dichloropropene	542-75-6	0.44	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
1,4-Dichlorobenzene	106-46-7	75	ug/l	8-18	< 1.0	U	-	1		22-32	1	-	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
2,2-Dichloropropane	594-20-7	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
2-Butanone	78-93-3	700	ug/l	8-18	< 10.0	U	-	10		22-32	< 10.0	U	-	10		45-55	< 10.0	U	-	10		9-19	< 10.0	U	-	10		24-34	< 10.0	U	-	10		24-34	4.7	J	-	10	
2-Chloroethylvinylether	110-75-8	NE	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
2-Chlorotoluene	95-49-8	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
2-Hexanone	591-78-6	NE	ug/l	8-18	< 5.0	U	-	5		22-32	< 5.0	U	-	5		45-55	< 5.0	U	-	5		9-19	< 5.0	U	-	5		24-34	< 5.0	U	-	5		24-34	< 5.0	U	-	5	
2-Phenylbutane	135-98-8	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
4-Chlorotoluene	106-43-4	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
4-Methyl-2-pentanone	108-10-1	630	ug/l	8-18	< 5.0	U	-	5		22-32	< 5.0	U	-	5		45-55	< 5.0	U	-	5		9-19	< 5.0	U	-	5		24-34	< 5.0	U	-	5		24-34	< 5.0	U	-	5	
Acetone	67-64-1	550	ug/l	8-18	< 10.0	U	-	10		22-32	3.9	J	-	10		45-55	3.6	J	-	10		9-19	< 10.0	U	-	10		24-34	4.8	J	-	10		24-34	< 10.0	U	-	10	
Benzene	71-43-2	5	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Bromobenzene	108-86-1	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Bromochloromethane	74-97-5	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Bromodichloromethane	75-27-4	80	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Bromoform	75-25-2	80	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Bromomethane	74-83-9	0.85	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Carbon disulfide	75-15-0	100	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	0.32	J	-	1	
Carbon tetrachloride	56-23-5	5	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Chlorobenzene	108-90-7	100	ug/l	8-18	< 1.0	U	-	1		22-32	4.6	-	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Chloroethane	75-00-3	3.6	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Chloroform	67-66-3	80	ug/l	8-18	< 1.0	U	-	1		22-32	22.7	-	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Chloromethane	74-87-3	19	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	8-18	2.3	-	-	1		22-32	996	-	-	100		45-55	1.5	-	-	1		9-19	< 1.0	U	-	1		24-34	1.6	-	-	1		24-34	0.59	J	-	1	
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Cyclohexane	110-82-7	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Cymene	99-87-6	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Dibromochloromethane	124-48-1	80	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Dibromomethane	74-95-3	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Diisopropyl ether	108-20-3	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	0.49	J	-	1	
Ethylbenzene	100-41-4	700	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	8-18	< 5.0	U	-	5		22-32	< 5.0	U	-	5		45-55	< 5.0	U	-	5		9-19	< 5.0	U	-	5		24-34	< 5.0	U	-	5		24-34	< 5.0	U	-	5	
Isopropylbenzene	98-82-8	66	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Methyl acetate	79-20-9	NE	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
Methyl tert-butyl ether	1634-04-4	20	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Methylcyclohexane	108-87-2	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Methylene chloride	75-09-2	5	ug/l	8-18	< 1.0	U	-	1		22-32	1.7	-	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
mp-Xylene	179601-23-1	NE	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
Naphthalene	91-20-3	0.65	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
n-Butylbenzene	104-51-8	NE	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
n-Propylbenzene	103-65-1	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
o-Xylene	95-47-6	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Styrene	100-42-5	100	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Tert-butyl alcohol	75-65-0	NE	ug/l	8-18	< 10.0	U	-	10		22-32	< 10.0	U	-	10		45-55	< 10.0	U	-	10		9-19	< 10.0	U	-	10		24-34	< 10.0	U	-	10		24-34	13.7	-	-	10	
Tert-butylbenzene	98-06-6	NE	ug/l	8-18	< 2.0	U	-	2		22-32	< 2.0	U	-	2		45-55	< 2.0	U	-	2		9-19	< 2.0	U	-	2		24-34	< 2.0	U	-	2		24-34	< 2.0	U	-	2	
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Tetrachloroethene (PCE)	127-18-4	5	ug/l	8-18	< 1.0	U	-	1		22-32	0.39	J	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Toluene	108-88-3	1000	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
trans-1,2-Dichloroethene	156-60-5	100	ug/l	8-18	< 1.0	U	-	1		22-32	10.4	-	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Trichloroethene (TCE)	79-01-6	5	ug/l	8-18	59.1	-	-	1		22-32	34300	-	-	500		45-55	32.9	-	-	1		9-19	0.72	J	-	1		24-34	10.4	-	-	1		24-34	< 1.0	U	-	1	
Trichlorofluoromethane	75-69-4	NE	ug/l	8-18	< 1.0	U	-	1		22-32	< 1.0	U	-	1		45-55	< 1.0	U	-	1		9-19	< 1.0	U	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Vinyl acetate	108-05-4	NE	ug/l	8-18	< 5.0	U	-	5		22-32	< 5.0	U	-	5		45-55	< 5.0	U	-	5		9-19	< 5.0	U	-	5		24-34	< 5.0	U	-	5		24-34	< 5.0	U	-	5	
Vinyl chloride (VC)	75-01-4	2	ug/l	8-18	< 1.0	U	-	1		22-32	1.4	-	-	1		45-55	< 1.0	U	-	1		9-19	0.56	J	-	1		24-34	< 1.0	U	-	1		24-34	< 1.0	U	-	1	
Total Xylenes	1330-20-7	10000	ug/l	8-18	< 3.0	U	-	3		22-32	< 3.0	U	-	3		45-55	< 3.0	U	-	3		9-19	< 3.0	U	-	3		24-34	< 3.0	U	-	3		24-34	< 3.0	U	-	3	
1,4- Dioxane - SW8270D-SIM																																							
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
PCB Homologs - E680																																							
Decachlorobiphenyl	2051-24-3	NE	ug/l	8-18	< 0.012	U	-	0.025		22-32	< 0.012	U	-	0.025		45-55	< 0.012	U	-	0.024		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	8-18	0.002	J	B	0.005		22-32	< 0.0016	U	-	0.005		45-55	0.0024	J	B	0.0048		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	8-18	< 0.0090	U	-	0.015		22-32	< 0.0090	U	-	0.015		45-55	0.012	J	-	0.014		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	8-18	0.013	-	-	0.01		22-32	0.008	J	-	0.01		45-55	0.045	-	-	0.0096		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	8-18	< 0.00059	U	-	0.005		22-32	< 0.00059	U	-	0.005		45-55	< 0.00059	U	-	0.0048		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	8-18	< 0.0088	U	-	0.02		22-32	< 0.0088	U	-	0.02		45-55	< 0.0088	U	-	0.019		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	8-18	< 0.0099	U	-	0.015		22-32	< 0.0099	U	-	0.015		45-55	< 0.0099	U	-	0.014		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	8-18	0.067	-	-	0.01		22-32	0.065	-	-	0.01		45-55	0.1	-	-	0.0096		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	8-18	0.044	-	-	0.01		22-32	0.046	-	-	0.01		45-55	0.034	-	-	0.0096		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	8-18	0.12	-	-	0.025		22-32	0.13	-	-	0.025		45-55	0.2	-	-	0.024		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	8-18	< 0.0022	U	-	0.005		22-32	0.0065	-	B	0.005		45-55	< 0.0022	U	-	0.0048		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Metals - SW6010C																																							
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Silica	7631-86-9	NE	mg/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Metals - SW6020																																							
Antimony	7440-36-0	0.006	mg/l	8-18	< 0.0022	U	-	0.0022		22-32	< 0.0022	U	-	0.0022		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Arsenic	7440-38-2	0.01	mg/l	8-18	< 0.0033	U	-	0.0033		22-32	< 0.0033	U	-	0.0033		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Beryllium	7440-41-7	0.004	mg/l	8-18	< 0.0011	U	-	0.0011		22-32	< 0.0011	U	-	0.0011		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-	
Cadmium	7440-43-9	0.005	mg/l	8-18	< 0.0011	U	-	0.0011		22-32	< 0.0011	U	-	0.0011		-	-	-	-	-		-

Sample ID				MRC-MW79B					MRC-MW81A					MRC-MW81B					MRC-MW87A					MRC-MW87B					MRC-MW90B				
Collection Date				4/9/2018					4/6/2018					4/6/2018					4/9/2018					4/9/2018					4/6/2018				
Block ID				E					E					E					G					G					G				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	27-37	1.2	-	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	27-37	26.3	-	-	1	-	-	-	-	-	22-32	7.3	-	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	8.6	-	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	1.3	J	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	4.2	-	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	27-37	< 7.0	U	-	7	-	-	-	-	-	22-32	< 7.0	U	-	7	6-16	< 7.0	U	-	7	24.5-34.5	< 7.0	U	-	7	30-40	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	27-37	2940	-	-	200	-	-	-	-	-	22-32	304	-	-	20	6-16	2.0	J	-	2	24.5-34.5	3.2	-	-	2	30-40	2.2	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	0.35	J	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	27-37	< 10.0	U	-	10	-	-	-	-	-	22-32	< 10.0	U	-	10	6-16	< 10.0	U	-	10	24.5-34.5	< 10.0	U	-	10	30-40	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	27-37	< 5.0	U	-	5	-	-	-	-	-	22-32	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24.5-34.5	< 5.0	U	-	5	30-40	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	27-37	< 5.0	U	-	5	-	-	-	-	-	22-32	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24.5-34.5	< 5.0	U	-	5	30-40	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	27-37	< 10.0	U	-	10	-	-	-	-	-	22-32	3.6	J	-	10	6-16	7.5	J	-	10	24.5-34.5	7.2	J	-	10	30-40	5.3	J	-	10
Benzene	71-43-2	5	ug/l	27-37	4	-	-	1	-	-	-	-	-	22-32	0.5	J	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	27-37	0.43	J	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	0.46	J	-	1
Chloromethane	74-87-3	19	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	27-37	2910	-	-	100	-	-	-	-	-	22-32	301	-	-	10	6-16	< 1.0	U	-	1	24.5-34.5	3.2	-	-	1	30-40	2.2	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	27-37	0.38	J	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	4	-	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	27-37	< 5.0	U	-	5	-	-	-	-	-	22-32	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24.5-34.5	< 5.0	U	-	5	30-40	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	27-37	1.9	-	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	0.59	J	-	1	6-16	< 1.0	U	-	1	24.5-34.5	0.65	J	-	1	30-40	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	27-37	4.6	J	-	10	-	-	-	-	-	22-32	< 10.0	U	-	10	6-16	4.7	J	-	10	24.5-34.5	< 10.0	U	-	10	30-40	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	27-37	< 2.0	U	-	2	-	-	-	-	-	22-32	< 2.0	U	-	2	6-16	< 2.0	U	-	2	24.5-34.5	< 2.0	U	-	2	30-40	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	27-37	1.3	-	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	27-37	0.41	J	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	27-37	27.8	-	-	1	-	-	-	-	-	22-32	1.4	-	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	27-37	1670	-	-	100	-	-	-	-	-	22-32	46.8	-	-	1	6-16	< 1.0	U	-	1	24.5-34.5	55.9	-	-	1	30-40	50.7	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	27-37	< 1.0	U	-	1	-	-	-	-	-	22-32	< 1.0	U	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	0.63	J	-	1
Vinyl acetate	108-05-4	NE	ug/l	27-37	< 5.0	U	-	5	-	-	-	-	-	22-32	< 5.0	U	-	5	6-16	< 5.0	U	-	5	24.5-34.5	< 5.0	U	-	5	30-40	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	27-37	75.1	-	-	1	-	-	-	-	-	22-32	110	-	-	1	6-16	< 1.0	U	-	1	24.5-34.5	< 1.0	U	-	1	30-40	< 1.0	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	27-37	< 3.0	U	-	3	-	-	-	-	-	22-32	< 3.0	U	-	3	6-16	< 3.0	U	-	3	24.5-34.5	< 3.0	U	-	3	30-40	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	27-37	5.9	-	-	0.48	9-19	0.3	-	-	0.098	22-32	0.36	-	-	0.1	-	-	-	-	-	24.5-34.5	1.1	-	-	0.1	30-40	1.4	-	-	0.94
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	9-19	0.00088	J	-	0.0022	22-32	< 0.0022	U	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	9-19	0.0018	J	-	0.0033	22-32	< 0.0033	U	-	0.0033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	9-19	< 0.0011	U	-	0.0011	22-32	< 0.0011	U	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	9-19	< 0.0011	U	-	0.0011	22-32	< 0.0011	U	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	9-19	0.0017	J	-	0.0022	22-32	0.0017	J	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	9-19	0.0021	J	-	0.0056	22-32	0.038	-	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	9-19	0.0038	J	-	0.0056	22-32	0.0026	J	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	9-19	< 0.0022	U	-	0.0022	22-32	< 0.0022	U	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	9-19	0.0088	-	-	0.0056	22-32	0.066	-	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	9-19	< 0.0056	U	-	0.0056	22-32	< 0.0056	U	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	9-19	< 0.0022	U	-	0.0022	22-32	< 0.0022	U	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	9-19	< 0.0011	U	-	0.0011	22-32	< 0.0011	U	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	9-19	0.016	-	B	0.0056	22-32	0.24	-	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																	
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	9-19	< 0.00050	U	-	0.0005	22-32	< 0.00050	U	-	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																	
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																	
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-

Appendix E – 2018 Groundwater Analytical Results

Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Sample ID				MRC-MW92C					MRC-MW93A					MRC-MW95B					MRC-MW96A					MRC-MW96B					MRC-MW96B-DUP				
Collection Date				4/6/2018					4/12/2018					4/9/2018					4/12/2018					4/12/2018					4/11/2018				
Block ID				E					E					I					G					G					G				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																	
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	43.6	-	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	15.6	-	-	1	39-49	15.8	-	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	64.5-74.5	< 7.0	U	-	7	4-14	< 7.0	U	-	7	45-55	< 7.0	U	-	7	10-20	< 7.0	U	-	7	39-49	< 7.0	U	-	7	39-49	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	64.5-74.5	3.5	-	-	2	4-14	1.7	J	-	2	45-55	< 2.0	U	-	2	10-20	22500	-	-	1000	39-49	14.3	-	-	2	39-49	13.2	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	64.5-74.5	< 10.0	U	-	10	4-14	< 10.0	U	-	10	45-55	< 10.0	U	-	10	10-20	< 10.0	U	-	10	39-49	< 10.0	U	-	10	39-49	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	64.5-74.5	< 5.0	U	-	5	4-14	< 5.0	U	-	5	45-55	< 5.0	U	-	5	10-20	< 5.0	U	-	5	39-49	< 5.0	U	-	5	39-49	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	2	-	-	1	39-49	2	-	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	64.5-74.5	< 5.0	U	-	5	4-14	< 5.0	U	-	5	45-55	< 5.0	U	-	5	10-20	< 5.0	U	-	5	39-49	< 5.0	U	-	5	39-49	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	64.5-74.5	4.2	J	-	10	4-14	3.9	J	-	10	45-55	6.4	J	-	10	10-20	5.5	J	-	10	39-49	< 10.0	U	-	10	39-49	< 10.0	U	-	10
Benzene	71-43-2	5	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	0.63	J	-	1	39-49	527	-	-	10	39-49	580	-	-	10
Bromobenzene	108-86-1	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	0.37	J	-	1	39-49	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	1.3	-	-	1	39-49	1.1	-	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	64.5-74.5	3.5	-	-	1	4-14	1.7	-	-	1	45-55	0.41	J	-	1	10-20	22500	-	-	500	39-49	12.6	-	-	1	39-49	11.6	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	8.8	-	-	1	39-49	8.5	-	-	1
Cymene	99-87-6	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	6.1	-	-	1	39-49	6.2	-	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	64.5-74.5	< 5.0	U	-	5	4-14	< 5.0	U	-	5	45-55	< 5.0	U	-	5	10-20	< 5.0	U	-	5	39-49	< 5.0	U	-	5	39-49	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	11.2	-	-	1	39-49	11.2	-	-	1
Methyl acetate	79-20-9	NE	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	29.7	-	-	1	39-49	27.8	-	-	1
Methylcyclohexane	108-87-2	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	35.3	-	-	2	39-49	35.5	-	-	2
Naphthalene	91-20-3	0.65	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	23.4	-	-	2	39-49	27.9	-	-	2
n-Butylbenzene	104-51-8	NE	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	1.9	J	-	2
n-Propylbenzene	103-65-1	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	4.2	-	-	1	39-49	4.3	-	-	1
o-Xylene	95-47-6	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	78.6	-	-	1	39-49	76.9	-	-	1
Styrene	100-42-5	100	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	64.5-74.5	< 10.0	U	-	10	4-14	< 10.0	U	-	10	45-55	< 10.0	U	-	10	10-20	2.9	J	-	10	39-49	3.1	J	-	10	39-49	3.2	J	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	64.5-74.5	< 2.0	U	-	2	4-14	< 2.0	U	-	2	45-55	< 2.0	U	-	2	10-20	< 2.0	U	-	2	39-49	< 2.0	U	-	2	39-49	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	4	-	-	1	39-49	1.7	-	-	1	39-49	1.7	-	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	82.5	-	-	1	39-49	1.7	-	-	1	39-49	1.6	-	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	64.5-74.5	3.4	-	-	1	4-14	1.9	-	-	1	45-55	1.7	-	-	1	10-20	2150	-	-	100	39-49	13.5	-	-	1	39-49	13.1	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	< 1.0	U	-	1	39-49	< 1.0	U	-	1	39-49	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	64.5-74.5	< 5.0	U	-	5	4-14	< 5.0	U	-	5	45-55	< 5.0	U	-	5	10-20	< 5.0	U	-	5	39-49	< 5.0	U	-	5	39-49	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	64.5-74.5	< 1.0	U	-	1	4-14	< 1.0	U	-	1	45-55	< 1.0	U	-	1	10-20	18.2	-	-	1	39-49	0.92	J	-	1	39-49	0.88	J	-	1
Total Xylenes	1330-20-7	10000	ug/l	64.5-74.5	< 3.0	U	-	3	4-14	< 3.0	U	-	3	45-55	< 3.0	U	-	3	10-20	< 3.0	U	-	3	39-49	114	-	-	3	39-49	112	-	-	3
1,4- Dioxane - SW8270D-SIM																																	
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10-20	4.1	-	-	0.49	39-49	0.5	-	-	0.099	39-49	0.43	-	-	0.096
PCB Homologs - E680																																	
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																	
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																	
Antimony	7440-36-0	0.006	mg/l	64.5-74.5	< 0.0022	U	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	64.5-74.5	< 0.0033	U	-	0.0033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	64.5-74.5	< 0.0011	U	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	64.5-74.5	< 0.0011	U	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	64.5-74.5	0.0028	-	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	64.5-74.5	0.013	-	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	64.5-74.5	0.0021	J	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	64.5-74.5	< 0.0022	U	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	64.5-74.5	0.024	-	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	64.5-74.5	< 0.0056	U	-	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	64.5-74.5	< 0.0022	U	-	0.0022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	64.5-74.5	< 0.0011	U	-	0.0011	-	-	-	-	-	-	-	-

Sample ID				MRC-MW98A					MRC-MW98B					MRC-MW98B-DUP					MRC-SEMW-7I					MRC-SEMW-7I					MRC-SEMW-8I				
Collection Date				4/12/2018					4/12/2018					4/12/2018					4/13/2018					4/13/2018					4/13/2018				
Block ID				G					G					G					F					F					F				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	5-15	< 1.0	U	-	1	27-37	13.8	-	-	1	27-37	13.5	-	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	5-15	< 1.0	U	-	1	27-37	1.1	-	-	1	27-37	1.3	-	-	1	-	-	-	-	-	20-30	0.35	J	-	1	18-28	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	5-15	1.4	-	-	1	27-37	85.2	-	-	1	27-37	84.1	-	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	5-15	0.65	J	-	1	27-37	195	-	-	10	27-37	201	-	-	5	-	-	-	-	-	20-30	1.2	-	-	1	18-28	3.7	-	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	5-15	< 7.0	U	-	7	27-37	< 7.0	U	-	7	27-37	< 7.0	U	-	7	-	-	-	-	-	20-30	< 7.0	U	-	7	18-28	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	5-15	0.54	J	-	2	27-37	23.7	-	J	2	27-37	36.3	-	J	2	-	-	-	-	-	20-30	126	-	-	2	18-28	1830	-	-	100
1,2-Dichloropropane	78-87-5	5	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	0.39	J	-	1	18-28	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	5-15	< 10.0	U	-	10	27-37	< 10.0	U	-	10	27-37	< 10.0	U	-	10	-	-	-	-	-	20-30	< 10.0	U	-	10	18-28	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	5-15	< 5.0	U	-	5	27-37	< 5.0	U	-	5	27-37	< 5.0	U	-	5	-	-	-	-	-	20-30	< 5.0	U	-	5	18-28	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	5-15	< 5.0	U	-	5	27-37	< 5.0	U	-	5	27-37	< 5.0	U	-	5	-	-	-	-	-	20-30	< 5.0	U	-	5	18-28	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	5-15	< 10.0	U	-	10	27-37	5.1	J	-	10	27-37	< 10.0	U	-	10	-	-	-	-	-	20-30	< 10.0	U	-	10	18-28	4.5	J	-	10
Benzene	71-43-2	5	ug/l	5-15	< 1.0	U	-	1	27-37	1.9	-	-	1	27-37	1.9	-	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	2.9	-	-	1	18-28	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	5-15	< 1.0	U	-	1	27-37	22	-	-	1	27-37	20.7	-	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	5-15	< 1.0	U	-	1	27-37	0.45	J	-	1	27-37	0.41	J	-	1	-	-	-	-	-	20-30	5.6	-	-	1	18-28	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	5-15	0.54	J	-	1	27-37	23.7	-	J	1	27-37	36.3	-	J	1	-	-	-	-	-	20-30	124	-	-	1	18-28	1830	-	-	50
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	5-15	< 5.0	U	-	5	27-37	< 5.0	U	-	5	27-37	< 5.0	U	-	5	-	-	-	-	-	20-30	< 5.0	U	-	5	18-28	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	2	-	-	1	18-28	4.9	-	-	1
Methylcyclohexane	108-87-2	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	5-15	< 1.0	U	-	1	27-37	4.2	-	-	1	27-37	4.8	-	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	5-15	< 10.0	U	-	10	27-37	< 10.0	U	-	10	27-37	< 10.0	U	-	10	-	-	-	-	-	20-30	< 10.0	U	-	10	18-28	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	5-15	< 2.0	U	-	2	27-37	< 2.0	U	-	2	27-37	< 2.0	U	-	2	-	-	-	-	-	20-30	< 2.0	U	-	2	18-28	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	5-15	< 1.0	U	-	1	27-37	5.4	-	-	1	27-37	5.2	-	-	1	-	-	-	-	-	20-30	0.63	J	-	1	18-28	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	1.5	-	-	1	18-28	2.5	-	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	5-15	3.5	-	-	1	27-37	414	-	-	10	27-37	424	-	-	5	-	-	-	-	-	20-30	29900	-	-	500	18-28	1080	-	-	50
Trichlorofluoromethane	75-69-4	NE	ug/l	5-15	< 1.0	U	-	1	27-37	< 1.0	U	-	1	27-37	< 1.0	U	-	1	-	-	-	-	-	20-30	< 1.0	U	-	1	18-28	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	5-15	< 5.0	U	-	5	27-37	< 5.0	U	-	5	27-37	< 5.0	U	-	5	-	-	-	-	-	20-30	< 5.0	U	-	5	18-28	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	5-15	< 1.0	U	-	1	27-37	0.94	J	-	1	27-37	0.86	J	-	1	-	-	-	-	-	20-30	0.72	J	-	1	18-28	1	-	-	1
Total Xylenes	1330-20-7	10000	ug/l	5-15	< 3.0	U	-	3	27-37	< 3.0	U	-	3	27-37	< 3.0	U	-	3	-	-	-	-	-	20-30	< 3.0	U	-	3	18-28	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																
1,4-Dioxane	123-91-1	0.46[b]	ug/l	5-15	0.98	-	-	0.1	27-37	118	-	-	5.1	27-37	96	-	-	4.8	-	-	-	-	-	20-30	0.15	-	-	0.092	18-28	0.14	-	-	0.1
PCB Homologs - E680																																
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.012	U	-	0.024	-	-	-	-	-	18-28	< 0.012	U	-	0.025
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	0.0038	J	B	0.0048	-	-	-	-	-	18-28	0.0045	J	B	0.005
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.0090	U	-	0.014	-	-	-	-	-	18-28	< 0.0090	U	-	0.015
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.0047	U	-	0.0096	-	-	-	-	-	18-28	< 0.0047	U	-	0.01
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.00059	U	-	0.0048	-	-	-	-	-	18-28	< 0.00059	U	-	0.005
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.0088	U	-	0.019	-	-	-	-	-	18-28	< 0.0088	U	-	0.02
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.0099	U	-	0.014	-	-	-	-	-	18-28	< 0.0099	U	-	0.015
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.0043	U	-	0.0096	-	-	-	-	-	18-28	< 0.0043	U	-	0.01
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.0023	U	-	0.0096	-	-	-	-	-	18-28	< 0.0023	U	-	0.01
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	< 0.012	U	-	0.024	-	-	-	-	-	18-28	< 0.012	U	-	0.025
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20-30	0.013	B	-	0.0048	-	-	-	-	-	18-28	< 0.0022	U	-	0.005
Metals - SW6010C																																
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																																
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																																
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																																
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite as N	14797-65-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E365.1																																
Phosphorus	7723-14-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A2320																																
Total Alkalinity (as CaCO3)	ALK	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A4500E																			

Appendix E – 2018 Groundwater Analytical Results

Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Sample ID				MRC-SEMW-8S					MRC-SEMW-9I					MRC-SEMW-9S					MRC-SWMW-1I					MRC-SWMW-2I					MRC-SWMW-3I				
Collection Date				4/13/2018					4/13/2018					4/13/2018					4/12/2018					4/12/2018					4/12/2018				
Block ID				F					F					F					F					F					F				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	8-18	0.67	J	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	3.1	-	-	1	20-30	4.9	-	-	1	10-20	1.1	-	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	8-18	2.2	-	-	1	20-30	< 1.0	U	-	1	6-16	2.2	-	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	0.39	J	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	8-18	< 7.0	U	-	7	20-30	< 7.0	U	-	7	6-16	< 7.0	U	-	7	20-30	< 7.0	U	-	7	20-30	< 7.0	U	-	7	10-20	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	0.35	J	-	1	20-30	0.54	J	-	1	10-20	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	8-18	187	-	-	2	20-30	12.1	-	-	2	6-16	190	-	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	1	J	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	0.25	J	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	8-18	0.36	J	-	1	20-30	< 1.0	U	-	1	6-16	0.56	J	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	8-18	< 10.0	U	-	10	20-30	< 10.0	U	-	10	6-16	< 10.0	U	-	10	20-30	< 10.0	U	-	10	20-30	< 10.0	U	-	10	10-20	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	8-18	< 5.0	U	-	5	20-30	< 5.0	U	-	5	6-16	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	10-20	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	8-18	< 5.0	U	-	5	20-30	< 5.0	U	-	5	6-16	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	10-20	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	8-18	< 10.0	U	-	10	20-30	< 10.0	U	-	10	6-16	3.2	J	-	10	20-30	4.3	J	-	10	20-30	< 10.0	U	-	10	10-20	7.2	J	-	10
Benzene	71-43-2	5	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	3	-	-	1	20-30	10.6	-	-	1	10-20	< 1.0	U	-	1
Bromobenzene	108-86-1	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Carbon disulfide	75-15-0	100	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	8-18	2.9	-	-	1	20-30	< 1.0	U	-	1	6-16	5.9	-	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	1.4	-	-	1	20-30	5.6	-	-	1	10-20	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	8-18	15.2	-	-	1	20-30	0.66	J	-	1	6-16	16.7	-	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Chloromethane	74-87-3	19	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	8-18	185	-	-	1	20-30	11.5	-	-	1	6-16	187	-	-	1	20-30	< 1.0	U	-	1	20-30	0.39	J	-	1	10-20	1	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	8-18	0.51	J	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	8-18	132	-	-	1	20-30	0.86	J	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	8-18	< 5.0	U	-	5	20-30	< 5.0	U	-	5	6-16	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	10-20	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	0.26	J	-	1	10-20	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	8-18	< 1.0	U	-	1	20-30	7.4	-	-	1	6-16	1.2	-	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	8-18	5.3	-	-	1	20-30	< 1.0	U	-	1	6-16	1.5	-	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	8-18	< 10.0	U	-	10	20-30	< 10.0	U	-	10	6-16	< 10.0	U	-	10	20-30	< 10.0	U	-	10	20-30	< 10.0	U	-	10	10-20	5.6	J	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	8-18	< 2.0	U	-	2	20-30	< 2.0	U	-	2	6-16	< 2.0	U	-	2	20-30	< 2.0	U	-	2	20-30	< 2.0	U	-	2	10-20	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	0.43	J	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Toluene	108-88-3	1000	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	8-18	1.1	-	-	1	20-30	0.64	J	-	1	6-16	2.5	-	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	8-18	24500	-	-	500	20-30	236	-	-	5	6-16	32800	-	-	500	20-30	< 1.0	U	-	1	20-30	0.91	J	-	1	10-20	1.1	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	8-18	< 1.0	U	-	1	20-30	< 1.0	U	-	1	6-16	< 1.0	U	-	1	20-30	< 1.0	U	-	1	20-30	< 1.0	U	-	1	10-20	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	8-18	< 5.0	U	-	5	20-30	< 5.0	U	-	5	6-16	< 5.0	U	-	5	20-30	< 5.0	U	-	5	20-30	< 5.0	U	-	5	10-20	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	8-18	1.4	-	-	1	20-30	< 1.0	U	-	1	6-16	1.3	-	-	1	20-30	0.68	J	-	1	20-30	0.95	J	-	1	10-20	0.37	J	-	1
Total Xylenes	1330-20-7	10000	ug/l	8-18	< 3.0	U	-	3	20-30	< 3.0	U	-	3	6-16	< 3.0	U	-	3	20-30	< 3.0	U	-	3	20-30	< 3.0	U	-	3	10-20	< 3.0	U	-	3
1,4- Dioxane - SW8270D-SIM																																
1,4-Dioxane	123-91-1	0.46[b]	ug/l	8-18	0.28	-	-	0.1	20-30	0.17	-	-	0.1	6-16	0.11	-	-	0.096	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB Homologs - E680																																
Decachlorobiphenyl	2051-24-3	NE	ug/l	8-18	< 0.012	U	-	0.025	20-30	< 0.012	U	-	0.025	6-16	< 0.012	U	-	0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	8-18	< 0.0016	U	-	0.005	20-30	< 0.0016	U	-	0.005	6-16	0.0025	J	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	8-18	< 0.0090	U	-	0.015	20-30	< 0.0090	U	-	0.015	6-16	< 0.0090	U	-	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	8-18	< 0.0047	U	-	0.01	20-30	< 0.0047	U	-	0.01	6-16	< 0.0047	U	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	8-18	< 0.00059	U	-	0.005	20-30	< 0.00059	U	-	0.005	6-16	< 0.00059	U	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	8-18	< 0.0088	U	-	0.02	20-30	< 0.0088	U	-	0.02	6-16	< 0.0088	U	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	8-18	< 0.0099	U	-	0.015	20-30	< 0.0099	U	-	0.015	6-16	< 0.0099	U	-	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	8-18	< 0.0043	U	-	0.01	20-30	< 0.0043	U	-	0.01	6-16	< 0.0043	U	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	8-18	< 0.0023	U	-	0.01	20-30	< 0.0023	U	-	0.01	6-16	< 0.0023	U	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	8-18	< 0.012	U	-	0.025	20-30	< 0.012	U	-	0.025	6-16	< 0.012	U	-	0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	8-18	< 0.0022	U	-	0.005	20-30	< 0.0022	U	-	0.005	6-16	< 0.0022	U	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E – 2018 Groundwater Analytical Results

Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

				Sample ID	MRC-SWMW-3I-D				MRC-SWMW-4I				MRC-SWMW-4S				MRC-SWMW-5I				MRC-SWMW-5I-D				MRC-MW11A			
				Collection Date	4/12/2018				4/5/2018				4/5/2018				4/11/2018				4/11/2018				6/25/2018			
				Block ID	F				G				G				G				G				G			
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																																
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	10-20	1.1	-	-	1	25-35	9.8	-	-	1	7-17	2.1	-	-	1	10-30	3	-	-	1	10-30	3.1	-	-	1	3-13	2.8	-	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	10-20	0.35	J	-	1	25-35	28.3	-	-	1	7-17	1.9	-	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	10.4	-	J	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	10-20	< 7.0	U	-	7	25-35	< 7.0	U	-	7	7-17	< 7.0	U	-	7	10-30	< 7.0	U	-	7	10-30	< 7.0	U	-	7	3-13	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	10-20	< 1.0	U	-	1	25-35	1.5	-	-	1	7-17	< 1.0	U	-	1	10-30	0.84	J	-	1	10-30	0.85	J	-	1	3-13	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	10-20	1.6	J	-	2	25-35	94.5	-	-	2	7-17	6.1	-	-	2	10-30	1.2	J	-	2	10-30	1.2	J	-	2	3-13	2.7	-	J	2
1,2-Dichloropropane	78-87-5	5	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	10-20	< 10.0	U	-	10	25-35	< 10.0	U	-	10	7-17	< 10.0	U	-	10	10-30	< 10.0	U	-	10	10-30	< 10.0	U	-	10	3-13	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	10-20	< 5.0	U	-	5	25-35	< 5.0	U	-	5	7-17	< 5.0	U	-	5	10-30	< 5.0	U	-	5	10-30	< 5.0	U	-	5	3-13	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	10-20	< 5.0	U	-	5	25-35	< 5.0	U	-	5	7-17	< 5.0	U	-	5	10-30	< 5.0	U	-	5	10-30	< 5.0	U	-	5	3-13	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	10-20	4.2	J	-	10	25-35	< 10.0	U	-	10	7-17	5.9	J	-	10	10-30	< 10.0	U	-	10	10-30	< 10.0	U	-	10	3-13	11.3	-	B	10
Benzene	71-43-2	5	ug/l	10-20	< 1.0	U	-	1	25-35	9.8	-	-	1	7-17	0.35	J	-	1	10-30	4	-	-	1	10-30	4.1	-	-	1	3-13	0.25	J	-	1
Bromobenzene	108-86-1	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	0.5	J	B	1
Carbon disulfide	75-15-0	100	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	0.24	J	B	1
Carbon tetrachloride	56-23-5	5	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Chlorobenzene	108-90-7	100	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	10-20	< 1.0	U	-	1	25-35	6.6	-	-	1	7-17	< 1.0	U	-	1	10-30	4.1	-	-	1	10-30	4.4	-	-	1	3-13	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	1.4	-	-	1
Chloromethane	74-87-3	19	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	10-20	1.2	-	-	1	25-35	94.5	-	-	1	7-17	5.4	-	-	1	10-30	0.71	J	-	1	10-30	0.69	J	-	1	3-13	2.7	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 0.34	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	10-20	< 1.0	U	-	1	25-35	0.4	J	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	10-20	< 5.0	U	-	5	25-35	< 5.0	U	-	5	7-17	< 5.0	U	-	5	10-30	< 5.0	U	-	5	10-30	< 5.0	U	-	5	3-13	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Methylcyclohexane	108-87-2	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	10-20	4	J	-	10	25-35	< 10.0	U	-	10	7-17	< 10.0	U	-	10	10-30	< 10.0	U	-	10	10-30	< 10.0	U	-	10	3-13	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	10-20	< 2.0	U	-	2	25-35	< 2.0	U	-	2	7-17	< 2.0	U	-	2	10-30	< 2.0	U	-	2	10-30	< 2.0	U	-	2	3-13	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 0.35	U	-	1
Toluene	108-88-3	1000	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 0.23	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	10-20	0.36	J	-	1	25-35	< 1.0	U	-	1	7-17	0.75	J	-	1	10-30	0.44	J	-	1	10-30	0.55	J	-	1	3-13	< 1.0	U	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	10-20	1	J	-	1	25-35	6.5	-	-	1	7-17	4.2	-	-	1	10-30	1	-	-	1	10-30	1.1	-	-	1	3-13	1.7	-	-	1
Trichlorofluoromethane	75-69-4	NE	ug/l	10-20	< 1.0	U	-	1	25-35	< 1.0	U	-	1	7-17	< 1.0	U	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	10-20	< 5.0	U	-	5	25-35	< 5.0	U	-	5	7-17	< 5.0	U	-	5	10-30	< 5.0	U	-	5	10-30	< 5.0	U	-	5	3-13	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	10-20	0.33	J	-	1	25-35	13.2	-	-	1	7-17	1.2	-	-	1	10-30	< 1.0	U	-	1	10-30	< 1.0	U	-	1	3-13	1.1	-	-	1
Total Xylenes	1330-20-7	10000	ug/l	10-20	< 3.0	U	-	3	25-35	< 3.0	U	-	3	7-17	< 3.0	U	-	3	10-30	< 3.0	U	-	3	10-30	< 3.0	U	-	3	3-13	< 0.66	U	-	3
1,4- Dioxane - SW8270D-SIM																																
1,4-Dioxane	123-91-1	0.46[b]	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	2	-	-	2
PCB Homologs - E680																																
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total polychlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6010C																																
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																																
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0022	U	-	0.0022
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	0.0071	-	-	0.0033
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0011	U	-	0.0011
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0011	U	-	0.0011
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	0.0011	J	-	0.0011
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	0.028	-	-	0.028
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	0.0022	J	-	0.0022
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0022	U	-	0.0022
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	0.0039	J	-	0.0039
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0056	U	-	0.0056
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0022	U	-	0.0022
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0011	U	-	0.0011
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	0.011	-	B	0.0056
Mercury - SW7470A																																
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3-13	< 0.0005	U	-	0.0005
Hex Chrom - E218.6																																
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0									

	Sample ID			MRC-MW16A					MW107B/C					EW-1					EW-2				
	Collection Date			6/25/2018					6/26/2018					6/26/2018					6/26/2018				
	Block ID			G					G					F					F				
Analyte	CAS Number	PAL[a]	Units	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL	Screen Interval feet bgs	Result	Lab Qual	DV Qual	RL
VOCs - SW8260B																							
1,1,1,2-Tetrachloroethane	630-20-6	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,1,1-Trichloroethane	71-55-6	200	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,1,2,2-Tetrachloroethane	79-34-5	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,1,2-Trichloroethane	79-00-5	5	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,1-Dichloroethane	75-34-3	90	ug/l	3-13	30.6	-	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,1-Dichloroethylene	75-35-4	7	ug/l	3-13	79.0	-	J	1	45-55	< 1.0	U	-	1	15-30	12.1	-	-	1	15-30	< 1.0	U	-	1
1,2,3-Trichlorobenzene	87-61-6	NE	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
1,2,3-Trichloropropane	96-18-4	NE	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
1,2,4-Trichlorobenzene	120-82-1	70	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
1,2,4-Trimethylbenzene	95-63-6	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	0.2	ug/l	3-13	< 7.0	U	-	7	45-55	< 7.0	U	-	7	15-30	< 7.0	U	-	7	15-30	< 7.0	U	-	7
1,2-Dibromoethane	106-93-4	0.05	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,2-Dichlorobenzene	95-50-1	600	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,2-Dichloroethane	107-06-2	5	ug/l	3-13	0.34	J	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Total 1,2-Dichloroethylene	540-59-0	5.5	ug/l	3-13	13.7	-	J	2	45-55	< 2.0	U	-	2	15-30	5320	-	-	200	15-30	23	-	-	2
1,2-Dichloropropane	78-87-5	5	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,3-Dichlorobenzene	541-73-1	1.8	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,3-Dichloropropane	142-28-9	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
1,3-Dichloropropene	542-75-6	0.44	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
1,4-Dichlorobenzene	106-46-7	75	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
2,2-Dichloropropane	594-20-7	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
2-Butanone	78-93-3	700	ug/l	3-13	< 10.0	U	-	10	45-55	< 10.0	U	-	10	15-30	< 10.0	U	-	10	15-30	< 10.0	U	-	10
2-Chloroethylvinylether	110-75-8	NE	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
2-Chlorotoluene	95-49-8	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
2-Hexanone	591-78-6	NE	ug/l	3-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	15-30	< 5.0	U	-	5	15-30	< 5.0	U	-	5
2-Phenylbutane	135-98-8	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
4-Chlorotoluene	106-43-4	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
4-Methyl-2-pentanone	108-10-1	630	ug/l	3-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	15-30	< 5.0	U	-	5	15-30	< 5.0	U	-	5
Acetone	67-64-1	550	ug/l	3-13	17.6	-	B	10	45-55	6.8	J	-	10	15-30	7.3	J	-	10	15-30	6.7	J	-	10
Benzene	71-43-2	5	ug/l	3-13	0.8	J	-	1	45-55	< 0.23	U	-	1	15-30	< 0.23	U	-	1	15-30	< 0.23	U	-	1
Bromobenzene	108-86-1	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Bromochloromethane	74-97-5	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Bromodichloromethane	75-27-4	80	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Bromoform	75-25-2	80	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Bromomethane	74-83-9	0.85	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	0.44	J	-	1
Carbon disulfide	75-15-0	100	ug/l	3-13	< 1.0	U	-	1	45-55	0.25	J	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Carbon tetrachloride	56-23-5	5	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	1.8	-	-	1
Chlorobenzene	108-90-7	100	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	1.2	-	-	1	15-30	< 1.0	U	-	1
Chloroethane	75-00-3	3.6	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Chloroform	67-66-3	80	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	1.7	-	-	1	15-30	0.91	J	-	1
Chloromethane	74-87-3	19	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
cis-1,2-Dichloroethene (*cis*-1,2-DCE)	156-59-2	70	ug/l	3-13	13.7	-	-	1	45-55	< 0.32	U	-	1	15-30	5320	-	-	100	15-30	22.5	-	-	1
cis-1,3-Dichloropropene	10061-01-5	0.44	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Cyclohexane	110-82-7	NE	ug/l	3-13	0.37	J	J	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Cymene	99-87-6	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Dibromochloromethane	124-48-1	80	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Dibromomethane	74-95-3	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Dichlorodifluoromethane (CFC-12)	75-71-8	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Diisopropyl ether	108-20-3	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Ethyl tertiary-butyl ether	637-92-3	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Ethylbenzene	100-41-4	700	ug/l	3-13	< 0.34	U	-	1	45-55	< 0.34	U	-	1	15-30	< 0.34	U	-	1	15-30	< 0.34	U	-	1
Freon TF (Chlorinated fluorocarbon)	76-13-1	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	7.1	-	-	1
Hexachloro-1,3-butadiene	87-68-3	NE	ug/l	3-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	15-30	< 5.0	U	-	5	15-30	< 5.0	U	-	5
Isopropylbenzene	98-82-8	66	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Methyl acetate	79-20-9	NE	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
Methyl tert-butyl ether	1634-04-4	20	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	0.65	J	-	1	15-30	5.4	-	-	1
Methylcyclohexane	108-87-2	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Methylene chloride	75-09-2	5	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
mp-Xylene	179601-23-1	NE	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
Naphthalene	91-20-3	0.65	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
n-Butylbenzene	104-51-8	NE	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
n-Propylbenzene	103-65-1	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
o-Xylene	95-47-6	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Styrene	100-42-5	100	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Tert-butyl alcohol	75-65-0	NE	ug/l	3-13	< 10.0	U	-	10	45-55	< 10.0	U	-	10	15-30	< 10.0	U	-	10	15-30	< 10.0	U	-	10
Tert-butylbenzene	98-06-6	NE	ug/l	3-13	< 2.0	U	-	2	45-55	< 2.0	U	-	2	15-30	< 2.0	U	-	2	15-30	< 2.0	U	-	2
Tertiary-amyl methyl ether	994-05-8	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Tetrachloroethene (PCE)	127-18-4	5	ug/l	3-13	6.3	-	J	1	45-55	< 0.35	U	-	1	15-30	< 0.35	U	-	100	15-30	< 0.35	U	-	50
Toluene	108-88-3	1000	ug/l	3-13	< 0.23	U	-	1	45-55	< 0.23	U	-	1	15-30	< 0.23	U	-	1	15-30	< 0.23	U	-	1
trans-1,2-Dichloroethene	156-60-5	100	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	8.9	-	-	1	15-30	0.48	J	-	1
trans-1,3-Dichloropropene	10061-02-6	0.44	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Trichloroethene (TCE)	79-01-6	5	ug/l	3-13	20.7	-	J+	1	45-55	< 0.33	U	-	1	15-30	794	-	-	100	15-30	2420	-	-	50
Trichlorofluoromethane	75-69-4	NE	ug/l	3-13	< 1.0	U	-	1	45-55	< 1.0	U	-	1	15-30	< 1.0	U	-	1	15-30	< 1.0	U	-	1
Vinyl acetate	108-05-4	NE	ug/l	3-13	< 5.0	U	-	5	45-55	< 5.0	U	-	5	15-30	< 5.0	U	-	5	15-30	< 5.0	U	-	5
Vinyl chloride (VC)	75-01-4	2	ug/l	3-13	10.9	-	-	1	45-55	< 0.3	U	-	1	15-30	0.54	J	-	1	15-30	< 0.3	U	-	1
Total Xylenes	1330-20-7	10000	ug/l	3-13	< 0.66	U	-	3	45-55	< 0.66	U	-	3	15-30	< 0.66	U	-	3	15-30	< 0.66	U	-	3
1,4- Dioxane - SW8270D-SIM																							
1,4-Dioxane	123-91-1	0.46[b]	ug/l	3-13	42.6	-	-	2	45-55	< 0.1	U	-	0.1	15-30	0.075	J	B	0.099	15-30	0.13	-	B	0.099
PCB Homologs - E680																							
Decachlorobiphenyl	2051-24-3	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.012	U	UJ	0.012	15-30	< 0.012	U	UJ	0.012
Total Dichlorobiphenyls	25512-42-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	0.0035	J*	J	0.0016	15-30	< 0.016	U	-	0.016
Total Heptachlorobiphenyls	28655-71-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.009	U	UJ	0.009	15-30	< 0.009	U	UJ	0.009
Total Hexachlorobiphenyls	26601-64-9	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.0047	U	UJ	0.0047	15-30	< 0.0047	U	-	0.0043
Total Monochlorobiphenyls	27323-18-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.00059	U	UJ	0.00059	15-30	< 0.00059	U	-	0.00059
Total Nonachlorobiphenyls	53742-07-7	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.0088	U	UJ	0.0088	15-30	< 0.0088	U	-	0.0088
Total Octachlorobiphenyls	55722-26-4	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.0099	U	UJ	0.0099	15-30	< 0.0099	U	UJ	0.0099
Total Pentachlorobiphenyls	25429-29-2	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.0043	U	UJ	0.0043	15-30	< 0.0043	U	-	0.0043
Total Tetrachlorobiphenyls	26914-33-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.0023	U	UJ	0.0023	15-30	< 0.0023	U	-	0.0023
Total Trichlorinated biphenyls (PCBs)	1336-36-3	0.5	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	< 0.012	U	UJ	0.012	15-30	< 0.012	U	-	0.012
Total Trichlorobiphenyls	25323-68-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	15-30	0.0056	*	J	0.0022	15-30	< 0.0022	U	-	0.0022
Metals - SW6010C																							
Calcium	7440-70-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	7439-89-6	0.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	7439-95-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	7439-96-5	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	7440-09-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silica	7631-86-9	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	7440-23-5	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals - SW6020																							
Antimony	7440-36-0	0.006	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7440-38-2	0.01	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	7440-41-7	0.004	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7440-43-9	0.005	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	7440-47-3	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	7440-48-4	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	7440-50-8	1.3	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	7439-92-1	0.015	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	7440-02-0	0.073	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	7782-49-2	0.05	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	7440-22-4	0.1	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	7440-28-0	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	7440-66-6	5	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury - SW7470A																							
Mercury	7439-97-6	0.002	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hex Chrom - E218.6																							
Chromium (hexavalent compounds)	18540-29-9	0.1	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E300.0																							
Chloride	16887-00-6	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate	14797-55-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite as N	14797-65-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	14808-79-8	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - E365.1																							
Phosphorus	7723-14-0	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A2320																							
Total Alkalinity (as CaCO3)	ALK	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - A4500E																							
Orthophosphate	14265-44-2	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - D6919-09																							
Nitrogen, ammonia (as N)	7664-41-7	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - RSK175																							
Butane	106-97-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethane	74-84-0	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	74-85-1	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutane	75-28-5	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	74-82-8	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propane	74-98-6	NE	ug/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - SM2540C																							
Total Dissolved Solids	TDS	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNA - SM5310B																							
Total Organic Carbon	TOC	NE	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- = Not Sampled or Not Detected
µg/L = Micrograms per liter
mg/L = Milligrams per liter
[a] = Maryland Department of the Environment Cleanup Standards for Soil and Groundwater; http://www.phaseonline.com/assets/Site_18/files/MDE%20June%202008%20VCP%20Cleanup%20Standards.pdf
[b] = United States Environmental Protection Agency Tapwater Regional Screening Level; http://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables drinking_water/certlic/drinkingwater/14-Dioxane.html
J = Indicates an estimated value
U = Indicates that a compound was analyzed for but not detected
B = Not detected substantially above the level reported in the laboratory or field blanks
NE = Not Established

APPENDIX F
Laboratory Analytical Reports

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 26, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2307128**
Purchase Order:	**95840ACM**	Workorder ID:	**2018-MIDDLE RIVER COMPLEX**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, April 5, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2307128001	MRC-MW43A	Water	4/4/2018 14:10	4/5/2018 21:00	Collected by Client
2307128002	MRC-MW123A	Water	4/4/2018 16:25	4/5/2018 21:00	Collected by Client
2307128003	MRC-MW48A	Water	4/4/2018 16:07	4/5/2018 21:00	Collected by Client
2307128004	MRC-MW121A	Water	4/4/2018 14:55	4/5/2018 21:00	Collected by Client
2307128005	MRC-MW121B	Water	4/4/2018 17:35	4/5/2018 21:00	Collected by Client
2307128006	MRC-MW14B	Water	4/4/2018 18:05	4/5/2018 21:00	Collected by Client
2307128007	MRC-MW71B	Water	4/4/2018 15:30	4/5/2018 21:00	Collected by Client
2307128008	Trip Blank 4	Water	4/5/2018 21:00	4/5/2018 21:00	Collected by Client
2307128009	Trip Blank 1	Water	4/5/2018 21:00	4/5/2018 21:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128001** Date Collected: 4/4/2018 14:10 Matrix: Water

Sample ID: **MRC-MW43A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 19:10	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 19:10	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 19:10	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 19:10	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 19:10	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 19:10	DD	A
1,2,3-Trichlorobenzene	901		ug/L	200	93.0	SW846 8260B		4/10/18 14:56	DD	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 19:10	DD	A
1,2,4-Trichlorobenzene	3960		ug/L	200	82.0	SW846 8260B		4/10/18 14:56	DD	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 19:10	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/9/18 19:10	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 19:10	DD	A
1,2-Dichlorobenzene	367		ug/L	100	38.0	SW846 8260B		4/10/18 14:56	DD	B
1,2-Dichloroethane	5.2		ug/L	1.0	0.32	SW846 8260B		4/9/18 19:10	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/9/18 19:10	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 19:10	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 19:10	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 19:10	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/9/18 19:10	DD	A
1,4-Dichlorobenzene	412		ug/L	100	27.0	SW846 8260B		4/10/18 14:56	DD	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 19:10	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/9/18 19:10	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/9/18 19:10	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/9/18 19:10	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/9/18 19:10	DD	A
Acetone	4.6J	J	ug/L	10.0	3.1	SW846 8260B		4/9/18 19:10	DD	A
Benzene	0.69J	J	ug/L	1.0	0.23	SW846 8260B		4/9/18 19:10	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 19:10	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 19:10	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 19:10	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/9/18 19:10	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/9/18 19:10	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 19:10	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 19:10	DD	A
Chlorobenzene	6.7		ug/L	1.0	0.19	SW846 8260B		4/9/18 19:10	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 19:10	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128001** Date Collected: 4/4/2018 14:10 Matrix: Water

Sample ID: **MRC-MW43A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 19:10	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/9/18 19:10	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 19:10	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 19:10	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 19:10	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 19:10	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 19:10	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 19:10	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 19:10	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 19:10	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/9/18 19:10	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 19:10	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/9/18 19:10	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 19:10	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 19:10	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 19:10	DD	A
Naphthalene	3.8		ug/L	2.0	0.34	SW846 8260B		4/9/18 19:10	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 19:10	DD	A
Tetrachloroethene	0.43J	J	ug/L	1.0	0.35	SW846 8260B		4/9/18 19:10	DD	A
Toluene	0.23J	J	ug/L	1.0	0.23	SW846 8260B		4/9/18 19:10	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/9/18 19:10	DD	A
Trichloroethene	ND		ug/L	100	33.0	SW846 8260B		4/10/18 14:56	DD	B
Trichlorofluoromethane	0.48J	J	ug/L	1.0	0.24	SW846 8260B		4/9/18 19:10	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/9/18 19:10	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 19:10	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 19:10	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 19:10	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/9/18 19:10	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 19:10	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 19:10	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 19:10	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 19:10	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 19:10	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 19:10	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 19:10	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/9/18 19:10	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/9/18 19:10	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/9/18 19:10	DD	A

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128001** Date Collected: 4/4/2018 14:10 Matrix: Water

Sample ID: **MRC-MW43A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/9/18 19:10	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/9/18 19:10	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/10/18 14:56	DD	B
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/9/18 19:10	DD	A
4-Bromofluorobenzene (S)	82.4		%	79 - 114		SW846 8260B			4/9/18 19:10	DD	A
4-Bromofluorobenzene (S)	98.8		%	79 - 114		SW846 8260B			4/10/18 14:56	DD	B
Dibromofluoromethane (S)	103		%	78 - 116		SW846 8260B			4/10/18 14:56	DD	B
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/9/18 19:10	DD	A
Toluene-d8 (S)	87.5		%	76 - 127		SW846 8260B			4/9/18 19:10	DD	A
Toluene-d8 (S)	89.1		%	76 - 127		SW846 8260B			4/10/18 14:56	DD	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 07:46	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128002** Date Collected: 4/4/2018 16:25 Matrix: Water

Sample ID: **MRC-MW123A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 18:48	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 18:48	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 18:48	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:48	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 18:48	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 18:48	DD	A
1,2,3-Trichlorobenzene	98.7	1	ug/L	2.0	0.93	SW846 8260B		4/9/18 18:48	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 18:48	DD	A
1,2,4-Trichlorobenzene	399		ug/L	40.0	16.4	SW846 8260B		4/10/18 15:40	DD	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 18:48	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/9/18 18:48	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 18:48	DD	A
1,2-Dichlorobenzene	53.9		ug/L	1.0	0.38	SW846 8260B		4/9/18 18:48	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:48	DD	A
1,2-Dichloroethene, Total	29.3		ug/L	2.0	0.45	SW846 8260B		4/9/18 18:48	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 18:48	DD	A
1,3-Dichlorobenzene	424		ug/L	20.0	5.0	SW846 8260B		4/10/18 15:40	DD	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 18:48	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/9/18 18:48	DD	A
1,4-Dichlorobenzene	261		ug/L	20.0	5.4	SW846 8260B		4/10/18 15:40	DD	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:48	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/9/18 18:48	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/9/18 18:48	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/9/18 18:48	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/9/18 18:48	DD	A
Acetone	4.2J	J	ug/L	10.0	3.1	SW846 8260B		4/9/18 18:48	DD	A
Benzene	15.9		ug/L	1.0	0.23	SW846 8260B		4/9/18 18:48	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:48	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:48	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 18:48	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/9/18 18:48	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/9/18 18:48	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 18:48	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:48	DD	A
Chlorobenzene	996		ug/L	20.0	3.8	SW846 8260B		4/10/18 15:40	DD	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 18:48	DD	A

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128002** Date Collected: 4/4/2018 16:25 Matrix: Water

Sample ID: **MRC-MW123A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:48	DD	A
Chloroform	0.24J	J	ug/L	1.0	0.21	SW846 8260B		4/9/18 18:48	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:48	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 18:48	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:48	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:48	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 18:48	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 18:48	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 18:48	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 18:48	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/9/18 18:48	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 18:48	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/9/18 18:48	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 18:48	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:48	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 18:48	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/9/18 18:48	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 18:48	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 18:48	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 18:48	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/9/18 18:48	DD	A
Trichloroethene	ND		ug/L	20.0	6.6	SW846 8260B		4/10/18 15:40	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 18:48	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/9/18 18:48	DD	A
Vinyl Chloride	1.4		ug/L	1.0	0.30	SW846 8260B		4/9/18 18:48	DD	A
cis-1,2-Dichloroethene	27.8		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:48	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:48	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/9/18 18:48	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 18:48	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:48	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 18:48	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:48	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:48	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:48	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:48	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/9/18 18:48	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/9/18 18:48	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/9/18 18:48	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128002** Date Collected: 4/4/2018 16:25 Matrix: Water

Sample ID: **MRC-MW123A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.5		ug/L	1.0	0.26	SW846 8260B			4/9/18 18:48	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/9/18 18:48	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	62 - 133		SW846 8260B			4/10/18 15:40	DD	B
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/9/18 18:48	DD	A
4-Bromofluorobenzene (S)	92.6		%	79 - 114		SW846 8260B			4/10/18 15:40	DD	B
4-Bromofluorobenzene (S)	83.8		%	79 - 114		SW846 8260B			4/9/18 18:48	DD	A
Dibromofluoromethane (S)	105		%	78 - 116		SW846 8260B			4/9/18 18:48	DD	A
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/10/18 15:40	DD	B
Toluene-d8 (S)	72.9	2	%	76 - 127		SW846 8260B			4/9/18 18:48	DD	A
Toluene-d8 (S)	86.2		%	76 - 127		SW846 8260B			4/10/18 15:40	DD	B
SEMIVOLATILE SIM											
1,4-Dioxane	0.19		ug/L	0.093	0.018	8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	73		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
Fluoranthene-d10 (S)	85.9		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/17/18 22:36	CGS	
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/7/18 07:48	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Arsenic, Total	0.0014J	J	mg/L	0.0033	0.0011	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Beryllium, Total	0.0013		mg/L	0.0011	0.00037	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Chromium, Total	0.0014J	J	mg/L	0.0022	0.00074	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Cobalt, Total	0.043		mg/L	0.0056	0.0019	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Copper, Total	0.0025J	J	mg/L	0.0056	0.0019	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/13/18 08:50	AXC	4/13/18 14:48	AXC	E1
Nickel, Total	0.038		mg/L	0.0056	0.0019	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128002** Date Collected: 4/4/2018 16:25 Matrix: Water

Sample ID: **MRC-MW123A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	*Cntr*
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
Zinc, Total	0.040		mg/L	0.0056	0.0019	SW846 6020A	4/10/18 17:30	AHI	4/11/18 14:17	MO	E
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 08:15	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128003** Date Collected: 4/4/2018 16:07 Matrix: Water

Sample ID: **MRC-MW48A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 18:26	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 18:26	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 18:26	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:26	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 18:26	DD	A
1,1-Dichloroethene	5.2		ug/L	1.0	0.29	SW846 8260B		4/9/18 18:26	DD	A
1,2,3-Trichlorobenzene	ND	1	ug/L	2.0	0.93	SW846 8260B		4/9/18 18:26	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 18:26	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/9/18 18:26	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 18:26	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/9/18 18:26	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 18:26	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/9/18 18:26	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:26	DD	A
1,2-Dichloroethene, Total	354		ug/L	40.0	9.0	SW846 8260B		4/10/18 15:18	DD	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 18:26	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 18:26	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 18:26	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/9/18 18:26	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 18:26	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:26	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/9/18 18:26	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/9/18 18:26	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/9/18 18:26	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/9/18 18:26	DD	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/9/18 18:26	DD	A
Benzene	0.25J	J	ug/L	1.0	0.23	SW846 8260B		4/9/18 18:26	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:26	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:26	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 18:26	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/9/18 18:26	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/9/18 18:26	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 18:26	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:26	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 18:26	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 18:26	DD	A

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128003** Date Collected: 4/4/2018 16:07 Matrix: Water

Sample ID: **MRC-MW48A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:26	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/9/18 18:26	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:26	DD	A
Cyclohexane	0.35J	J	ug/L	1.0	0.29	SW846 8260B		4/9/18 18:26	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:26	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:26	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 18:26	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 18:26	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 18:26	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 18:26	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/9/18 18:26	DD	A
Isopropylbenzene	0.58J	J	ug/L	1.0	0.22	SW846 8260B		4/9/18 18:26	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/9/18 18:26	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 18:26	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:26	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 18:26	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/9/18 18:26	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 18:26	DD	A
Tetrachloroethene	11.0		ug/L	1.0	0.35	SW846 8260B		4/9/18 18:26	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 18:26	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/9/18 18:26	DD	A
Trichloroethene	842		ug/L	20.0	6.6	SW846 8260B		4/10/18 15:18	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 18:26	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/9/18 18:26	DD	A
Vinyl Chloride	33.6		ug/L	1.0	0.30	SW846 8260B		4/9/18 18:26	DD	A
cis-1,2-Dichloroethene	354		ug/L	20.0	6.4	SW846 8260B		4/10/18 15:18	DD	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 18:26	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/9/18 18:26	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 18:26	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:26	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 18:26	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:26	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 18:26	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 18:26	DD	A
sec-Butylbenzene	0.37J	J	ug/L	1.0	0.31	SW846 8260B		4/9/18 18:26	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/9/18 18:26	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/9/18 18:26	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/9/18 18:26	DD	A

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128003** Date Collected: 4/4/2018 16:07 Matrix: Water

Sample ID: **MRC-MW48A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	3.5		ug/L	1.0	0.26	SW846 8260B			4/9/18 18:26	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/9/18 18:26	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/9/18 18:26	DD	A
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			4/10/18 15:18	DD	B
4-Bromofluorobenzene (S)	106		%	79 - 114		SW846 8260B			4/9/18 18:26	DD	A
4-Bromofluorobenzene (S)	103		%	79 - 114		SW846 8260B			4/10/18 15:18	DD	B
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/10/18 15:18	DD	B
Dibromofluoromethane (S)	102		%	78 - 116		SW846 8260B			4/9/18 18:26	DD	A
Toluene-d8 (S)	89.9		%	76 - 127		SW846 8260B			4/10/18 15:18	DD	B
Toluene-d8 (S)	90.3		%	76 - 127		SW846 8260B			4/9/18 18:26	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.49	3,4	ug/L	0.093	0.018	8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	54		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
Fluoranthene-d10 (S)	84.4		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/17/18 21:42	CGS	
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/17/18 02:47	EGO	E
Ethane	1.0J	J	ug/L	3.3	0.23	RSK 175			4/17/18 02:47	EGO	E
Ethene	5.0		ug/L	2.4	0.40	RSK 175			4/17/18 02:47	EGO	E
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/17/18 02:47	EGO	E
Methane	1590		ug/L	1.5	0.34	RSK 175			4/17/18 02:47	EGO	E
Propane	ND		ug/L	3.2	0.22	RSK 175			4/17/18 02:47	EGO	E
WET CHEMISTRY											
Alkalinity, Total	56	2	mg/L	5	0.8	S2320B-97			4/10/18 06:01	MSA	H
Ammonia-N	0.029J	J	mg/L	0.100	0.03	D6919-09			4/12/18 23:11	NJA	I
Chloride	122		mg/L	2.0	0.24	EPA 300.0			4/6/18 09:15	CHW	G
Nitrate-N	ND		mg/L	0.20	0.057	EPA 300.0			4/6/18 09:15	CHW	G
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/6/18 09:15	CHW	G
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/6/18 03:06	MSA	G
Sulfate	4.4		mg/L	2.0	0.40	EPA 300.0			4/6/18 09:15	CHW	G

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128003** Date Collected: 4/4/2018 16:07 Matrix: Water

Sample ID: **MRC-MW48A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Total Dissolved Solids	266		mg/L	5	5	S2540C-11		4/10/18 15:15	BMK	G
Total Organic Carbon (TOC)	3.0		mg/L	0.50	0.18	S5310B-00		4/9/18 12:02	PAG	

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128004** Date Collected: 4/4/2018 14:55 Matrix: Water

Sample ID: **MRC-MW121A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 17:21	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 17:21	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 17:21	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 17:21	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 17:21	DD	A
1,2,3-Trichlorobenzene	ND	1	ug/L	2.0	0.93	SW846 8260B		4/9/18 17:21	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 17:21	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/9/18 17:21	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 17:21	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/9/18 17:21	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 17:21	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/9/18 17:21	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:21	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/9/18 17:21	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 17:21	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 17:21	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 17:21	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/9/18 17:21	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 17:21	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:21	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/9/18 17:21	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/9/18 17:21	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/9/18 17:21	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/9/18 17:21	DD	A
Acetone	24.5		ug/L	10.0	3.1	SW846 8260B		4/9/18 17:21	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 17:21	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:21	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:21	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 17:21	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/9/18 17:21	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/9/18 17:21	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 17:21	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:21	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 17:21	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 17:21	DD	A

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128004** Date Collected: 4/4/2018 14:55 Matrix: Water

Sample ID: **MRC-MW121A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/9/18 17:21	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:21	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 17:21	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:21	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 17:21	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 17:21	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 17:21	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 17:21	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/9/18 17:21	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 17:21	DD	A
Methyl acetate	0.36J	J	ug/L	2.0	0.32	SW846 8260B		4/9/18 17:21	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 17:21	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 17:21	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/9/18 17:21	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 17:21	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 17:21	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 17:21	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/9/18 17:21	DD	A
Trichloroethene	1.2		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 17:21	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/9/18 17:21	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 17:21	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:21	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:21	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/9/18 17:21	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 17:21	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 17:21	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:21	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:21	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:21	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/9/18 17:21	DD	A
tert-Butyl Alcohol	4.5J	J	ug/L	10.0	2.2	SW846 8260B		4/9/18 17:21	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/9/18 17:21	DD	A

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128004** Date Collected: 4/4/2018 14:55 Matrix: Water

Sample ID: **MRC-MW121A** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/9/18 17:21	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/9/18 17:21	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	107		%	62 - 133		SW846 8260B			4/9/18 17:21	DD	A
4-Bromofluorobenzene (S)	104		%	79 - 114		SW846 8260B			4/9/18 17:21	DD	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/9/18 17:21	DD	A
Toluene-d8 (S)	89.2		%	76 - 127		SW846 8260B			4/9/18 17:21	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.048J	J	ug/L	0.10	0.020	8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	65.9		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
Fluoranthene-d10 (S)	87.7		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/17/18 21:14	CGS	
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/7/18 07:57	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128005** Date Collected: 4/4/2018 17:35 Matrix: Water

Sample ID: **MRC-MW121B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 17:42	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 17:42	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 17:42	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 17:42	DD	A
1,1-Dichloroethene	2.5		ug/L	1.0	0.29	SW846 8260B		4/9/18 17:42	DD	A
1,2,3-Trichlorobenzene	ND	1	ug/L	2.0	0.93	SW846 8260B		4/9/18 17:42	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 17:42	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/9/18 17:42	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 17:42	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/9/18 17:42	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 17:42	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/9/18 17:42	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:42	DD	A
1,2-Dichloroethene, Total	2.0J	J	ug/L	2.0	0.45	SW846 8260B		4/9/18 17:42	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 17:42	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 17:42	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 17:42	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/9/18 17:42	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 17:42	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:42	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/9/18 17:42	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/9/18 17:42	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/9/18 17:42	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/9/18 17:42	DD	A
Acetone	10.0		ug/L	10.0	3.1	SW846 8260B		4/9/18 17:42	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 17:42	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:42	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:42	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 17:42	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/9/18 17:42	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/9/18 17:42	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 17:42	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:42	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 17:42	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 17:42	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128005** Date Collected: 4/4/2018 17:35 Matrix: Water

Sample ID: **MRC-MW121B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
Chloroform	0.49J	J	ug/L	1.0	0.21	SW846 8260B		4/9/18 17:42	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:42	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 17:42	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:42	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 17:42	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 17:42	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 17:42	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 17:42	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/9/18 17:42	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 17:42	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/9/18 17:42	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 17:42	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 17:42	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/9/18 17:42	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 17:42	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 17:42	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 17:42	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/9/18 17:42	DD	A
Trichloroethene	104		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 17:42	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/9/18 17:42	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 17:42	DD	A
cis-1,2-Dichloroethene	2.0		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:42	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:42	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/9/18 17:42	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 17:42	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 17:42	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 17:42	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 17:42	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 17:42	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/9/18 17:42	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/9/18 17:42	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/9/18 17:42	DD	A

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128005** Date Collected: 4/4/2018 17:35 Matrix: Water

Sample ID: **MRC-MW121B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/9/18 17:42	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/9/18 17:42	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	107		%	62 - 133		SW846 8260B			4/9/18 17:42	DD	A
4-Bromofluorobenzene (S)	103		%	79 - 114		SW846 8260B			4/9/18 17:42	DD	A
Dibromofluoromethane (S)	108		%	78 - 116		SW846 8260B			4/9/18 17:42	DD	A
Toluene-d8 (S)	87.9		%	76 - 127		SW846 8260B			4/9/18 17:42	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	1.6		ug/L	0.097	0.018	8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	79.5		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
Fluoranthene-d10 (S)	100		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/19/18 23:18	GEC	
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/7/18 08:06	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128006** Date Collected: 4/4/2018 18:05 Matrix: Water

Sample ID: **MRC-MW14B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/10/18 19:55	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/10/18 19:55	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/10/18 19:55	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
1,1-Dichloroethane	7.5		ug/L	1.0	0.28	SW846 8260B		4/10/18 19:55	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/10/18 19:55	CJG	B
1,2,3-Trichlorobenzene	ND	2	ug/L	2.0	0.93	SW846 8260B		4/10/18 19:55	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/10/18 19:55	CJG	B
1,2,4-Trichlorobenzene	ND	1	ug/L	2.0	0.82	SW846 8260B		4/10/18 19:55	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/10/18 19:55	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/10/18 19:55	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/10/18 19:55	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/10/18 19:55	CJG	B
1,2-Dichloroethane	1.2		ug/L	1.0	0.32	SW846 8260B		4/10/18 19:55	CJG	B
1,2-Dichloroethene, Total	1.2J	J	ug/L	2.0	0.45	SW846 8260B		4/10/18 19:55	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/10/18 19:55	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/10/18 19:55	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/10/18 19:55	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/10/18 19:55	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/10/18 19:55	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/10/18 19:55	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/10/18 19:55	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/10/18 19:55	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/10/18 19:55	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/10/18 19:55	CJG	B
Acetone	7.2J	J	ug/L	10.0	3.1	SW846 8260B		4/10/18 19:55	CJG	B
Benzene	23.2		ug/L	1.0	0.23	SW846 8260B		4/10/18 19:55	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/10/18 19:55	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/10/18 19:55	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/10/18 19:55	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/10/18 19:55	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/10/18 19:55	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/10/18 19:55	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/10/18 19:55	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/10/18 19:55	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/10/18 19:55	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128006** Date Collected: 4/4/2018 18:05 Matrix: Water

Sample ID: **MRC-MW14B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	23.3		ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/10/18 19:55	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/10/18 19:55	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/10/18 19:55	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/10/18 19:55	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/10/18 19:55	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/10/18 19:55	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/10/18 19:55	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/10/18 19:55	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/10/18 19:55	CJG	B
Isopropylbenzene	0.65J	J	ug/L	1.0	0.22	SW846 8260B		4/10/18 19:55	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/10/18 19:55	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/10/18 19:55	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/10/18 19:55	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/10/18 19:55	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/10/18 19:55	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/10/18 19:55	CJG	B
Toluene	0.23J	J	ug/L	1.0	0.23	SW846 8260B		4/10/18 19:55	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/10/18 19:55	CJG	B
Trichloroethene	0.67J	J	ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/10/18 19:55	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/10/18 19:55	CJG	B
Vinyl Chloride	0.66J	J	ug/L	1.0	0.30	SW846 8260B		4/10/18 19:55	CJG	B
cis-1,2-Dichloroethene	0.45J	J	ug/L	1.0	0.32	SW846 8260B		4/10/18 19:55	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/10/18 19:55	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/10/18 19:55	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/10/18 19:55	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/10/18 19:55	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/10/18 19:55	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/10/18 19:55	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/10/18 19:55	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/10/18 19:55	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/10/18 19:55	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/10/18 19:55	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128006** Date Collected: 4/4/2018 18:05 Matrix: Water
Sample ID: **MRC-MW14B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.79J	J	ug/L	1.0	0.26	SW846 8260B			4/10/18 19:55	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/10/18 19:55	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/10/18 19:55	CJG	B
4-Bromofluorobenzene (S)	105		%	79 - 114		SW846 8260B			4/10/18 19:55	CJG	B
Dibromofluoromethane (S)	103		%	78 - 116		SW846 8260B			4/10/18 19:55	CJG	B
Toluene-d8 (S)	91.2		%	76 - 127		SW846 8260B			4/10/18 19:55	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	113		ug/L	9.7	1.8	8270 SIM	4/11/18 21:05	TXC	4/17/18 23:56	CGS	
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 17:43	GEC	
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 17:43	GEC	
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 17:43	GEC	
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 17:43	GEC	
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 17:43	GEC	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	0		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/17/18 23:56	CGS	
2-Methylnapthalene-d10 (S)	52.9		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/13/18 17:43	GEC	
Fluoranthene-d10 (S)	79.9		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/13/18 17:43	GEC	
Fluoranthene-d10 (S)	298		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/17/18 23:56	CGS	

Vanessa N. Badman
Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128007** Date Collected: 4/4/2018 15:30 Matrix: Water

Sample ID: **MRC-MW71B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/9/18 16:59	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 16:59	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 16:59	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
1,1-Dichloroethane	4.5		ug/L	1.0	0.28	SW846 8260B		4/9/18 16:59	DD	A
1,1-Dichloroethene	61.9		ug/L	1.0	0.29	SW846 8260B		4/9/18 16:59	DD	A
1,2,3-Trichlorobenzene	ND	1	ug/L	2.0	0.93	SW846 8260B		4/9/18 16:59	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 16:59	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/9/18 16:59	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 16:59	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/9/18 16:59	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/9/18 16:59	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/9/18 16:59	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 16:59	DD	A
1,2-Dichloroethene, Total	7.7		ug/L	2.0	0.45	SW846 8260B		4/9/18 16:59	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 16:59	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 16:59	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 16:59	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/9/18 16:59	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 16:59	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 16:59	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/9/18 16:59	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/9/18 16:59	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/9/18 16:59	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/9/18 16:59	DD	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/9/18 16:59	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 16:59	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 16:59	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 16:59	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/9/18 16:59	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/9/18 16:59	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/9/18 16:59	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 16:59	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 16:59	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 16:59	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 16:59	DD	A

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128007** Date Collected: 4/4/2018 15:30 Matrix: Water

Sample ID: **MRC-MW71B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/9/18 16:59	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 16:59	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/9/18 16:59	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 16:59	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/9/18 16:59	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/9/18 16:59	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/9/18 16:59	DD	A
Freon 113	0.76J	J	ug/L	1.0	0.26	SW846 8260B		4/9/18 16:59	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/9/18 16:59	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/9/18 16:59	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/9/18 16:59	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 16:59	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/9/18 16:59	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/9/18 16:59	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 16:59	DD	A
Tetrachloroethene	0.57J	J	ug/L	1.0	0.35	SW846 8260B		4/9/18 16:59	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/9/18 16:59	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/9/18 16:59	DD	A
Trichloroethene	55.4		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/9/18 16:59	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/9/18 16:59	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/9/18 16:59	DD	A
cis-1,2-Dichloroethene	7.7		ug/L	1.0	0.32	SW846 8260B		4/9/18 16:59	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 16:59	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/9/18 16:59	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/9/18 16:59	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/9/18 16:59	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/9/18 16:59	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/9/18 16:59	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/9/18 16:59	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/9/18 16:59	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/9/18 16:59	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/9/18 16:59	DD	A

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128007** Date Collected: 4/4/2018 15:30 Matrix: Water

Sample ID: **MRC-MW71B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/9/18 16:59	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/9/18 16:59	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/9/18 16:59	DD	A
4-Bromofluorobenzene (S)	104		%	79 - 114		SW846 8260B			4/9/18 16:59	DD	A
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/9/18 16:59	DD	A
Toluene-d8 (S)	87.4		%	76 - 127		SW846 8260B			4/9/18 16:59	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	13.5		ug/L	1.0	0.19	8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	54.1		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
Fluoranthene-d10 (S)	76.5		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/13/18 14:59	GEC	
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/17/18 03:03	EGO	E
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/17/18 03:03	EGO	E
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/17/18 03:03	EGO	E
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/17/18 03:03	EGO	E
Methane	4.1		ug/L	1.5	0.34	RSK 175			4/17/18 03:03	EGO	E
Propane	ND		ug/L	3.2	0.22	RSK 175			4/17/18 03:03	EGO	E
WET CHEMISTRY											
Alkalinity, Total	34	2	mg/L	5	0.8	S2320B-97			4/10/18 06:09	MSA	H
Ammonia-N	ND		mg/L	0.100	0.03	D6919-09			4/12/18 23:30	NJA	I
Chloride	148		mg/L	2.0	0.24	EPA 300.0			4/6/18 09:28	CHW	G
Nitrate-N	0.060J	J	mg/L	0.20	0.057	EPA 300.0			4/6/18 09:28	CHW	G
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/6/18 09:28	CHW	G
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/6/18 03:06	MSA	G
Sulfate	25.6		mg/L	2.0	0.40	EPA 300.0			4/6/18 09:28	CHW	G
Total Dissolved Solids	330		mg/L	5	5	S2540C-11			4/10/18 15:15	BMK	G
Total Organic Carbon (TOC)	2.7		mg/L	0.50	0.18	S5310B-00			4/9/18 12:02	PAG	

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128007** Date Collected: 4/4/2018 15:30 Matrix: Water
Sample ID: **MRC-MW71B** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*

Vanessa N. Badman
Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128008** Date Collected: 4/5/2018 21:00 Matrix: Water

Sample ID: **Trip Blank 4** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 01:44	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 01:44	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 01:44	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 01:44	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 01:44	CJG	B
1,2,3-Trichlorobenzene	ND	2	ug/L	2.0	0.93	SW846 8260B		4/11/18 01:44	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 01:44	CJG	B
1,2,4-Trichlorobenzene	ND	1	ug/L	2.0	0.82	SW846 8260B		4/11/18 01:44	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 01:44	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 01:44	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 01:44	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 01:44	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 01:44	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 01:44	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 01:44	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 01:44	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 01:44	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 01:44	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 01:44	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 01:44	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 01:44	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 01:44	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 01:44	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 01:44	CJG	B
Acetone	5.2J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 01:44	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 01:44	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 01:44	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 01:44	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 01:44	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 01:44	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 01:44	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 01:44	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 01:44	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 01:44	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 01:44	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128008** Date Collected: 4/5/2018 21:00 Matrix: Water

Sample ID: **Trip Blank 4** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 01:44	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 01:44	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 01:44	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 01:44	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 01:44	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 01:44	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 01:44	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 01:44	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 01:44	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 01:44	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 01:44	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 01:44	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 01:44	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 01:44	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 01:44	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 01:44	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 01:44	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 01:44	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 01:44	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 01:44	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 01:44	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 01:44	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 01:44	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 01:44	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 01:44	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 01:44	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 01:44	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 01:44	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 01:44	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 01:44	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 01:44	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 01:44	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128008** Date Collected: 4/5/2018 21:00 Matrix: Water

Sample ID: **Trip Blank 4** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 01:44	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 01:44	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/11/18 01:44	CJG	B
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/11/18 01:44	CJG	B
Dibromofluoromethane (S)	109		%	78 - 116		SW846 8260B			4/11/18 01:44	CJG	B
Toluene-d8 (S)	88.1		%	76 - 127		SW846 8260B			4/11/18 01:44	CJG	B

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128009** Date Collected: 4/5/2018 21:00 Matrix: Water

Sample ID: **Trip Blank 1** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 02:06	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 02:06	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 02:06	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 02:06	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 02:06	CJG	B
1,2,3-Trichlorobenzene	ND	2	ug/L	2.0	0.93	SW846 8260B		4/11/18 02:06	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 02:06	CJG	B
1,2,4-Trichlorobenzene	ND	1	ug/L	2.0	0.82	SW846 8260B		4/11/18 02:06	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 02:06	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 02:06	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 02:06	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 02:06	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 02:06	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 02:06	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 02:06	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 02:06	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 02:06	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 02:06	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 02:06	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 02:06	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 02:06	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 02:06	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 02:06	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 02:06	CJG	B
Acetone	5.6J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 02:06	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 02:06	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 02:06	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 02:06	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 02:06	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 02:06	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 02:06	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 02:06	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 02:06	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 02:06	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 02:06	CJG	B

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128009** Date Collected: 4/5/2018 21:00 Matrix: Water

Sample ID: **Trip Blank 1** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 02:06	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 02:06	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 02:06	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 02:06	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 02:06	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 02:06	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 02:06	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 02:06	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 02:06	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 02:06	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 02:06	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 02:06	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 02:06	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 02:06	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 02:06	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 02:06	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 02:06	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 02:06	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 02:06	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 02:06	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 02:06	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 02:06	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 02:06	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 02:06	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 02:06	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 02:06	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 02:06	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 02:06	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 02:06	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 02:06	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 02:06	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 02:06	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307128009** Date Collected: 4/5/2018 21:00 Matrix: Water

Sample ID: **Trip Blank 1** Date Received: 4/5/2018 21:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 02:06	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 02:06	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	62 - 133		SW846 8260B			4/11/18 02:06	CJG	B
4-Bromofluorobenzene (S)	103		%	79 - 114		SW846 8260B			4/11/18 02:06	CJG	B
Dibromofluoromethane (S)	109		%	78 - 116		SW846 8260B			4/11/18 02:06	CJG	B
Toluene-d8 (S)	89.4		%	76 - 127		SW846 8260B			4/11/18 02:06	CJG	B

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2307128002	1	MRC-MW123A	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 60.4 and the control limits were 61 to 126.				
2307128002	2	MRC-MW123A	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 72.9 and the control limits were 76 to 127. This result was reported at a dilution of 1.				
2307128003	1	MRC-MW48A	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 60.4 and the control limits were 61 to 126.				
2307128003	2	MRC-MW48A	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2307128003	3	MRC-MW48A	8270 SIM	1,4-Dioxane
The QC sample type MS for method 8270 SIM was outside the control limits for the analyte 1,4-Dioxane. The % Recovery was reported as 18.6 and the control limits were 22 to 75.				
2307128003	4	MRC-MW48A	8270 SIM	1,4-Dioxane
The QC sample type MS for method 8270 SIM was outside the control limits for the analyte 1,4-Dioxane. The % Recovery was reported as 18.6 and the control limits were 22 to 75.				
2307128004	1	MRC-MW121A	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 60.4 and the control limits were 61 to 126.				
2307128005	1	MRC-MW121B	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 60.4 and the control limits were 61 to 126.				
2307128006	1	MRC-MW14B	SW846 8260B	1,2,4-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,4-Trichlorobenzene. The % Recovery was reported as 57.2 and the control limits were 67 to 123.				
2307128006	2	MRC-MW14B	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 50.7 and the control limits were 61 to 126.				
2307128007	1	MRC-MW71B	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 60.4 and the control limits were 61 to 126.				
2307128007	2	MRC-MW71B	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2307128008	1	Trip Blank 4	SW846 8260B	1,2,4-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,4-Trichlorobenzene. The % Recovery was reported as 57.2 and the control limits were 67 to 123.				
2307128008	2	Trip Blank 4	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 50.7 and the control limits were 61 to 126.				
2307128009	1	Trip Blank 1	SW846 8260B	1,2,4-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,4-Trichlorobenzene. The % Recovery was reported as 57.2 and the control limits were 67 to 123.				

ANALYTICAL RESULTS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

2307128009	2	Trip Blank 1	SW846 8260B	1,2,3-Trichlorobenzene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 50.7 and the control limits were 61 to 126.

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QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51720 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2307128002, 2307128003, 2307128004, 2307128005, 2307128006, 2307128007

METHOD BLANK: 2721362

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	67.9	%	29 - 112
Fluoranthene-d10 (S)	75.6	%	45 - 130

LABORATORY CONTROL SAMPLE: 2721363

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	46.6	ug/L	1	0.47	22 - 75
2-Methylnapthalene-d10 (S)	75.4	%			29 - 112
Fluoranthene-d10 (S)	85.5	%			45 - 130

MATRIX SPIKE SAMPLE: 2721364 ORIGINAL: 2307128003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.49256	ug/L	.97	.67281	18.6*	22 - 75
2-Methylnapthalene-d10 (S)	61.4	%				29 - 112
Fluoranthene-d10 (S)	77.5	%				45 - 130

SAMPLE DUPLICATE: 2721365 ORIGINAL: 2307128005

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	1.60876	ug/L	1.48438	8.04	

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71109 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2307128002

METHOD BLANK: 2720287

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	0.0011J	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	0.0011J	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	0.0018J	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	0.0013J	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	ND	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2720288

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	103	mg/L	.22	0.23	80 - 120
Arsenic, Total	90.4	mg/L	.22	0.20	80 - 120
Beryllium, Total	98.8	mg/L	.22	0.22	80 - 120
Cadmium, Total	98.1	mg/L	.22	0.22	80 - 120
Chromium, Total	105	mg/L	.22	0.23	80 - 120
Cobalt, Total	105	mg/L	.22	0.23	80 - 120
Copper, Total	104	mg/L	.22	0.23	80 - 120
Lead, Total	106	mg/L	.22	0.23	80 - 120
Nickel, Total	105	mg/L	.22	0.23	80 - 120
Selenium, Total	83	mg/L	.22	0.18	80 - 120
Silver, Total	102	mg/L	.11	0.11	80 - 120
Thallium, Total	105	mg/L	.22	0.23	80 - 120
Zinc, Total	88.6	mg/L	.22	0.20	80 - 120

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QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE: 2720303 DUPLICATE: 2720304 ORIGINAL: 2307613001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Antimony, Total	.00009	mg/L	.22	.22397	.23134	101	104	75 - 125	3.23	20
Arsenic, Total	.00038	mg/L	.22	.20383	.19208	91.6	86.3	75 - 125	5.93	20
Beryllium, Total	.00015	mg/L	.22	.21791	.22255	98	100	75 - 125	2.11	20
Cadmium, Total	.00016	mg/L	.22	.20984	.21779	94.4	97.9	75 - 125	3.72	20
Chromium, Total	.00103	mg/L	.22	.22841	.23084	102	103	75 - 125	1.06	20
Cobalt, Total	.00221	mg/L	.22	.2282	.23109	102	103	75 - 125	1.26	20
Copper, Total	.00352	mg/L	.22	.22081	.23319	97.8	103	75 - 125	5.46	20
Lead, Total	.00059	mg/L	.22	.24006	.24281	108	109	75 - 125	1.14	20
Nickel, Total	.00264	mg/L	.22	.22216	.22828	98.8	102	75 - 125	2.71	20
Selenium, Total	.00034	mg/L	.22	.17627	.18337	79.2	82.4	75 - 125	3.95	20
Silver, Total	.00001	mg/L	.11	.10859	.1108	97.7	99.7	75 - 125	2.01	20
Thallium, Total	.00004	mg/L	.22	.23855	.24065	107	108	75 - 125	.88	20
Zinc, Total	.0047	mg/L	.22	.19108	.1973	83.9	86.7	75 - 125	3.21	20

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QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71170 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2307128002

METHOD BLANK: 2722342

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2722343

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	105	mg/L	.002	0.0021	85 - 115

MATRIX SPIKE: 2722346 DUPLICATE: 2722347 ORIGINAL: 2307613008

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00492	.00497	98.4	99.4	70 - 130	1.01	20

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: SVGC/48838 **Analysis Method:** RSK 175

QC Batch Method: RSK 175

Associated Lab Samples: 2307128003, 2307128007

METHOD BLANK: 2723247

Parameter	Blank Result	Units	Reporting Limit
n-Butane	ND	ug/L	4.3
Ethane	ND	ug/L	3.3
Ethene	ND	ug/L	2.4
Isobutane	ND	ug/L	4.6
Methane	ND	ug/L	1.5
Propane	ND	ug/L	3.2

SAMPLE DUPLICATE: 2723248 ORIGINAL: 2307210001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	2.08	ug/L	2.16	3.77	20
Propane	0	ug/L	0	NC	30

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46455 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307128001, 2307128002, 2307128003, 2307128004, 2307128005, 2307128006, 2307128007

METHOD BLANK: 2718916

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	98.3	%	62 - 133
4-Bromofluorobenzene (S)	100	%	79 - 114
Dibromofluoromethane (S)	98.6	%	78 - 116
Toluene-d8 (S)	87.4	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2718917

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	112	ug/L	20	22.5	78 - 121
1,1,1-Trichloroethane	114	ug/L	20	22.7	66 - 130
1,1,2,2-Tetrachloroethane	102	ug/L	20	20.3	74 - 135
1,1,2-Trichloroethane	105	ug/L	20	21.0	82 - 126
1,1-Dichloroethane	106	ug/L	20	21.3	78 - 124
1,1-Dichloroethene	114	ug/L	20	22.7	63 - 128
1,2,3-Trichlorobenzene	60.4*	ug/L	20	12.1	61 - 126
1,2,3-Trichloropropane	103	ug/L	20	20.7	75 - 132
1,2,4-Trichlorobenzene	68.1	ug/L	20	13.6	67 - 123
1,2,4-Trimethylbenzene	102	ug/L	20	20.5	76 - 125
1,2-Dibromo-3-chloropropane	68.5	ug/L	20	13.7	59 - 133
1,2-Dibromoethane	110	ug/L	20	22.0	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.1	82 - 118
1,2-Dichloroethane	103	ug/L	20	20.6	70 - 133
1,2-Dichloroethene, Total	106	ug/L	40	42.5	78 - 125
1,2-Dichloropropane	108	ug/L	20	21.6	81 - 127
1,3-Dichlorobenzene	109	ug/L	20	21.7	81 - 118
1,3-Dichloropropane	105	ug/L	20	21.0	82 - 126
1,3-Dichloropropene, Total	95.2	ug/L	40	38.1	80 - 123
1,4-Dichlorobenzene	106	ug/L	20	21.1	81 - 116
2,2-Dichloropropane	117	ug/L	20	23.3	64 - 129
2-Butanone	93.1	ug/L	100	93.1	50 - 152
2-Chloroethylvinyl ether	64.3	ug/L	20	12.9	1 - 150
2-Hexanone	77.9	ug/L	100	77.9	65 - 154
4-Methyl-2-Pentanone(MIBK)	84.8	ug/L	100	84.8	71 - 146
Acetone	94.8	ug/L	100	94.8	40 - 151
Benzene	104	ug/L	20	20.7	80 - 124
Bromobenzene	113	ug/L	20	22.6	81 - 119
Bromochloromethane	106	ug/L	20	21.2	73 - 117
Bromodichloromethane	102	ug/L	20	20.3	79 - 126
Bromoform	92.5	ug/L	20	18.5	70 - 123
Bromomethane	84.9	ug/L	20	17.0	45 - 148
Carbon Disulfide	96.3	ug/L	20	19.3	57 - 131
Carbon Tetrachloride	116	ug/L	20	23.2	62 - 132
Chlorobenzene	107	ug/L	20	21.4	85 - 117
Chlorodibromomethane	97.6	ug/L	20	19.5	77 - 122
Chloroethane	79.2	ug/L	20	15.8	51 - 142
Chloroform	105	ug/L	20	21.1	78 - 122
Chloromethane	76.5	ug/L	20	15.3	38 - 156
Cyclohexane	121	ug/L	20	24.3	66 - 130
Dibromomethane	100	ug/L	20	20.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	64.5	ug/L	20	12.9	17 - 166
Diisopropyl ether	95.2	ug/L	20	19.0	74 - 131
Ethyl tert-butyl ether	89.5	ug/L	20	17.9	75 - 123
Ethylbenzene	112	ug/L	20	22.5	80 - 124
Freon 113	121	ug/L	20	24.3	50 - 130
Hexachlorobutadiene	108	ug/L	20	21.6	55 - 128
Isopropylbenzene	119	ug/L	20	23.7	73 - 129
Methyl acetate	92.5	ug/L	20	18.5	70 - 130
Methyl cyclohexane	125	ug/L	20	25.0	70 - 130
Methyl t-Butyl Ether	99.9	ug/L	20	20.0	69 - 115
Methylene Chloride	103	ug/L	20	20.6	76 - 121
Naphthalene	79.5	ug/L	20	15.9	56 - 134
Styrene	98.6	ug/L	20	19.7	79 - 123
Tetrachloroethene	112	ug/L	20	22.4	72 - 124
Toluene	116	ug/L	20	23.3	80 - 125
Total Xylenes	108	ug/L	60	65.1	79 - 125
Trichloroethene	101	ug/L	20	20.3	77 - 124
Trichlorofluoromethane	74.9	ug/L	20	15.0	38 - 123
Vinyl Acetate	84.8	ug/L	20	17.0	58 - 136
Vinyl Chloride	71.4	ug/L	20	14.3	27 - 138
cis-1,2-Dichloroethene	105	ug/L	20	20.9	78 - 125
cis-1,3-Dichloropropene	89.9	ug/L	20	18.0	81 - 121
mp-Xylene	115	ug/L	40	46.0	79 - 125
n-Butylbenzene	102	ug/L	20	20.4	71 - 130
n-Propylbenzene	107	ug/L	20	21.4	74 - 122
o-Chlorotoluene	116	ug/L	20	23.3	78 - 126
o-Xylene	95.4	ug/L	20	19.1	79 - 124
p-Chlorotoluene	116	ug/L	20	23.1	78 - 125
p-Isopropyltoluene	103	ug/L	20	20.6	72 - 123
sec-Butylbenzene	108	ug/L	20	21.5	72 - 127
tert-Amyl methyl ether	84.8	ug/L	20	17.0	75 - 121
tert-Butyl Alcohol	61.7	ug/L	100	61.7	17 - 168
tert-Butylbenzene	108	ug/L	20	21.5	72 - 124
trans-1,2-Dichloroethene	108	ug/L	20	21.6	71 - 122
trans-1,3-Dichloropropene	100	ug/L	20	20.1	78 - 126
1,2-Dichloroethane-d4 (S)	78.7	%			62 - 133
4-Bromofluorobenzene (S)	87.6	%			79 - 114
Dibromofluoromethane (S)	89.1	%			78 - 116
Toluene-d8 (S)	76.7	%			76 - 127

MATRIX SPIKE: 2719187 DUPLICATE: 2719188 ORIGINAL: 2307197001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

1,2,4-Trimethylbenzene	0	ug/L	20	20.0811	20.969	100	105	76 - 125	4.33	24
Benzene	0	ug/L	20	22.4978	22.0536	112	110	80 - 124	1.99	26
Ethylbenzene	0	ug/L	20	22.7349	22.6607	114	113	80 - 124	.33	19
Isopropylbenzene	0	ug/L	20	23.2769	24.0999	116	120	73 - 129	3.47	18
Naphthalene	0	ug/L	20	23.709	21.2462	119	106	56 - 134	11	40
Toluene	0	ug/L	20	24.1117	23.5864	121	118	80 - 125	2.2	20
Total Xylenes	0	ug/L	60	64.9923	65.0537	108	108	79 - 125	.09	35
n-Butylbenzene	0	ug/L	20	17.4406	18.3501	87.2	91.8	71 - 130	5.08	20
n-Propylbenzene	0	ug/L	20	21.1044	21.9678	106	110	74 - 122	4.01	20
p-Isopropyltoluene	0	ug/L	20	19.0982	20.6897	95.5	103	72 - 123	8	17
sec-Butylbenzene	0	ug/L	20	20.0894	20.9618	100	105	72 - 127	4.25	17
1,2-Dichloroethane-d4 (S)	100	%				100	97.5	62 - 133		
4-Bromofluorobenzene (S)	99.5	%				99.5	100	79 - 114		
Dibromofluoromethane (S)	103	%				103	102	78 - 116		
Toluene-d8 (S)	87.5	%				87.5	85.6	76 - 127		

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46469 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307128001, 2307128002, 2307128003

METHOD BLANK: 2719843

Parameter	Blank Result	Units	Reporting Limit
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	103	%	62 - 133
4-Bromofluorobenzene (S)	104	%	79 - 114
Dibromofluoromethane (S)	103	%	78 - 116
Toluene-d8 (S)	90.8	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2719844

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2,3-Trichlorobenzene	88	ug/L	20	17.6	61 - 126
1,2,4-Trichlorobenzene	84.4	ug/L	20	16.9	67 - 123
1,2-Dichlorobenzene	107	ug/L	20	21.4	82 - 118
1,2-Dichloroethene, Total	113	ug/L	40	45.1	78 - 125
1,3-Dichlorobenzene	111	ug/L	20	22.2	81 - 118
1,4-Dichlorobenzene	108	ug/L	20	21.7	81 - 116
Chlorobenzene	109	ug/L	20	21.7	85 - 117
Trichloroethene	105	ug/L	20	21.0	77 - 124
cis-1,2-Dichloroethene	109	ug/L	20	21.8	78 - 125
1,1,1,2-Tetrachloroethane	113	ug/L	20	22.6	78 - 121
1,1,1-Trichloroethane	121	ug/L	20	24.2	66 - 130
1,1,2,2-Tetrachloroethane	99.8	ug/L	20	20.0	74 - 135
1,1,2-Trichloroethane	107	ug/L	20	21.4	82 - 126
1,1-Dichloroethane	111	ug/L	20	22.1	78 - 124
1,1-Dichloroethene	126	ug/L	20	25.3	63 - 128
1,2,3-Trichloropropane	104	ug/L	20	20.9	75 - 132
1,2,4-Trimethylbenzene	104	ug/L	20	20.7	76 - 125
1,2-Dibromo-3-chloropropane	76.2	ug/L	20	15.2	59 - 133
1,2-Dibromoethane	111	ug/L	20	22.1	80 - 124
1,2-Dichloroethane	106	ug/L	20	21.2	70 - 133
1,2-Dichloropropane	111	ug/L	20	22.3	81 - 127
1,3-Dichloropropane	105	ug/L	20	21.0	82 - 126
1,3-Dichloropropene, Total	95.4	ug/L	40	38.1	80 - 123
2,2-Dichloropropane	124	ug/L	20	24.8	64 - 129
2-Butanone	111	ug/L	100	111	50 - 152
2-Chloroethylvinyl ether	68.9	ug/L	20	13.8	1 - 150
2-Hexanone	85.1	ug/L	100	85.1	65 - 154
4-Methyl-2-Pentanone(MIBK)	89.9	ug/L	100	89.9	71 - 146
Acetone	102	ug/L	100	102	40 - 151
Benzene	109	ug/L	20	21.7	80 - 124
Bromobenzene	114	ug/L	20	22.8	81 - 119
Bromochloromethane	109	ug/L	20	21.8	73 - 117
Bromodichloromethane	103	ug/L	20	20.7	79 - 126
Bromoform	96.1	ug/L	20	19.2	70 - 123
Bromomethane	103	ug/L	20	20.6	45 - 148
Carbon Disulfide	113	ug/L	20	22.7	57 - 131
Carbon Tetrachloride	123	ug/L	20	24.5	62 - 132
Chlorodibromomethane	99.6	ug/L	20	19.9	77 - 122
Chloroethane	97.1	ug/L	20	19.4	51 - 142
Chloroform	111	ug/L	20	22.1	78 - 122
Chloromethane	91.2	ug/L	20	18.2	38 - 156

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Cyclohexane	130	ug/L	20	26.0	66 - 130
Dibromomethane	104	ug/L	20	20.8	81 - 125
Dichlorodifluoromethane	75.8	ug/L	20	15.2	17 - 166
Diisopropyl ether	97.2	ug/L	20	19.4	74 - 131
Ethyl tert-butyl ether	90.7	ug/L	20	18.1	75 - 123
Ethylbenzene	114	ug/L	20	22.9	80 - 124
Freon 113	132*	ug/L	20	26.5	50 - 130
Hexachlorobutadiene	124	ug/L	20	24.9	55 - 128
Isopropylbenzene	122	ug/L	20	24.5	73 - 129
Methyl acetate	99.4	ug/L	20	19.9	70 - 130
Methyl cyclohexane	132*	ug/L	20	26.4	70 - 130
Methyl t-Butyl Ether	103	ug/L	20	20.7	69 - 115
Methylene Chloride	104	ug/L	20	20.8	76 - 121
Naphthalene	107	ug/L	20	21.5	56 - 134
Styrene	102	ug/L	20	20.3	79 - 123
Tetrachloroethene	114	ug/L	20	22.8	72 - 124
Toluene	120	ug/L	20	24.0	80 - 125
Total Xylenes	113	ug/L	60	67.9	79 - 125
Trichlorofluoromethane	92.7	ug/L	20	18.5	38 - 123
Vinyl Acetate	88.1	ug/L	20	17.6	58 - 136
Vinyl Chloride	88.2	ug/L	20	17.6	27 - 138
cis-1,3-Dichloropropene	90.8	ug/L	20	18.2	81 - 121
mp-Xylene	120	ug/L	40	47.8	79 - 125
n-Butylbenzene	105	ug/L	20	21.1	71 - 130
n-Propylbenzene	110	ug/L	20	21.9	74 - 122
o-Chlorotoluene	119	ug/L	20	23.9	78 - 126
o-Xylene	101	ug/L	20	20.1	79 - 124
p-Chlorotoluene	116	ug/L	20	23.3	78 - 125
p-Isopropyltoluene	107	ug/L	20	21.5	72 - 123
sec-Butylbenzene	110	ug/L	20	22.0	72 - 127
tert-Amyl methyl ether	88.8	ug/L	20	17.8	75 - 121
tert-Butyl Alcohol	67.5	ug/L	100	67.5	17 - 168
tert-Butylbenzene	110	ug/L	20	21.9	72 - 124
trans-1,2-Dichloroethene	117	ug/L	20	23.3	71 - 122
trans-1,3-Dichloropropene	100	ug/L	20	20.0	78 - 126
1,2-Dichloroethane-d4 (S)	97.4	%			62 - 133
4-Bromofluorobenzene (S)	99.7	%			79 - 114
Dibromofluoromethane (S)	102	%			78 - 116
Toluene-d8 (S)	87.5	%			76 - 127

MATRIX SPIKE: 2720037 DUPLICATE: 2720038 ORIGINAL: 2307551001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

1,2,4-Trimethylbenzene	0	ug/L	20	20.3915	21.8381	102	109	76 - 125	6.85	24
Benzene	0	ug/L	20	22.6353	22.7866	113	114	80 - 124	.67	26
Ethylbenzene	0	ug/L	20	23.1951	23.7444	116	119	80 - 124	2.34	19
Isopropylbenzene	0	ug/L	20	23.6587	25.4831	118	127	73 - 129	7.43	18
Naphthalene	0	ug/L	20	13.5906	15.5628	68	77.8	56 - 134	13.5	40
Toluene	0	ug/L	20	23.6287	24.0559	118	120	80 - 125	1.79	20
Total Xylenes	0	ug/L	60	65.723	68.2084	110	114	79 - 125	3.71	35
n-Butylbenzene	0	ug/L	20	18.5976	21.1067	93	106	71 - 130	12.6	20
n-Propylbenzene	0	ug/L	20	22.006	23.2134	110	116	74 - 122	5.34	20
p-Isopropyltoluene	0	ug/L	20	19.9597	22.4072	99.8	112	72 - 123	11.6	17
sec-Butylbenzene	0	ug/L	20	20.9787	23.2126	105	116	72 - 127	10.1	17
1,2-Dichloroethane-d4 (S)	93.4	%				93.4	102	62 - 133		
4-Bromofluorobenzene (S)	98.6	%				98.6	98.1	79 - 114		
Dibromofluoromethane (S)	103	%				103	102	78 - 116		
Toluene-d8 (S)	85.3	%				85.3	85.6	76 - 127		

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46473 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307128006, 2307128008, 2307128009

METHOD BLANK: 2720310

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	1.1J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	104	%	62 - 133
4-Bromofluorobenzene (S)	100	%	79 - 114
Dibromofluoromethane (S)	102	%	78 - 116
Toluene-d8 (S)	88.1	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2720311

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	110	ug/L	20	22.0	78 - 121
1,1,1-Trichloroethane	115	ug/L	20	23.1	66 - 130
1,1,2,2-Tetrachloroethane	98.7	ug/L	20	19.7	74 - 135
1,1,2-Trichloroethane	104	ug/L	20	20.8	82 - 126
1,1-Dichloroethane	107	ug/L	20	21.5	78 - 124
1,1-Dichloroethene	117	ug/L	20	23.4	63 - 128
1,2,3-Trichlorobenzene	50.7*	ug/L	20	10.1	61 - 126
1,2,3-Trichloropropane	101	ug/L	20	20.3	75 - 132
1,2,4-Trichlorobenzene	57.2*	ug/L	20	11.4	67 - 123
1,2,4-Trimethylbenzene	98.3	ug/L	20	19.7	76 - 125
1,2-Dibromo-3-chloropropane	67.1	ug/L	20	13.4	59 - 133
1,2-Dibromoethane	105	ug/L	20	21.1	80 - 124
1,2-Dichlorobenzene	99.7	ug/L	20	19.9	82 - 118
1,2-Dichloroethane	103	ug/L	20	20.5	70 - 133
1,2-Dichloroethene, Total	107	ug/L	40	42.8	78 - 125
1,2-Dichloropropane	108	ug/L	20	21.7	81 - 127
1,3-Dichlorobenzene	105	ug/L	20	21.0	81 - 118
1,3-Dichloropropane	102	ug/L	20	20.5	82 - 126
1,3-Dichloropropene, Total	88.1	ug/L	40	35.2	80 - 123
1,4-Dichlorobenzene	102	ug/L	20	20.4	81 - 116
2,2-Dichloropropane	113	ug/L	20	22.7	64 - 129
2-Butanone	98.9	ug/L	100	98.9	50 - 152
2-Chloroethylvinyl ether	66.1	ug/L	20	13.2	1 - 150
2-Hexanone	77.5	ug/L	100	77.5	65 - 154
4-Methyl-2-Pentanone(MIBK)	82.9	ug/L	100	82.9	71 - 146
Acetone	97.5	ug/L	100	97.5	40 - 151
Benzene	105	ug/L	20	20.9	80 - 124
Bromobenzene	109	ug/L	20	21.8	81 - 119
Bromochloromethane	107	ug/L	20	21.5	73 - 117
Bromodichloromethane	104	ug/L	20	20.8	79 - 126
Bromoform	88.5	ug/L	20	17.7	70 - 123
Bromomethane	97.9	ug/L	20	19.6	45 - 148
Carbon Disulfide	101	ug/L	20	20.1	57 - 131
Carbon Tetrachloride	118	ug/L	20	23.7	62 - 132
Chlorobenzene	106	ug/L	20	21.2	85 - 117
Chlorodibromomethane	93.4	ug/L	20	18.7	77 - 122
Chloroethane	95.5	ug/L	20	19.1	51 - 142
Chloroform	106	ug/L	20	21.2	78 - 122
Chloromethane	88.6	ug/L	20	17.7	38 - 156
Cyclohexane	126	ug/L	20	25.2	66 - 130
Dibromomethane	100	ug/L	20	20.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	75.1	ug/L	20	15.0	17 - 166
Diisopropyl ether	89	ug/L	20	17.8	74 - 131
Ethyl tert-butyl ether	84.8	ug/L	20	17.0	75 - 123
Ethylbenzene	112	ug/L	20	22.3	80 - 124
Freon 113	131*	ug/L	20	26.1	50 - 130
Hexachlorobutadiene	91.5	ug/L	20	18.3	55 - 128
Isopropylbenzene	115	ug/L	20	22.9	73 - 129
Methyl acetate	91.1	ug/L	20	18.2	70 - 130
Methyl cyclohexane	125	ug/L	20	25.1	70 - 130
Methyl t-Butyl Ether	94.5	ug/L	20	18.9	69 - 115
Methylene Chloride	102	ug/L	20	20.5	76 - 121
Naphthalene	63.5	ug/L	20	12.7	56 - 134
Styrene	96.4	ug/L	20	19.3	79 - 123
Tetrachloroethene	108	ug/L	20	21.5	72 - 124
Toluene	113	ug/L	20	22.5	80 - 125
Total Xylenes	107	ug/L	60	64.1	79 - 125
Trichloroethene	102	ug/L	20	20.4	77 - 124
Trichlorofluoromethane	94.5	ug/L	20	18.9	38 - 123
Vinyl Acetate	82.7	ug/L	20	16.5	58 - 136
Vinyl Chloride	83.5	ug/L	20	16.7	27 - 138
cis-1,2-Dichloroethene	103	ug/L	20	20.5	78 - 125
cis-1,3-Dichloropropene	84.4	ug/L	20	16.9	81 - 121
mp-Xylene	114	ug/L	40	45.6	79 - 125
n-Butylbenzene	90.4	ug/L	20	18.1	71 - 130
n-Propylbenzene	105	ug/L	20	21.0	74 - 122
o-Chlorotoluene	113	ug/L	20	22.5	78 - 126
o-Xylene	92.6	ug/L	20	18.5	79 - 124
p-Chlorotoluene	112	ug/L	20	22.4	78 - 125
p-Isopropyltoluene	97.7	ug/L	20	19.5	72 - 123
sec-Butylbenzene	99.7	ug/L	20	19.9	72 - 127
tert-Amyl methyl ether	80.5	ug/L	20	16.1	75 - 121
tert-Butyl Alcohol	62.6	ug/L	100	62.6	17 - 168
tert-Butylbenzene	102	ug/L	20	20.4	72 - 124
trans-1,2-Dichloroethene	111	ug/L	20	22.2	71 - 122
trans-1,3-Dichloropropene	91.8	ug/L	20	18.4	78 - 126
1,2-Dichloroethane-d4 (S)	89.2	%			62 - 133
4-Bromofluorobenzene (S)	96.8	%			79 - 114
Dibromofluoromethane (S)	101	%			78 - 116
Toluene-d8 (S)	83.8	%			76 - 127

MATRIX SPIKE: 2720544 DUPLICATE: 2720545 ORIGINAL: 2307615002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	23.0489	23.3334	115	117	78 - 121	1.23	16
1,1,1-Trichloroethane	0	ug/L	20	25.9651	25.5489	130	128	66 - 130	1.62	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.8316	21.0848	104	105	74 - 135	1.21	16
1,1,2-Trichloroethane	0	ug/L	20	21.6306	21.619	108	108	82 - 126	.05	15
1,1-Dichloroethane	0	ug/L	20	23.7055	23.4571	119	117	78 - 124	1.05	15
1,1-Dichloroethene	0	ug/L	20	26.9334	26.7238	135*	134*	63 - 128	.78	21
1,2,3-Trichloropropane	0	ug/L	20	21.9302	20.5942	110	103	75 - 132	6.28	19
1,2-Dibromo-3-chloropropane	0	ug/L	20	13.6969	13.0093	68.5	65	59 - 133	5.15	26
1,2-Dibromoethane	0	ug/L	20	21.6625	21.7302	108	109	80 - 124	.31	19
1,2-Dichlorobenzene	0	ug/L	20	21.1808	21.719	106	109	82 - 118	2.51	15
1,2-Dichloroethane	0	ug/L	20	22.1476	22.0188	111	110	70 - 133	.58	19
1,2-Dichloropropane	0	ug/L	20	23.4211	22.4137	117	112	81 - 127	4.4	15
1,4-Dichlorobenzene	0	ug/L	20	21.9382	22.1338	110	111	81 - 116	.89	15
2-Butanone	0	ug/L	100	108.299	101.79	108	102	50 - 152	6.2	16
2-Hexanone	0	ug/L	100	74.822	73.1974	74.8	73.2	65 - 154	2.2	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	84.7282	82.0496	84.7	82	71 - 146	3.21	16
Acetone	5.72786	ug/L	100	92.5113	88.8327	86.8	83.1	40 - 151	4.06	40
Benzene	0	ug/L	20	23.1529	23.0661	116	115	80 - 124	.38	26
Bromochloromethane	0	ug/L	20	23.5279	22.6069	118*	113	73 - 117	3.99	19
Bromodichloromethane	0	ug/L	20	22.2855	21.3353	111	107	79 - 126	4.36	16
Bromoform	0	ug/L	20	14.5039	13.4407	72.5	67.2*	70 - 123	7.61	16
Bromomethane	0	ug/L	20	16.2745	18.6383	81.4	93.2	45 - 148	13.5	26
Carbon Disulfide	0	ug/L	20	23.4548	21.781	117	109	57 - 131	7.4	28
Carbon Tetrachloride	0	ug/L	20	26.9307	26.8726	135*	134*	62 - 132	.22	17
Chlorobenzene	0	ug/L	20	22.267	22.2753	111	111	85 - 117	.04	15
Chlorodibromomethane	0	ug/L	20	18.278	18.1144	91.4	90.6	77 - 122	.9	15
Chloroethane	0	ug/L	20	22.5785	22.0345	113	110	51 - 142	2.44	24
Chloroform	0	ug/L	20	23.0512	22.8599	115	114	78 - 122	.83	16
Chloromethane	0	ug/L	20	17.7176	18.6236	88.6	93.1	38 - 156	4.99	27
Dibromomethane	0	ug/L	20	22.0226	21.5047	110	108	81 - 125	2.38	16
Ethylbenzene	0	ug/L	20	23.7098	23.8332	119	119	80 - 124	.52	19
Methyl t-Butyl Ether	0	ug/L	20	19.7589	19.6038	98.8	98	69 - 115	.79	20
Methylene Chloride	0	ug/L	20	21.6185	20.8536	108	104	76 - 121	3.6	17
Styrene	0	ug/L	20	20.64	18.3869	103	91.9	79 - 123	11.5	16
Tetrachloroethene	0	ug/L	20	23.74	24.6919	119	123	72 - 124	3.93	38
Toluene	0	ug/L	20	23.8405	24.2398	119	121	80 - 125	1.66	20
Trichloroethene	0	ug/L	20	22.8499	22.3572	114	112	77 - 124	2.18	18
Trichlorofluoromethane	0	ug/L	20	21.774	21.654	109	108	38 - 123	.55	23
Vinyl Acetate	0	ug/L	20	15.5637	14.7866	77.8	73.9	58 - 136	5.12	17
Vinyl Chloride	0	ug/L	20	18.118	18.5698	90.6	92.8	27 - 138	2.46	40
cis-1,2-Dichloroethene	0	ug/L	20	23.007	22.5576	115	113	78 - 125	1.97	21
cis-1,3-Dichloropropene	0	ug/L	20	15.907	16.3725	79.5*	81.9	81 - 121	2.88	16
mp-Xylene	0	ug/L	40	47.7386	47.4978	119	119	79 - 125	.51	21
o-Xylene	0	ug/L	20	19.2421	19.1625	96.2	95.8	79 - 124	.41	19
trans-1,2-Dichloroethene	0	ug/L	20	24.6506	24.5026	123*	123*	71 - 122	.6	22
trans-1,3-Dichloropropene	0	ug/L	20	18.1364	18.1184	90.7	90.6	78 - 126	.1	18

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

1,2-Dichloroethane-d4 (S)	103	%	103	103	62 - 133
4-Bromofluorobenzene (S)	98.4	%	98.4	98.1	79 - 114
Dibromofluoromethane (S)	106	%	106	108	78 - 116
Toluene-d8 (S)	84.3	%	84.3	87.3	76 - 127

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202564 **Analysis Method:** S4500PE-99

QC Batch Method: S4500PE-99

Associated Lab Samples: 2307128003, 2307128007

METHOD BLANK: 2717881

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

MATRIX SPIKE: 2718606 DUPLICATE: 2718607 ORIGINAL: 2307141003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	.0607	mg/L	.5	.5185	.5304	91.6	93.9	90 - 110	2.27	10

MATRIX SPIKE: 2718608 DUPLICATE: 2718609 ORIGINAL: 2307141006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	.0533	mg/L	.5	.5067	.5259	90.7	94.5	90 - 110	3.72	10

METHOD BLANK: 2717883

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

MATRIX SPIKE: 2719693 DUPLICATE: 2719694 ORIGINAL: 2307230002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	3.9407	mg/L	5	8.6667	8.8889	94.5	99	90 - 110	2.53	10

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QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2719695

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202584 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2307128003, 2307128007

METHOD BLANK: 2718152

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.12J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2718154

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	96.9	mg/L	20	19.4	90 - 110
Nitrate-N	95.2	mg/L	2.5	2.4	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110
Sulfate	96.8	mg/L	20	19.4	90 - 110

MATRIX SPIKE: 2718577 DUPLICATE: 2718578 ORIGINAL: 2307080001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrate-N	10.86	mg/L	5	15.64	15.56	95.6	94	80 - 120	.51	20

METHOD BLANK: 2718580

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.17J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE SAMPLE: 2719627 ORIGINAL: 2307450001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Nitrate-N	3.84	mg/L	5	8.46	92.4	80 - 120

LABORATORY CONTROL SAMPLE: 2719629

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	96.8	mg/L	20	19.4	90 - 110
Nitrate-N	94.8	mg/L	2.5	2.4	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110
Sulfate	96.6	mg/L	20	19.3	90 - 110

METHOD BLANK: 2719630

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.16J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

METHOD BLANK: 2719634

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.17J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202627 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2307128002, 2307128004, 2307128005

LABORATORY CONTROL SAMPLE: 2718633

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	90.2	ug/L	10	9.0	90 - 110

METHOD BLANK: 2718637

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

MATRIX SPIKE: 2718638 DUPLICATE: 2718639 ORIGINAL: 2307078002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	0	ug/L	5	4.72	4.582	94.4	91.6	90 - 110	2.97	20

METHOD BLANK: 2718641

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

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QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202682 **Analysis Method:** S5310B-00

QC Batch Method: 415.1/9060/5310B

Associated Lab Samples: 2307128003, 2307128007

METHOD BLANK: 2719286

Parameter	Blank Result	Units	Reporting Limit
Total Organic Carbon (TOC)	ND	mg/L	0.50

LABORATORY CONTROL SAMPLE: 2719287

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Organic Carbon (TOC)	103	mg/L	1	1.0	85 - 115

MATRIX SPIKE: 2719288 DUPLICATE: 2719289 ORIGINAL: 2307294004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	.725	mg/L	6	6.602	6.593	98	97.8	85 - 115	.14	20

MATRIX SPIKE: 2719290 DUPLICATE: 2719291 ORIGINAL: 2307294009

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	.682	mg/L	6	6.417	6.417	95.6	95.6	85 - 115	0	20

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202703 **Analysis Method:** S2320B-97

QC Batch Method: S2320B-97

Associated Lab Samples: 2307128003, 2307128007

METHOD BLANK: 2719558

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2719563 ORIGINAL: 2307294001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	66.96202	mg/L	68.40884	2.14	20

METHOD BLANK: 2719566

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2719567 ORIGINAL: 2307294002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	73.52578	mg/L	74.68073	1.56	20

METHOD BLANK: 2719570

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2719571 ORIGINAL: 2307294003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Alkalinity, Total	65.0528	mg/L	67.67873	3.96	20

METHOD BLANK: 2719574

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2719575 ORIGINAL: 2307211001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	5.51367	mg/L	5.55785	.8	20

METHOD BLANK: 2719578

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2719579 ORIGINAL: 2307206001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	41.18494	mg/L	40.54667	1.56	20

METHOD BLANK: 2719582

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2719583 ORIGINAL: 2307294004

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	132.56139	mg/L	127.68642	3.75	20

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2719586

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2719587 ORIGINAL: 2307294009

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	148.58258	mg/L	134.79143	9.73	20

METHOD BLANK: 2719590

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2719591 ORIGINAL: 2307421001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	71.79591	mg/L	68.38954	4.86	20

METHOD BLANK: 2719594

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2719595 ORIGINAL: 2307351001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	26.9102	mg/L	27.98973	3.93	20

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QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2719794

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	1J	mg/L	5

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202734 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2719934

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	5	mg/L	5

METHOD BLANK: 2719935

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2719936

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	95	mg/L	500	475	90 - 110

SAMPLE DUPLICATE: 2719937 ORIGINAL: 2306975001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	483	mg/L	516	6.61*	5

SAMPLE DUPLICATE: 2719938 ORIGINAL: 2307197001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	29	mg/L	33	12.9*	5

QUALITY CONTROL DATA

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202848 **Analysis Method:** D6919-09

QC Batch Method: D6919-09

Associated Lab Samples: 2307128003, 2307128007

LABORATORY CONTROL SAMPLE: 2721356

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Ammonia-N	101	mg/L	2.5	2.53	90 - 110

METHOD BLANK: 2721357

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	ND	mg/L	0.010

METHOD BLANK: 2721359

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	0.014	mg/L	0.010

MATRIX SPIKE: 2721360 DUPLICATE: 2721361 ORIGINAL: 2307446004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Ammonia-N	0	mg/L	10	8.869	8.804	88.7	88	75 - 125	.74	25

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2718917	1	Lab Control Standard	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 60.4 and the control limits were 61 to 126.				
2719844	2	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 132 and the control limits were 70 to 130.				
2719844	3	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 132 and the control limits were 50 to 130.				
2720311	4	Lab Control Standard	SW846 8260B	1,2,4-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,4-Trichlorobenzene. The % Recovery was reported as 57.2 and the control limits were 67 to 123.				
2720311	5	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 131 and the control limits were 50 to 130.				
2720311	6	Lab Control Standard	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 50.7 and the control limits were 61 to 126.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307128003	MRC-MW48A			S4500PE-99	WETC/202564
2307128007	MRC-MW71B			S4500PE-99	WETC/202564
2307128003	MRC-MW48A			EPA 300.0	WETC/202584
2307128007	MRC-MW71B			EPA 300.0	WETC/202584
2307128002	MRC-MW123A			EPA 218.6	WETC/202627
2307128004	MRC-MW121A			EPA 218.6	WETC/202627
2307128005	MRC-MW121B			EPA 218.6	WETC/202627
2307128001	MRC-MW43A			SW846 8260B	VOMS/46455
2307128002	MRC-MW123A			SW846 8260B	VOMS/46455
2307128003	MRC-MW48A			SW846 8260B	VOMS/46455
2307128004	MRC-MW121A			SW846 8260B	VOMS/46455
2307128005	MRC-MW121B			SW846 8260B	VOMS/46455
2307128007	MRC-MW71B			SW846 8260B	VOMS/46455
2307128003	MRC-MW48A			S5310B-00	WETC/202682
2307128007	MRC-MW71B			S5310B-00	WETC/202682
2307128003	MRC-MW48A			S2320B-97	WETC/202703
2307128007	MRC-MW71B			S2320B-97	WETC/202703
2307128001	MRC-MW43A			SW846 8260B	VOMS/46469
2307128002	MRC-MW123A			SW846 8260B	VOMS/46469
2307128003	MRC-MW48A			SW846 8260B	VOMS/46469
2307128003	MRC-MW48A			S2540C-11	WETC/202734
2307128007	MRC-MW71B			S2540C-11	WETC/202734

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307128 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307128002	MRC-MW123A	SW846 3015	MDIG/71109	SW846 6020A	META/61586
2307128006	MRC-MW14B			SW846 8260B	VOMS/46473
2307128008	Trip Blank 4			SW846 8260B	VOMS/46473
2307128009	Trip Blank 1			SW846 8260B	VOMS/46473
2307128003	MRC-MW48A			D6919-09	WETC/202848
2307128007	MRC-MW71B			D6919-09	WETC/202848
2307128006	MRC-MW14B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30426
2307128007	MRC-MW71B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30426
2307128002	MRC-MW123A	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30456
2307128003	MRC-MW48A	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30456
2307128004	MRC-MW121A	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30456
2307128006	MRC-MW14B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30456
2307128005	MRC-MW121B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30459
2307128002	MRC-MW123A	SW846 7470A	MDIG/71170	SW846 7470A	META/61628
2307128003	MRC-MW48A			RSK 175	SVGC/48838
2307128007	MRC-MW71B			RSK 175	SVGC/48838

Thursday, April 26, 2018 9:04:11 AM
Page 72 of 95
ALS

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

2307128

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] Y ravi.damera@aecom.com

Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A/7470)	Hexavalent Chromium (218.6)	PCB Homologs (8260C)	MEE (RSK 175)	MNA (Cl, NO3, NO2, SO4, TDS, Ortho-Phos)	Alkalinity	Ammonia-N (NH3-N)	TOC (415.3)
1 MRC-MW43A		1/4/18	1910	G	GW	2				2					
2 MRC-MW123A		1/4/18	1625	G	GW	2	2	1	1	2					
3 MRC-MW48A		1/1/18	1607	G	GW	2	2				2	1	1	1	2
4 MRC-MW ~~123A~~ 121A		1/4/18	1455	G	GW	2	2		1						
5 MRC-MW121B		1/4/18	1735	G	GW	2	2		1						
6 MRC-MW14B		1/4/18	1805	G	GW	2	2								
7 MRC-MW71B		1/4/18	1530	G	GW	2	2				2	1	1	1	2
8 Trip Blank 4		NA	NA			2									

Container Type: CG / AG / PL / PL / A / CG / PL / PL / PL / AG

Container Size: 40mL / 1L / 250ml / 250ml / 1L / 4oz / 500ml / 250ml / 250ml / 4oz

Preservative: HCl / None / HNO3 / / / / / / H2SO4 / HCl

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receipt)

Performed by: PG

Cooler Temp: 4°C

Therm. ID: 318

No. of Coolers:

Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	Y	Y	Y	Y	
3	Y	Y	Y	Y	
4	Y	Y	Y	Y	
5	Y	Y	Y	Y	
6	Y	Y	Y	Y	
7	Y	Y	Y	Y	
8	Y	Y	Y	Y	

	Custody seals Present?	(if present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
1	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y
3	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	Y
5	Y	Y	Y	Y	Y
6	Y	Y	Y	Y	Y
7	Y	Y	Y	Y	Y
8	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email data to holly.brown@aecom.com & raoum.trahantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Holly Brown / AECOM	4-5-18	1540	2	4/5	1544
3	4/5	1700	4		1738
5		2100	6	4/5	2100
7			8		
9			10		

Data Deliverables: [X] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ]

EDDs Required? [X] If yes, format type: EQUIS & CSV

DOD Criteria Required?

SDWA Formats? yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other: ENTER PWSID HERE

ALS FIELD SERVICES

[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #: 370 2907128

Co. Name: AECOM
Contact (Report to): Ravi Amara & Holly Brown Phone: 301-674-3199
Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Amara PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] Y ravi.damara@aecom.com
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	Preservative	Enter Number of Containers Per Analysis
1 Trip Blank 1		NA	NA			CG	40mL	HCl	2
2									
3									
4									
5									
6									
7									
8									

ANALYSES/METHOD REQUESTED: VOCs (8260C)

Receipt Information (complete by Sample Receipt)
Received by: RM/MM
Cooler Temp: 4°C
Therm. ID: 318
No. of Coolers:
Notes:

	Circle appropriate Y or N.
Correct containers?	Y
Correct sample volume?	Y
Correct preservation?	Y
Headspace/Volatiles?	N
COC/Labels complete/accurate?	N
Received on ice?	Y
(If present) Seals intact?	Y
Custody seals Present?	N
Container in good condition?	Y

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email data to nacum.tavantzis@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AECOM	4-5-18	1540		4/5	1544
3	4/5	1700	4		1732
5		2100	6	4/5	2100
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
EDDs Required? [X] If yes, format type: EQUIS 4 .CSV
SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected in? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
EDD/PWSID No.
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oi=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

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Thursday, April 26, 2018 9:04:11 AM
Page 73 of 95
ALS

April 18, 2018 Service Request No:R1803127

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2307128

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 10, 2018
For your reference, these analyses have been assigned our service request number **R1803127.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2307128
Sample Matrix: Water

Service Request: R1803127
Date Received: 04/10/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Two water samples were received for analysis at ALS Environmental on 04/10/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/12/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Approved by _____ Date 04/18/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2307128 001			Lab ID: R1803127-001			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.082		0.0016	0.0047	ug/L	680
Hexachlorobiphenyls, Total	0.21		0.0047	0.0094	ug/L	680
Monochlorobiphenyls, Total	0.22		0.00059	0.0047	ug/L	680
Pentachlorobiphenyls, Total	0.49		0.0043	0.0094	ug/L	680
Tetrachlorobiphenyls, Total	0.012		0.0023	0.0094	ug/L	680
Trichlorobiphenyls, Total	0.018		0.0022	0.0047	ug/L	680
Total PCBs as Sum of Homologs	1.0			0.024	ug/L	680

CLIENT ID: 2307128 002			Lab ID: R1803127-002			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.012		0.0016	0.0047	ug/L	680
Hexachlorobiphenyls, Total	0.0047	J	0.0047	0.0094	ug/L	680
Monochlorobiphenyls, Total	0.025		0.00059	0.0047	ug/L	680
Total PCBs as Sum of Homologs	0.042			0.024	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803127-001	2307128 001	4/4/2018	1410
R1803127-002	2307128 002	4/4/2018	1625

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2307128

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/18/2018 Approved By:

Email? [ ] -Y

Fax? [ ] -Y No.:

Container Type: AN
Container Size: 1L
Preservative: None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL. Full QC lab report needed, EQUIS EDD.	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
1 2307128 001	4/4/18	1410	G	WT	2	*		
2 2307128 002	4/4/18	1625	G	WT	2	*		Sub to ALS Rochester
3								
4								
5								
6								
7								
8								
9								
10								

R1803127 5
ALS Environmental
UR115: 2307128

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ALS Field Services: [ ] Pickup [ ] Labor [ ] Composite_Sampling [ ] Rental_Equipment [ ] Other:

Project Comments:

LOGGED BY(signature): DATE:

REVIEWED BY(signature): DATE:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible]	4/4/18	1755	2 [illegible] ALS	4/4/18	1828
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE

Special Processing: USACE [ ] Navy [ ]

State Samples Collected in: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ]

PWSID # ____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- EQUIS EDD

* G=Grab; C=Composite ** Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 8/04

Cooler Receipt and Preservation Check Form

R1803127 5
ALS Environmental
UR116: 2307128

Project/Client ALS Middletown Folder Number

Cooler received on 4/10/18 by: C

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	~~ALS/ROC~~ (CLIENT)
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/10/18 Time: 1002 ID: (IR#7) IR#9 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	0.8						
Correction Factor (°C)	—						
Corrected Temp (°C)	0.8						
Temp from:Type of bottle	—						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by C on 4/10/18 at 1004
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 4/10/18 Time: 1848 by: DW

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: client.

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: DW

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client:	ALS Environmental - US	**Service Request:**	R1803127
Project:	UR115-2307128		

Sample Name:	2307128-001	**Date Collected:**	04/4/18
Lab Code:	R1803127-001	**Date Received:**	04/10/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name:	2307128-002	**Date Collected:**	04/4/18
Lab Code:	R1803127-002	**Date Received:**	04/10/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
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Semivolatile Organic Compounds by GC/MS

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Client:	ALS Environmental - US	**Service Request:**	R1803127
Project:	UR115: 2307128	**Date Collected:**	04/04/18 14:10
Sample Matrix:	Water	**Date Received:**	04/10/18 09:35
Sample Name:	2307128.001	**Units:**	ug/L
Lab Code:	R1803127-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 07:46	4/11/18	
Dichlorobiphenyls, Total	**0.082**	0.0047	0.0016	1	04/12/18 07:46	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 07:46	4/11/18	
Hexachlorobiphenyls, Total	**0.21**	0.0094	0.0047	1	04/12/18 07:46	4/11/18	
Monochlorobiphenyls, Total	**0.22**	0.0047	0.00059	1	04/12/18 07:46	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 07:46	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 07:46	4/11/18	
Pentachlorobiphenyls, Total	**0.49**	0.0094	0.0048	1	04/12/18 07:46	4/11/18	
Tetrachlorobiphenyls, Total	**0.012**	0.0094	0.0023	1	04/12/18 07:46	4/11/18	
Trichlorobiphenyls, Total	**0.018**	0.0047	0.0022	1	04/12/18 07:46	4/11/18	
Total PCBs as Sum of Homologs	**1.0**	0.024	-	1	04/12/18 07:46	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	87	58 - 125	04/12/18 07:46	
4,4'-DDT	85	37 - 166	04/12/18 07:46	

Client:	ALS Environmental - US	**Service Request:**	R1803127
Project:	UR115: 2307128	**Date Collected:**	04/04/18 16:25
Sample Matrix:	Water	**Date Received:**	04/10/18 09:35
Sample Name:	2307128 002	**Units:**	ug/L
Lab Code:	R1803127-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND	U	0.024	0.012	1	04/12/18 08:15	4/11/18	
Dichlorobiphenyls, Total	**0.012**		0.0047	0.0016	1	04/12/18 08:15	4/11/18	
Heptachlorobiphenyls, Total	ND	U	0.014	0.0090	1	04/12/18 08:15	4/11/18	
Hexachlorobiphenyls, Total	**0.0047**	**J**	0.0094	0.0047	1	04/12/18 08:15	4/11/18	
Monochlorobiphenyls, Total	**0.025**		0.0047	0.00059	1	04/12/18 08:15	4/11/18	
Nonachlorobiphenyls, Total	ND	U	0.019	0.0088	1	04/12/18 08:15	4/11/18	
Octachlorobiphenyls, Total	ND	U	0.014	0.0099	1	04/12/18 08:15	4/11/18	
Pentachlorobiphenyls, Total	ND	U	0.0094	0.0048	1	04/12/18 08:15	4/11/18	
Tetrachlorobiphenyls, Total	ND	U	0.0094	0.0023	1	04/12/18 08:15	4/11/18	
Trichlorobiphenyls, Total	ND	U	0.0047	0.0022	1	04/12/18 08:15	4/11/18	
Total PCBs as Sum of Homologs	**0.042**		0.024	-	1	04/12/18 08:15	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	78	58 - 125	04/12/18 08:15	
4,4'-DDT	99	37 - 166	04/12/18 08:15	

QC Summary Forms

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Client: ALS Environmental - US **Service Request:** R1803127
Project: UR115: 2307128
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2307128 001	R1803127-001	85	87
2307128 002	R1803127-002	99	78
Method Blank	RQ1803214-01	116	98
Lab Control Sample	RQ1803214-02	121	101
Duplicate Lab Control Sample	RQ1803214-03	110	92

Client:	ALS Environmental - US	**Service Request:**	R1803127
Project:	UR115: 2307128	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803214-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/12/18 07:17	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/12/18 07:17	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/12/18 07:17	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/12/18 07:17	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/12/18 07:17	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/12/18 07:17	4/11/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/12/18 07:17	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/12/18 07:17	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/12/18 07:17	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/12/18 07:17	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/12/18 07:17	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	98	58 - 125	04/12/18 07:17	
4,4'-DDT	116	37 - 166	04/12/18 07:17	

Client: ALS Environmental - US
Project: UR115: 2307128
Sample Matrix: Water

Service Request: R1803127
Date Analyzed: 04/12/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803214-02			Duplicate Lab Control Sample RQ1803214-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.704	1.25	56	0.670	1.25	54	29-162	5	30
Dichlorobiphenyls, Total	680	0.225	0.250	90	0.207	0.250	83	37-139	9	30
Heptachlorobiphenyls, Total	680	0.575	0.750	77	0.526	0.750	70	53-120	9	30
Hexachlorobiphenyls, Total	680	0.420	0.500	84	0.371	0.500	74	11-160	12	30
Monochlorobiphenyls, Total	680	0.193	0.250	77	0.184	0.250	74	34-137	5	30
Octachlorobiphenyls, Total	680	0.532	0.750	71	0.490	0.750	65	57-125	8	30
Pentachlorobiphenyls, Total	680	0.450	0.500	90	0.390	0.500	78	10-180	14	30
Tetrachlorobiphenyls, Total	680	0.475	0.500	95	0.421	0.500	84	14-153	12	30
Trichlorobiphenyls, Total	680	0.237	0.250	95	0.208	0.250	83	10-173	13	30

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 26, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2307596**
Purchase Order:	**95840ACM**	Workorder ID:	**2018-MIDDLE RIVER COMPLEX**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, April 6, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2307596001	MRC-MW110A	Water	4/5/2018 10:10	4/6/2018 22:10	Ms. Holly Brown
2307596002	MRC-MW110B	Water	4/5/2018 13:40	4/6/2018 22:10	Ms. Holly Brown
2307596003	MRC-MW60B	Water	4/5/2018 17:23	4/6/2018 22:10	Ms. Holly Brown
2307596004	MRC-MW62C	Water	4/5/2018 13:40	4/6/2018 22:10	Ms. Holly Brown
2307596005	Trip Blank 2	Water	4/6/2018 22:10	4/6/2018 22:10	Ms. Holly Brown
2307596006	Trip Blank 3	Water	4/6/2018 22:10	4/6/2018 22:10	Ms. Holly Brown
2307596007	MRC-MW103A	Water	4/5/2018 15:47	4/6/2018 22:10	Ms. Holly Brown
2307596008	MRC-MW103B	Water	4/5/2018 18:05	4/6/2018 22:10	Ms. Holly Brown
2307596009	MRC-MW44A	Water	4/5/2018 09:15	4/6/2018 22:10	Ms. Holly Brown
2307596010	MRC-MW64A	Water	4/5/2018 10:50	4/6/2018 22:10	Ms. Holly Brown
2307596011	MRC-MW60A	Water	4/5/2018 14:07	4/6/2018 22:10	Ms. Holly Brown
2307596012	MRC-MW70B	Water	4/5/2018 12:05	4/6/2018 22:10	Ms. Holly Brown
2307596013	MRC-SWMW-4I	Water	4/5/2018 16:25	4/6/2018 22:10	Ms. Holly Brown
2307596014	MRC-MW70A	Water	4/5/2018 09:55	4/6/2018 22:10	Ms. Holly Brown
2307596015	MRC-MW53A	Water	4/5/2018 16:15	4/6/2018 22:10	Ms. Holly Brown
2307596016	MRC-SWMW-4S	Water	4/5/2018 14:15	4/6/2018 22:10	Ms. Holly Brown
2307596017	MRC-MW76A	Water	4/5/2018 12:15	4/6/2018 22:10	Ms. Holly Brown
2307596018	MRC-MW53B	Water	4/5/2018 17:50	4/6/2018 22:10	Ms. Holly Brown
2307596019	MRC-MW76B	Water	4/5/2018 10:25	4/6/2018 22:10	Ms. Holly Brown
2307596020	Trip Blank 5	Water	4/6/2018 22:10	4/6/2018 22:10	Ms. Holly Brown

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596001** Date Collected: 4/5/2018 10:10 Matrix: Water

Sample ID: **MRC-MW110A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 13:07	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 13:07	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 13:07	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
1,1-Dichloroethane	0.39J	J	ug/L	1.0	0.28	SW846 8260B		4/11/18 13:07	TMP	A
1,1-Dichloroethene	0.79J	J	ug/L	1.0	0.29	SW846 8260B		4/11/18 13:07	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 13:07	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 13:07	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 13:07	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:07	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 13:07	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 13:07	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 13:07	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:07	TMP	A
1,2-Dichloroethene, Total	9.6		ug/L	2.0	0.45	SW846 8260B		4/11/18 13:07	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:07	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:07	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:07	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 13:07	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:07	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:07	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 13:07	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 13:07	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 13:07	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 13:07	TMP	A
Acetone	12.4		ug/L	10.0	3.1	SW846 8260B		4/11/18 13:07	TMP	A
Benzene	1.3		ug/L	1.0	0.23	SW846 8260B		4/11/18 13:07	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:07	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:07	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:07	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 13:07	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 13:07	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 13:07	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:07	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 13:07	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 13:07	TMP	A

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596001** Date Collected: 4/5/2018 10:10 Matrix: Water

Sample ID: **MRC-MW110A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 13:07	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:07	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 13:07	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:07	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:07	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 13:07	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 13:07	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 13:07	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 13:07	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 13:07	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 13:07	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 13:07	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 13:07	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 13:07	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:07	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 13:07	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 13:07	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 13:07	TMP	A
Trichloroethene	17.7		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:07	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 13:07	TMP	A
Vinyl Chloride	0.50J	J	ug/L	1.0	0.30	SW846 8260B		4/11/18 13:07	TMP	A
cis-1,2-Dichloroethene	9.1		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:07	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:07	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 13:07	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 13:07	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 13:07	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:07	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:07	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:07	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 13:07	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 13:07	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 13:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596001** Date Collected: 4/5/2018 10:10 Matrix: Water

Sample ID: **MRC-MW110A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.48J	J	ug/L	1.0	0.26	SW846 8260B			4/11/18 13:07	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 13:07	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/11/18 13:07	TMP	A
4-Bromofluorobenzene (S)	99.6		%	79 - 114		SW846 8260B			4/11/18 13:07	TMP	A
Dibromofluoromethane (S)	95.8		%	78 - 116		SW846 8260B			4/11/18 13:07	TMP	A
Toluene-d8 (S)	96.4		%	76 - 127		SW846 8260B			4/11/18 13:07	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	2.5		ug/L	0.19	0.036	8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	83.6		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C
Fluoranthene-d10 (S)	109		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/21/18 02:35	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596002** Date Collected: 4/5/2018 13:40 Matrix: Water

Sample ID: **MRC-MW110B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 13:29	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 13:29	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 13:29	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 13:29	TMP	A
1,1-Dichloroethene	0.70J	J	ug/L	1.0	0.29	SW846 8260B		4/11/18 13:29	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 13:29	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 13:29	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 13:29	TMP	A
1,2,4-Trimethylbenzene	0.33J	J	ug/L	1.0	0.25	SW846 8260B		4/11/18 13:29	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 13:29	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 13:29	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 13:29	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:29	TMP	A
1,2-Dichloroethene, Total	9.3		ug/L	2.0	0.45	SW846 8260B		4/11/18 13:29	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:29	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:29	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:29	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 13:29	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:29	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:29	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 13:29	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 13:29	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 13:29	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 13:29	TMP	A
Acetone	6.8J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 13:29	TMP	A
Benzene	81.4		ug/L	1.0	0.23	SW846 8260B		4/11/18 13:29	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:29	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:29	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:29	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 13:29	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 13:29	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 13:29	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:29	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 13:29	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 13:29	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596002** Date Collected: 4/5/2018 13:40 Matrix: Water

Sample ID: **MRC-MW110B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
Chloroform	0.90J	J	ug/L	1.0	0.21	SW846 8260B		4/11/18 13:29	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:29	TMP	A
Cyclohexane	1.3		ug/L	1.0	0.29	SW846 8260B		4/11/18 13:29	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:29	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:29	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 13:29	TMP	A
Ethylbenzene	2.7		ug/L	1.0	0.34	SW846 8260B		4/11/18 13:29	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 13:29	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 13:29	TMP	A
Isopropylbenzene	0.40J	J	ug/L	1.0	0.22	SW846 8260B		4/11/18 13:29	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 13:29	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 13:29	TMP	A
Methyl t-Butyl Ether	7.0		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 13:29	TMP	A
Naphthalene	0.39J	J	ug/L	2.0	0.34	SW846 8260B		4/11/18 13:29	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:29	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 13:29	TMP	A
Toluene	0.24J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 13:29	TMP	A
Total Xylenes	7.7		ug/L	3.0	0.66	SW846 8260B		4/11/18 13:29	TMP	A
Trichloroethene	44.7		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:29	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 13:29	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 13:29	TMP	A
cis-1,2-Dichloroethene	9.0		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:29	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:29	TMP	A
mp-Xylene	3.4		ug/L	2.0	0.52	SW846 8260B		4/11/18 13:29	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 13:29	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 13:29	TMP	A
o-Xylene	4.3		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:29	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:29	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:29	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 13:29	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 13:29	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 13:29	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596002** Date Collected: 4/5/2018 13:40 Matrix: Water

Sample ID: **MRC-MW110B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.33J	J	ug/L	1.0	0.26	SW846 8260B			4/11/18 13:29	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 13:29	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/11/18 13:29	TMP	A
4-Bromofluorobenzene (S)	99.5		%	79 - 114		SW846 8260B			4/11/18 13:29	TMP	A
Dibromofluoromethane (S)	93.8		%	78 - 116		SW846 8260B			4/11/18 13:29	TMP	A
Toluene-d8 (S)	93.4		%	76 - 127		SW846 8260B			4/11/18 13:29	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	2.5		ug/L	0.20	0.038	8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	54.7		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C
Fluoranthene-d10 (S)	93		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/21/18 03:01	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596003** Date Collected: 4/5/2018 17:23 Matrix: Water

Sample ID: **MRC-MW60B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 13:52	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 13:52	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 13:52	TMP	A
1,1,2-Trichloroethane	1.9		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:52	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 13:52	TMP	A
1,1-Dichloroethene	30.4		ug/L	1.0	0.29	SW846 8260B		4/11/18 13:52	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 13:52	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 13:52	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 13:52	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:52	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 13:52	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 13:52	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 13:52	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:52	TMP	A
1,2-Dichloroethene, Total	235J	J	ug/L	400	90.0	SW846 8260B		4/12/18 14:32	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:52	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:52	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:52	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 13:52	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:52	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:52	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 13:52	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 13:52	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 13:52	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 13:52	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 13:52	TMP	A
Benzene	0.83J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 13:52	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:52	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:52	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 13:52	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 13:52	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 13:52	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 13:52	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:52	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 13:52	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 13:52	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596003** Date Collected: 4/5/2018 17:23 Matrix: Water

Sample ID: **MRC-MW60B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:52	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 13:52	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:52	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 13:52	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:52	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:52	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 13:52	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 13:52	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 13:52	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 13:52	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 13:52	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 13:52	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 13:52	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 13:52	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:52	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 13:52	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 13:52	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:52	TMP	A
Tetrachloroethene	10.7		ug/L	1.0	0.35	SW846 8260B		4/11/18 13:52	TMP	A
Toluene	0.54J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 13:52	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 13:52	TMP	A
Trichloroethene	6120		ug/L	200	66.0	SW846 8260B		4/12/18 14:32	TMP	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 13:52	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 13:52	TMP	A
Vinyl Chloride	5.3		ug/L	1.0	0.30	SW846 8260B		4/11/18 13:52	TMP	A
cis-1,2-Dichloroethene	235		ug/L	200	64.0	SW846 8260B		4/12/18 14:32	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:52	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 13:52	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 13:52	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:52	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 13:52	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:52	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 13:52	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 13:52	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 13:52	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 13:52	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 13:52	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 13:52	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596003** Date Collected: 4/5/2018 17:23 Matrix: Water

Sample ID: **MRC-MW60B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	2.9		ug/L	1.0	0.26	SW846 8260B			4/11/18 13:52	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 13:52	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/11/18 13:52	TMP	A
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/12/18 14:32	TMP	B
4-Bromofluorobenzene (S)	99.2		%	79 - 114		SW846 8260B			4/11/18 13:52	TMP	A
4-Bromofluorobenzene (S)	98.4		%	79 - 114		SW846 8260B			4/12/18 14:32	TMP	B
Dibromofluoromethane (S)	96.9		%	78 - 116		SW846 8260B			4/12/18 14:32	TMP	B
Dibromofluoromethane (S)	94.5		%	78 - 116		SW846 8260B			4/11/18 13:52	TMP	A
Toluene-d8 (S)	94.8		%	76 - 127		SW846 8260B			4/11/18 13:52	TMP	A
Toluene-d8 (S)	94.1		%	76 - 127		SW846 8260B			4/12/18 14:32	TMP	B
SEMIVOLATILE SIM											
1,4-Dioxane	0.20		ug/L	0.095	0.018	8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	55.1		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
Fluoranthene-d10 (S)	88.1		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/17/18 23:30	CGS	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/17/18 03:19	EGO	F
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/17/18 03:19	EGO	F
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/17/18 03:19	EGO	F
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/17/18 03:19	EGO	F
Methane	68.5		ug/L	1.5	0.34	RSK 175			4/17/18 03:19	EGO	F
Propane	ND		ug/L	3.2	0.22	RSK 175			4/17/18 03:19	EGO	F
WET CHEMISTRY											
Alkalinity, Total	45	1	mg/L	5	0.8	S2320B-97			4/11/18 12:34	MSA	H
Ammonia-N	0.158		mg/L	0.100	0.03	D6919-09			4/17/18 04:32	CMM	I
Chloride	63.8		mg/L	2.0	0.24	EPA 300.0			4/10/18 06:52	CHW	L
Nitrate-N	ND	3	mg/L	0.20	0.057	EPA 300.0			4/10/18 06:52	CHW	L
Nitrite-N	ND	2	mg/L	0.20	0.040	EPA 300.0			4/10/18 06:52	CHW	L
Orthophosphate	0.0030J	J,4	mg/L	0.020	0.0029	S4500PE-99			4/10/18 02:22	MSA	L
Phosphorus, Total	0.083J	J	mg/L	0.10	0.017	EPA 365.1	4/13/18 13:00	C_D	4/24/18 12:08	MNP	I

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596003** Date Collected: 4/5/2018 17:23 Matrix: Water

Sample ID: **MRC-MW60B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	3.0		mg/L	2.0	0.40	EPA 300.0			4/10/18 06:52	CHW	L
Total Dissolved Solids	177		mg/L	5	5	S2540C-11			4/12/18 15:04	BMK	L
Total Organic Carbon (TOC)	0.47J	J	mg/L	0.50	0.18	S5310B-00			4/11/18 11:34	PAG	J
METALS											
Silica	9.9		mg/L	0.24	0.080	SW846 6010C	4/10/18 14:45	DXC	4/18/18 07:25	SRT	E1
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Calcium, Total	6.4		mg/L	0.11	0.036	SW846 6010C	4/10/18 14:45	DXC	4/11/18 16:07	SRT	E1
Chromium, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Cobalt, Total	0.042		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Iron, Total	13.0		mg/L	0.067	0.022	SW846 6010C	4/10/18 14:45	DXC	4/11/18 16:07	SRT	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Magnesium, Total	5.3		mg/L	0.11	0.036	SW846 6010C	4/10/18 14:45	DXC	4/11/18 16:07	SRT	E1
Manganese, Total	2.1		mg/L	0.0056	0.0020	SW846 6010C	4/10/18 14:45	DXC	4/11/18 16:07	SRT	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:28	AXC	E3
Nickel, Total	0.065		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Potassium, Total	2.2		mg/L	0.56	0.18	SW846 6010C	4/10/18 14:45	DXC	4/11/18 16:07	SRT	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Sodium, Total	34.6		mg/L	0.56	0.18	SW846 6010C	4/10/18 14:45	DXC	4/11/18 16:07	SRT	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2
Zinc, Total	0.11		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:46	MO	E2

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596004** Date Collected: 4/5/2018 13:40 Matrix: Water

Sample ID: **MRC-MW62C** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 13:00	TMP	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 13:00	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 13:00	TMP	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 13:00	TMP	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 13:00	TMP	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 13:00	TMP	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 13:00	TMP	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 13:00	TMP	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:00	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 13:00	TMP	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 13:00	TMP	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 13:00	TMP	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:00	TMP	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 13:00	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:00	TMP	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:00	TMP	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:00	TMP	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 13:00	TMP	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:00	TMP	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:00	TMP	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 13:00	TMP	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 13:00	TMP	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 13:00	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 13:00	TMP	B
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 13:00	TMP	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:00	TMP	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:00	TMP	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:00	TMP	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:00	TMP	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 13:00	TMP	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 13:00	TMP	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:00	TMP	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:00	TMP	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 13:00	TMP	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 13:00	TMP	B

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596004** Date Collected: 4/5/2018 13:40 Matrix: Water

Sample ID: **MRC-MW62C** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 13:00	TMP	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:00	TMP	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 13:00	TMP	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:00	TMP	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:00	TMP	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 13:00	TMP	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 13:00	TMP	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 13:00	TMP	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 13:00	TMP	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 13:00	TMP	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 13:00	TMP	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 13:00	TMP	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 13:00	TMP	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 13:00	TMP	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:00	TMP	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 13:00	TMP	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:00	TMP	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 13:00	TMP	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:00	TMP	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 13:00	TMP	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 13:00	TMP	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:00	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:00	TMP	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 13:00	TMP	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 13:00	TMP	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 13:00	TMP	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:00	TMP	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:00	TMP	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:00	TMP	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 13:00	TMP	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 13:00	TMP	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 13:00	TMP	B

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596004** Date Collected: 4/5/2018 13:40 Matrix: Water

Sample ID: **MRC-MW62C** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 13:00	TMP	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 13:00	TMP	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/12/18 13:00	TMP	B
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/12/18 13:00	TMP	B
Dibromofluoromethane (S)	96.8		%	78 - 116		SW846 8260B			4/12/18 13:00	TMP	B
Toluene-d8 (S)	95.8		%	76 - 127		SW846 8260B			4/12/18 13:00	TMP	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 12:01	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596005** Date Collected: 4/6/2018 22:10 Matrix: Water

Sample ID: **Trip Blank 2** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 11:35	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 11:35	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 11:35	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 11:35	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 11:35	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 11:35	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 11:35	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 11:35	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 11:35	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 11:35	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 11:35	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 11:35	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 11:35	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 11:35	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 11:35	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 11:35	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 11:35	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 11:35	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 11:35	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 11:35	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 11:35	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 11:35	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 11:35	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 11:35	TMP	A
Acetone	7.0J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 11:35	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 11:35	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 11:35	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 11:35	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 11:35	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 11:35	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 11:35	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 11:35	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 11:35	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 11:35	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 11:35	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596005** Date Collected: 4/6/2018 22:10 Matrix: Water

Sample ID: **Trip Blank 2** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 11:35	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 11:35	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 11:35	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 11:35	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 11:35	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 11:35	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 11:35	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 11:35	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 11:35	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 11:35	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 11:35	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 11:35	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 11:35	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 11:35	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 11:35	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 11:35	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 11:35	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 11:35	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 11:35	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 11:35	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 11:35	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 11:35	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 11:35	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 11:35	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 11:35	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 11:35	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 11:35	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 11:35	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 11:35	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 11:35	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 11:35	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 11:35	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596005** Date Collected: 4/6/2018 22:10 Matrix: Water

Sample ID: **Trip Blank 2** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 11:35	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 11:35	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/11/18 11:35	TMP	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/11/18 11:35	TMP	A
Dibromofluoromethane (S)	97.4		%	78 - 116		SW846 8260B			4/11/18 11:35	TMP	A
Toluene-d8 (S)	94.8		%	76 - 127		SW846 8260B			4/11/18 11:35	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596006** Date Collected: 4/6/2018 22:10 Matrix: Water

Sample ID: **Trip Blank 3** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	*Cntr*
ADMINISTRATIVE											
Sample Cancelled	Not received.								4/17/18 15:37	VNB	

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596007** Date Collected: 4/5/2018 15:47 Matrix: Water

Sample ID: **MRC-MW103A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 13:23	TMP	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 13:23	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 13:23	TMP	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 13:23	TMP	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 13:23	TMP	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 13:23	TMP	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 13:23	TMP	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 13:23	TMP	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:23	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 13:23	TMP	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 13:23	TMP	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 13:23	TMP	B
1,2-Dichloroethane	19.7		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:23	TMP	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 13:23	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:23	TMP	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:23	TMP	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:23	TMP	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 13:23	TMP	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:23	TMP	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:23	TMP	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 13:23	TMP	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 13:23	TMP	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 13:23	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 13:23	TMP	B
Acetone	5.1J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 13:23	TMP	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:23	TMP	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:23	TMP	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:23	TMP	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:23	TMP	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 13:23	TMP	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 13:23	TMP	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:23	TMP	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:23	TMP	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 13:23	TMP	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 13:23	TMP	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596007** Date Collected: 4/5/2018 15:47 Matrix: Water

Sample ID: **MRC-MW103A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
Chloroform	0.94J	J	ug/L	1.0	0.21	SW846 8260B		4/12/18 13:23	TMP	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:23	TMP	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 13:23	TMP	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:23	TMP	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:23	TMP	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 13:23	TMP	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 13:23	TMP	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 13:23	TMP	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 13:23	TMP	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 13:23	TMP	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 13:23	TMP	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 13:23	TMP	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 13:23	TMP	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 13:23	TMP	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:23	TMP	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 13:23	TMP	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:23	TMP	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 13:23	TMP	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
Trichlorofluoromethane	2.3		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:23	TMP	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 13:23	TMP	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 13:23	TMP	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:23	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:23	TMP	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 13:23	TMP	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 13:23	TMP	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 13:23	TMP	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:23	TMP	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:23	TMP	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:23	TMP	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 13:23	TMP	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 13:23	TMP	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 13:23	TMP	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596007** Date Collected: 4/5/2018 15:47 Matrix: Water

Sample ID: **MRC-MW103A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 13:23	TMP	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 13:23	TMP	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/12/18 13:23	TMP	B
4-Bromofluorobenzene (S)	99.3		%	79 - 114		SW846 8260B			4/12/18 13:23	TMP	B
Dibromofluoromethane (S)	93.2		%	78 - 116		SW846 8260B			4/12/18 13:23	TMP	B
Toluene-d8 (S)	94.8		%	76 - 127		SW846 8260B			4/12/18 13:23	TMP	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 12:30	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596008** Date Collected: 4/5/2018 18:05 Matrix: Water

Sample ID: **MRC-MW103B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 13:46	TMP	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 13:46	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 13:46	TMP	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 13:46	TMP	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 13:46	TMP	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 13:46	TMP	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 13:46	TMP	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 13:46	TMP	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:46	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 13:46	TMP	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 13:46	TMP	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 13:46	TMP	B
1,2-Dichloroethane	0.44J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 13:46	TMP	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 13:46	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:46	TMP	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:46	TMP	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:46	TMP	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 13:46	TMP	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:46	TMP	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:46	TMP	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 13:46	TMP	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 13:46	TMP	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 13:46	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 13:46	TMP	B
Acetone	6.4J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 13:46	TMP	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:46	TMP	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:46	TMP	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:46	TMP	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 13:46	TMP	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 13:46	TMP	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 13:46	TMP	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:46	TMP	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:46	TMP	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 13:46	TMP	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 13:46	TMP	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596008** Date Collected: 4/5/2018 18:05 Matrix: Water

Sample ID: **MRC-MW103B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 13:46	TMP	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:46	TMP	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 13:46	TMP	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:46	TMP	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 13:46	TMP	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 13:46	TMP	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 13:46	TMP	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 13:46	TMP	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 13:46	TMP	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 13:46	TMP	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 13:46	TMP	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 13:46	TMP	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 13:46	TMP	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 13:46	TMP	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:46	TMP	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 13:46	TMP	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 13:46	TMP	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 13:46	TMP	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 13:46	TMP	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 13:46	TMP	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 13:46	TMP	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:46	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:46	TMP	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 13:46	TMP	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 13:46	TMP	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 13:46	TMP	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 13:46	TMP	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 13:46	TMP	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 13:46	TMP	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 13:46	TMP	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 13:46	TMP	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 13:46	TMP	B

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596008** Date Collected: 4/5/2018 18:05 Matrix: Water

Sample ID: **MRC-MW103B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 13:46	TMP	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 13:46	TMP	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			4/12/18 13:46	TMP	B
4-Bromofluorobenzene (S)	98.1		%	79 - 114		SW846 8260B			4/12/18 13:46	TMP	B
Dibromofluoromethane (S)	97.1		%	78 - 116		SW846 8260B			4/12/18 13:46	TMP	B
Toluene-d8 (S)	94.7		%	76 - 127		SW846 8260B			4/12/18 13:46	TMP	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 12:59	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596009** Date Collected: 4/5/2018 09:15 Matrix: Water

Sample ID: **MRC-MW44A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 15:24	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 15:24	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 15:24	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 15:24	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 15:24	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 15:24	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 15:24	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 15:24	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 15:24	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 15:24	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 15:24	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 15:24	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:24	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 15:24	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 15:24	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 15:24	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 15:24	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 15:24	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 15:24	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:24	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 15:24	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 15:24	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 15:24	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 15:24	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 15:24	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 15:24	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:24	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:24	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 15:24	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 15:24	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 15:24	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 15:24	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:24	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 15:24	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 15:24	TMP	A

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596009** Date Collected: 4/5/2018 09:15 Matrix: Water

Sample ID: **MRC-MW44A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 15:24	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:24	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 15:24	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:24	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 15:24	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 15:24	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 15:24	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 15:24	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 15:24	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 15:24	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 15:24	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 15:24	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 15:24	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 15:24	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 15:24	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 15:24	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 15:24	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 15:24	TMP	A
Trichloroethene	1.0		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 15:24	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 15:24	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 15:24	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:24	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:24	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 15:24	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 15:24	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 15:24	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:24	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:24	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:24	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 15:24	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 15:24	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 15:24	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596009** Date Collected: 4/5/2018 09:15 Matrix: Water

Sample ID: **MRC-MW44A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 15:24	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 15:24	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/11/18 15:24	TMP	A
4-Bromofluorobenzene (S)	98.4		%	79 - 114		SW846 8260B			4/11/18 15:24	TMP	A
Dibromofluoromethane (S)	94.1		%	78 - 116		SW846 8260B			4/11/18 15:24	TMP	A
Toluene-d8 (S)	95		%	76 - 127		SW846 8260B			4/11/18 15:24	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.50		ug/L	0.096	0.018	8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	54.7		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
Fluoranthene-d10 (S)	83.6		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/17/18 23:03	CGS	E
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 13:28	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596010** Date Collected: 4/5/2018 10:50 Matrix: Water

Sample ID: **MRC-MW64A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 15:47	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 15:47	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 15:47	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 15:47	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 15:47	TMP	A
1,2,3-Trichlorobenzene	1.1J	J	ug/L	2.0	0.93	SW846 8260B		4/11/18 15:47	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 15:47	TMP	A
1,2,4-Trichlorobenzene	4.8		ug/L	2.0	0.82	SW846 8260B		4/11/18 15:47	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 15:47	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 15:47	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 15:47	TMP	A
1,2-Dichlorobenzene	0.48J	J	ug/L	1.0	0.38	SW846 8260B		4/11/18 15:47	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:47	TMP	A
1,2-Dichloroethene, Total	0.98J	J	ug/L	2.0	0.45	SW846 8260B		4/11/18 15:47	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 15:47	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 15:47	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 15:47	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 15:47	TMP	A
1,4-Dichlorobenzene	0.66J	J	ug/L	1.0	0.27	SW846 8260B		4/11/18 15:47	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:47	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 15:47	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 15:47	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 15:47	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 15:47	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 15:47	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 15:47	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:47	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:47	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 15:47	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 15:47	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 15:47	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 15:47	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:47	TMP	A
Chlorobenzene	0.45J	J	ug/L	1.0	0.19	SW846 8260B		4/11/18 15:47	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 15:47	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596010** Date Collected: 4/5/2018 10:50 Matrix: Water

Sample ID: **MRC-MW64A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
Chloroform	1.9		ug/L	1.0	0.21	SW846 8260B		4/11/18 15:47	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:47	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 15:47	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:47	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 15:47	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 15:47	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 15:47	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 15:47	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 15:47	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 15:47	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 15:47	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 15:47	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 15:47	TMP	A
Naphthalene	1.3J	J	ug/L	2.0	0.34	SW846 8260B		4/11/18 15:47	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 15:47	TMP	A
Tetrachloroethene	3.5		ug/L	1.0	0.35	SW846 8260B		4/11/18 15:47	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 15:47	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 15:47	TMP	A
Trichloroethene	1.4		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 15:47	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 15:47	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 15:47	TMP	A
cis-1,2-Dichloroethene	0.98J	J	ug/L	1.0	0.32	SW846 8260B		4/11/18 15:47	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:47	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 15:47	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 15:47	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 15:47	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 15:47	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 15:47	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 15:47	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 15:47	TMP	A
tert-Butyl Alcohol	38.2		ug/L	10.0	2.2	SW846 8260B		4/11/18 15:47	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 15:47	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596010** Date Collected: 4/5/2018 10:50 Matrix: Water

Sample ID: **MRC-MW64A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 15:47	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 15:47	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/11/18 15:47	TMP	A
4-Bromofluorobenzene (S)	98.6		%	79 - 114		SW846 8260B			4/11/18 15:47	TMP	A
Dibromofluoromethane (S)	96.2		%	78 - 116		SW846 8260B			4/11/18 15:47	TMP	A
Toluene-d8 (S)	95.1		%	76 - 127		SW846 8260B			4/11/18 15:47	TMP	A
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 13:57	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596011** Date Collected: 4/5/2018 14:07 Matrix: Water

Sample ID: **MRC-MW60A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 16:10	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 16:10	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 16:10	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:10	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 16:10	TMP	A
1,1-Dichloroethene	4.0		ug/L	1.0	0.29	SW846 8260B		4/11/18 16:10	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 16:10	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 16:10	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 16:10	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 16:10	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 16:10	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 16:10	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 16:10	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:10	TMP	A
1,2-Dichloroethene, Total	571		ug/L	100	22.5	SW846 8260B		4/12/18 14:54	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 16:10	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 16:10	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 16:10	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 16:10	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 16:10	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:10	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 16:10	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 16:10	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 16:10	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 16:10	TMP	A
Acetone	6.9J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 16:10	TMP	A
Benzene	0.41J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 16:10	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:10	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:10	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 16:10	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 16:10	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 16:10	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 16:10	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:10	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 16:10	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 16:10	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596011** Date Collected: 4/5/2018 14:07 Matrix: Water

Sample ID: **MRC-MW60A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:10	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 16:10	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:10	TMP	A
Cyclohexane	0.80J	J	ug/L	1.0	0.29	SW846 8260B		4/11/18 16:10	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:10	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:10	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 16:10	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 16:10	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 16:10	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 16:10	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 16:10	TMP	A
Isopropylbenzene	2.3		ug/L	1.0	0.22	SW846 8260B		4/11/18 16:10	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 16:10	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 16:10	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:10	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 16:10	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 16:10	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 16:10	TMP	A
Tetrachloroethene	81.2		ug/L	1.0	0.35	SW846 8260B		4/11/18 16:10	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 16:10	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 16:10	TMP	A
Trichloroethene	1920		ug/L	50.0	16.5	SW846 8260B		4/12/18 14:54	TMP	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 16:10	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 16:10	TMP	A
Vinyl Chloride	80.1		ug/L	1.0	0.30	SW846 8260B		4/11/18 16:10	TMP	A
cis-1,2-Dichloroethene	571		ug/L	50.0	16.0	SW846 8260B		4/12/18 14:54	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:10	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 16:10	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 16:10	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:10	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 16:10	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:10	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:10	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:10	TMP	A
sec-Butylbenzene	1.4		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:10	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 16:10	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 16:10	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 16:10	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596011** Date Collected: 4/5/2018 14:07 Matrix: Water

Sample ID: **MRC-MW60A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	2.2		ug/L	1.0	0.26	SW846 8260B			4/11/18 16:10	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 16:10	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/12/18 14:54	TMP	B
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/11/18 16:10	TMP	A
4-Bromofluorobenzene (S)	97.8		%	79 - 114		SW846 8260B			4/12/18 14:54	TMP	B
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/11/18 16:10	TMP	A
Dibromofluoromethane (S)	97.7		%	78 - 116		SW846 8260B			4/12/18 14:54	TMP	B
Dibromofluoromethane (S)	95.5		%	78 - 116		SW846 8260B			4/11/18 16:10	TMP	A
Toluene-d8 (S)	95.3		%	76 - 127		SW846 8260B			4/12/18 14:54	TMP	B
Toluene-d8 (S)	93.8		%	76 - 127		SW846 8260B			4/11/18 16:10	TMP	A
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Beryllium, Total	0.0012		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Chromium, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Cobalt, Total	0.071		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Copper, Total	0.0025J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:29	AXC	C2
Nickel, Total	0.059		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1
Zinc, Total	0.0076		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/13/18 16:50	MO	C1

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596012** Date Collected: 4/5/2018 12:05 Matrix: Water

Sample ID: **MRC-MW70B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 14:09	TMP	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 14:09	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 14:09	TMP	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
1,1-Dichloroethane	5.4		ug/L	1.0	0.28	SW846 8260B		4/12/18 14:09	TMP	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 14:09	TMP	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 14:09	TMP	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 14:09	TMP	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 14:09	TMP	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 14:09	TMP	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 14:09	TMP	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 14:09	TMP	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 14:09	TMP	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 14:09	TMP	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 14:09	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 14:09	TMP	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 14:09	TMP	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 14:09	TMP	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 14:09	TMP	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 14:09	TMP	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 14:09	TMP	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 14:09	TMP	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 14:09	TMP	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 14:09	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 14:09	TMP	B
Acetone	5.7J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 14:09	TMP	B
Benzene	1.7		ug/L	1.0	0.23	SW846 8260B		4/12/18 14:09	TMP	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 14:09	TMP	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 14:09	TMP	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 14:09	TMP	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 14:09	TMP	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 14:09	TMP	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 14:09	TMP	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 14:09	TMP	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 14:09	TMP	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 14:09	TMP	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596012** Date Collected: 4/5/2018 12:05 Matrix: Water

Sample ID: **MRC-MW70B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	4.5		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 14:09	TMP	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 14:09	TMP	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 14:09	TMP	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 14:09	TMP	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 14:09	TMP	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 14:09	TMP	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 14:09	TMP	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 14:09	TMP	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 14:09	TMP	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 14:09	TMP	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 14:09	TMP	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 14:09	TMP	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 14:09	TMP	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 14:09	TMP	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 14:09	TMP	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 14:09	TMP	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 14:09	TMP	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 14:09	TMP	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 14:09	TMP	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 14:09	TMP	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 14:09	TMP	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 14:09	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 14:09	TMP	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 14:09	TMP	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 14:09	TMP	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 14:09	TMP	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 14:09	TMP	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 14:09	TMP	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 14:09	TMP	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 14:09	TMP	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 14:09	TMP	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 14:09	TMP	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596012** Date Collected: 4/5/2018 12:05 Matrix: Water

Sample ID: **MRC-MW70B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 14:09	TMP	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 14:09	TMP	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/12/18 14:09	TMP	B
4-Bromofluorobenzene (S)	99.5		%	79 - 114		SW846 8260B			4/12/18 14:09	TMP	B
Dibromofluoromethane (S)	93.7		%	78 - 116		SW846 8260B			4/12/18 14:09	TMP	B
Toluene-d8 (S)	93.6		%	76 - 127		SW846 8260B			4/12/18 14:09	TMP	B
SEMIVOLATILE SIM											
1,4-Dioxane	25.6		ug/L	9.3	1.8	8270 SIM	4/11/18 21:05	TXC	4/18/18 00:23	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 19:05	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 19:05	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 19:05	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 19:05	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/11/18 21:05	TXC	4/13/18 19:05	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	54.4		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/13/18 19:05	GEC	C
2-Methylnapthalene-d10 (S)	0		%	29 - 112		8270 SIM	4/11/18 21:05	TXC	4/18/18 00:23	CGS	C
Fluoranthene-d10 (S)	78		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/13/18 19:05	GEC	C
Fluoranthene-d10 (S)	301		%	45 - 130		8270 SIM	4/11/18 21:05	TXC	4/18/18 00:23	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596013** Date Collected: 4/5/2018 16:25 Matrix: Water

Sample ID: **MRC-SWMW-4I** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 16:56	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 16:56	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 16:56	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
1,1-Dichloroethane	9.8		ug/L	1.0	0.28	SW846 8260B		4/11/18 16:56	TMP	A
1,1-Dichloroethene	28.3		ug/L	1.0	0.29	SW846 8260B		4/11/18 16:56	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 16:56	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 16:56	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 16:56	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 16:56	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 16:56	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 16:56	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 16:56	TMP	A
1,2-Dichloroethane	1.5		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:56	TMP	A
1,2-Dichloroethene, Total	94.5		ug/L	2.0	0.45	SW846 8260B		4/11/18 16:56	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 16:56	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 16:56	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 16:56	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 16:56	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 16:56	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:56	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 16:56	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 16:56	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 16:56	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 16:56	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 16:56	TMP	A
Benzene	9.8		ug/L	1.0	0.23	SW846 8260B		4/11/18 16:56	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:56	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:56	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 16:56	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 16:56	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 16:56	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 16:56	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:56	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 16:56	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 16:56	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596013** Date Collected: 4/5/2018 16:25 Matrix: Water

Sample ID: **MRC-SWMW-4I** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	6.6		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 16:56	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:56	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 16:56	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:56	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 16:56	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 16:56	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 16:56	TMP	A
Freon 113	0.40J	J	ug/L	1.0	0.26	SW846 8260B		4/11/18 16:56	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 16:56	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 16:56	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 16:56	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 16:56	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 16:56	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 16:56	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 16:56	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 16:56	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 16:56	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 16:56	TMP	A
Trichloroethene	6.5		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 16:56	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 16:56	TMP	A
Vinyl Chloride	13.2		ug/L	1.0	0.30	SW846 8260B		4/11/18 16:56	TMP	A
cis-1,2-Dichloroethene	94.5		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:56	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:56	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 16:56	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 16:56	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 16:56	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 16:56	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 16:56	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 16:56	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 16:56	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 16:56	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 16:56	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596013** Date Collected: 4/5/2018 16:25 Matrix: Water

Sample ID: **MRC-SWMW-4I** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 16:56	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 16:56	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/11/18 16:56	TMP	A
4-Bromofluorobenzene (S)	99.3		%	79 - 114		SW846 8260B			4/11/18 16:56	TMP	A
Dibromofluoromethane (S)	95.5		%	78 - 116		SW846 8260B			4/11/18 16:56	TMP	A
Toluene-d8 (S)	95.6		%	76 - 127		SW846 8260B			4/11/18 16:56	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596014** Date Collected: 4/5/2018 09:55 Matrix: Water

Sample ID: **MRC-MW70A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 17:18	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 17:18	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 17:18	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 17:18	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 17:18	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 17:18	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 17:18	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 17:18	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 17:18	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 17:18	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 17:18	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 17:18	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:18	TMP	A
1,2-Dichloroethene, Total	0.69J	J	ug/L	2.0	0.45	SW846 8260B		4/11/18 17:18	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 17:18	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 17:18	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 17:18	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 17:18	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 17:18	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:18	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 17:18	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 17:18	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 17:18	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 17:18	TMP	A
Acetone	6.3J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 17:18	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 17:18	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:18	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:18	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 17:18	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 17:18	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 17:18	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 17:18	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:18	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 17:18	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 17:18	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596014** Date Collected: 4/5/2018 09:55 Matrix: Water

Sample ID: **MRC-MW70A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 17:18	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:18	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 17:18	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:18	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 17:18	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 17:18	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 17:18	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 17:18	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 17:18	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 17:18	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 17:18	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 17:18	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 17:18	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 17:18	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 17:18	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 17:18	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 17:18	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 17:18	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 17:18	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 17:18	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 17:18	TMP	A
cis-1,2-Dichloroethene	0.69J	J	ug/L	1.0	0.32	SW846 8260B		4/11/18 17:18	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:18	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 17:18	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 17:18	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 17:18	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:18	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:18	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:18	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 17:18	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 17:18	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 17:18	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596014** Date Collected: 4/5/2018 09:55 Matrix: Water

Sample ID: **MRC-MW70A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 17:18	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 17:18	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/11/18 17:18	TMP	A
4-Bromofluorobenzene (S)	97.8		%	79 - 114		SW846 8260B			4/11/18 17:18	TMP	A
Dibromofluoromethane (S)	97.7		%	78 - 116		SW846 8260B			4/11/18 17:18	TMP	A
Toluene-d8 (S)	95.7		%	76 - 127		SW846 8260B			4/11/18 17:18	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596015** Date Collected: 4/5/2018 16:15 Matrix: Water

Sample ID: **MRC-MW53A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 17:41	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 17:41	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 17:41	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 17:41	TMP	A
1,1-Dichloroethene	0.74J	J	ug/L	1.0	0.29	SW846 8260B		4/11/18 17:41	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 17:41	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 17:41	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 17:41	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 17:41	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 17:41	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 17:41	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 17:41	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:41	TMP	A
1,2-Dichloroethene, Total	0.50J	J	ug/L	2.0	0.45	SW846 8260B		4/11/18 17:41	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 17:41	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 17:41	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 17:41	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 17:41	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 17:41	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:41	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 17:41	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 17:41	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 17:41	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 17:41	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 17:41	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 17:41	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:41	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:41	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 17:41	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 17:41	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 17:41	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 17:41	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:41	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 17:41	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 17:41	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596015** Date Collected: 4/5/2018 16:15 Matrix: Water

Sample ID: **MRC-MW53A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 17:41	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:41	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 17:41	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:41	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 17:41	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 17:41	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 17:41	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 17:41	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 17:41	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 17:41	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 17:41	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 17:41	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 17:41	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 17:41	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 17:41	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 17:41	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 17:41	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 17:41	TMP	A
Trichloroethene	11.4		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 17:41	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 17:41	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 17:41	TMP	A
cis-1,2-Dichloroethene	0.50J	J	ug/L	1.0	0.32	SW846 8260B		4/11/18 17:41	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:41	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 17:41	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 17:41	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 17:41	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 17:41	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 17:41	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 17:41	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 17:41	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 17:41	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 17:41	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596015** Date Collected: 4/5/2018 16:15 Matrix: Water

Sample ID: **MRC-MW53A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 17:41	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 17:41	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/11/18 17:41	TMP	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/11/18 17:41	TMP	A
Dibromofluoromethane (S)	95.6		%	78 - 116		SW846 8260B			4/11/18 17:41	TMP	A
Toluene-d8 (S)	94.4		%	76 - 127		SW846 8260B			4/11/18 17:41	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596016** Date Collected: 4/5/2018 14:15 Matrix: Water

Sample ID: **MRC-SWMW-4S** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 18:04	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 18:04	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 18:04	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
1,1-Dichloroethane	2.1		ug/L	1.0	0.28	SW846 8260B		4/11/18 18:04	TMP	A
1,1-Dichloroethene	1.9		ug/L	1.0	0.29	SW846 8260B		4/11/18 18:04	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 18:04	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 18:04	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 18:04	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:04	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 18:04	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 18:04	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 18:04	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:04	TMP	A
1,2-Dichloroethene, Total	6.1		ug/L	2.0	0.45	SW846 8260B		4/11/18 18:04	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:04	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:04	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:04	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 18:04	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:04	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:04	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 18:04	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 18:04	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 18:04	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 18:04	TMP	A
Acetone	5.9J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 18:04	TMP	A
Benzene	0.35J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 18:04	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:04	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:04	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:04	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 18:04	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 18:04	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 18:04	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:04	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 18:04	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 18:04	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596016** Date Collected: 4/5/2018 14:15 Matrix: Water

Sample ID: **MRC-SWMW-4S** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 18:04	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:04	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 18:04	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:04	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:04	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 18:04	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 18:04	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 18:04	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 18:04	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 18:04	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 18:04	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 18:04	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 18:04	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 18:04	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:04	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 18:04	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 18:04	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 18:04	TMP	A
Trichloroethene	4.2		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:04	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 18:04	TMP	A
Vinyl Chloride	1.2		ug/L	1.0	0.30	SW846 8260B		4/11/18 18:04	TMP	A
cis-1,2-Dichloroethene	5.4		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:04	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:04	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 18:04	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 18:04	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 18:04	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:04	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:04	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:04	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 18:04	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 18:04	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 18:04	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596016** Date Collected: 4/5/2018 14:15 Matrix: Water

Sample ID: **MRC-SWMW-4S** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.75J	J	ug/L	1.0	0.26	SW846 8260B			4/11/18 18:04	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 18:04	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	107		%	62 - 133		SW846 8260B			4/11/18 18:04	TMP	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/11/18 18:04	TMP	A
Dibromofluoromethane (S)	97.4		%	78 - 116		SW846 8260B			4/11/18 18:04	TMP	A
Toluene-d8 (S)	94.3		%	76 - 127		SW846 8260B			4/11/18 18:04	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596017** Date Collected: 4/5/2018 12:15 Matrix: Water

Sample ID: **MRC-MW76A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 18:27	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 18:27	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 18:27	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 18:27	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 18:27	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 18:27	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 18:27	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 18:27	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:27	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 18:27	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 18:27	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 18:27	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:27	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 18:27	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:27	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:27	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:27	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 18:27	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:27	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:27	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 18:27	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 18:27	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 18:27	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 18:27	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 18:27	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 18:27	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:27	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:27	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:27	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 18:27	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 18:27	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 18:27	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:27	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 18:27	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 18:27	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596017** Date Collected: 4/5/2018 12:15 Matrix: Water

Sample ID: **MRC-MW76A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 18:27	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:27	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 18:27	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:27	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:27	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 18:27	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 18:27	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 18:27	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 18:27	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 18:27	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 18:27	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 18:27	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 18:27	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 18:27	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:27	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 18:27	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 18:27	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 18:27	TMP	A
Trichloroethene	0.72J	J	ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:27	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 18:27	TMP	A
Vinyl Chloride	0.56J	J	ug/L	1.0	0.30	SW846 8260B		4/11/18 18:27	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:27	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:27	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 18:27	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 18:27	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 18:27	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:27	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:27	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:27	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 18:27	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 18:27	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 18:27	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596017** Date Collected: 4/5/2018 12:15 Matrix: Water

Sample ID: **MRC-MW76A** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 18:27	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 18:27	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/11/18 18:27	TMP	A
4-Bromofluorobenzene (S)	97.8		%	79 - 114		SW846 8260B			4/11/18 18:27	TMP	A
Dibromofluoromethane (S)	97.4		%	78 - 116		SW846 8260B			4/11/18 18:27	TMP	A
Toluene-d8 (S)	91.9		%	76 - 127		SW846 8260B			4/11/18 18:27	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596018** Date Collected: 4/5/2018 17:50 Matrix: Water

Sample ID: **MRC-MW53B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 18:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 18:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 18:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 18:50	TMP	A
1,1-Dichloroethene	0.83J	J	ug/L	1.0	0.29	SW846 8260B		4/11/18 18:50	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 18:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 18:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 18:50	TMP	A
1,2,4-Trimethylbenzene	1.6		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 18:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 18:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 18:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:50	TMP	A
1,2-Dichloroethene, Total	14.2		ug/L	2.0	0.45	SW846 8260B		4/11/18 18:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:50	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:50	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 18:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:50	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:50	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 18:50	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 18:50	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 18:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 18:50	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 18:50	TMP	A
Benzene	302		ug/L	5.0	1.2	SW846 8260B		4/12/18 15:17	TMP	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 18:50	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 18:50	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 18:50	TMP	A
Carbon Disulfide	0.39J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 18:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 18:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 18:50	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596018** Date Collected: 4/5/2018 17:50 Matrix: Water

Sample ID: **MRC-MW53B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 18:50	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:50	TMP	A
Cyclohexane	2.8		ug/L	1.0	0.29	SW846 8260B		4/11/18 18:50	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 18:50	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 18:50	TMP	A
Ethylbenzene	5.0		ug/L	1.0	0.34	SW846 8260B		4/11/18 18:50	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 18:50	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 18:50	TMP	A
Isopropylbenzene	1.4		ug/L	1.0	0.22	SW846 8260B		4/11/18 18:50	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 18:50	TMP	A
Methyl cyclohexane	2.0		ug/L	1.0	0.30	SW846 8260B		4/11/18 18:50	TMP	A
Methyl t-Butyl Ether	22.1		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 18:50	TMP	A
Naphthalene	1.0J	J	ug/L	2.0	0.34	SW846 8260B		4/11/18 18:50	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 18:50	TMP	A
Toluene	0.57J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 18:50	TMP	A
Total Xylenes	31.7		ug/L	3.0	0.66	SW846 8260B		4/11/18 18:50	TMP	A
Trichloroethene	36.5		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 18:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 18:50	TMP	A
Vinyl Chloride	0.39J	J	ug/L	1.0	0.30	SW846 8260B		4/11/18 18:50	TMP	A
cis-1,2-Dichloroethene	13.3		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:50	TMP	A
mp-Xylene	13.7		ug/L	2.0	0.52	SW846 8260B		4/11/18 18:50	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 18:50	TMP	A
n-Propylbenzene	0.89J	J	ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 18:50	TMP	A
o-Xylene	18.0		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 18:50	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 18:50	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 18:50	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 18:50	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 18:50	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 18:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596018** Date Collected: 4/5/2018 17:50 Matrix: Water

Sample ID: **MRC-MW53B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.89J	J	ug/L	1.0	0.26	SW846 8260B		4/11/18 18:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 18:50	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B		4/11/18 18:50	TMP	A
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B		4/12/18 15:17	TMP	B
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B		4/12/18 15:17	TMP	B
4-Bromofluorobenzene (S)	98.1		%	79 - 114		SW846 8260B		4/11/18 18:50	TMP	A
Dibromofluoromethane (S)	95.4		%	78 - 116		SW846 8260B		4/12/18 15:17	TMP	B
Dibromofluoromethane (S)	92.2		%	78 - 116		SW846 8260B		4/11/18 18:50	TMP	A
Toluene-d8 (S)	95.7		%	76 - 127		SW846 8260B		4/12/18 15:17	TMP	B
Toluene-d8 (S)	93.5		%	76 - 127		SW846 8260B		4/11/18 18:50	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596019** Date Collected: 4/5/2018 10:25 Matrix: Water

Sample ID: **MRC-MW76B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 23:25	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 23:25	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 23:25	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
1,1-Dichloroethane	2.1		ug/L	1.0	0.28	SW846 8260B		4/11/18 23:25	CJG	A
1,1-Dichloroethene	1.3		ug/L	1.0	0.29	SW846 8260B		4/11/18 23:25	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 23:25	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 23:25	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 23:25	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:25	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 23:25	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 23:25	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 23:25	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:25	CJG	A
1,2-Dichloroethene, Total	1.6J	J	ug/L	2.0	0.45	SW846 8260B		4/11/18 23:25	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:25	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:25	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:25	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 23:25	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:25	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:25	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 23:25	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 23:25	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 23:25	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 23:25	CJG	A
Acetone	4.8J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 23:25	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:25	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:25	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:25	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:25	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 23:25	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 23:25	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:25	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:25	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 23:25	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 23:25	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596019** Date Collected: 4/5/2018 10:25 Matrix: Water

Sample ID: **MRC-MW76B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 23:25	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:25	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 23:25	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:25	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:25	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 23:25	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 23:25	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 23:25	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 23:25	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 23:25	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 23:25	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 23:25	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 23:25	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 23:25	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:25	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 23:25	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:25	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 23:25	CJG	A
Trichloroethene	10.4		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:25	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 23:25	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 23:25	CJG	A
cis-1,2-Dichloroethene	1.6		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:25	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:25	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 23:25	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 23:25	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 23:25	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:25	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:25	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:25	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 23:25	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 23:25	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 23:25	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596019** Date Collected: 4/5/2018 10:25 Matrix: Water

Sample ID: **MRC-MW76B** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 23:25	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 23:25	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/11/18 23:25	CJG	A
4-Bromofluorobenzene (S)	99.1		%	79 - 114		SW846 8260B			4/11/18 23:25	CJG	A
Dibromofluoromethane (S)	94.9		%	78 - 116		SW846 8260B			4/11/18 23:25	CJG	A
Toluene-d8 (S)	95.4		%	76 - 127		SW846 8260B			4/11/18 23:25	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596020** Date Collected: 4/6/2018 22:10 Matrix: Water

Sample ID: **Trip Blank 5** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 22:39	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 22:39	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 22:39	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 22:39	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 22:39	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 22:39	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 22:39	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 22:39	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 22:39	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 22:39	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 22:39	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 22:39	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 22:39	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 22:39	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 22:39	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 22:39	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 22:39	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 22:39	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 22:39	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 22:39	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 22:39	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 22:39	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 22:39	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 22:39	CJG	A
Acetone	4.7J	J	ug/L	10.0	3.1	SW846 8260B		4/11/18 22:39	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 22:39	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 22:39	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 22:39	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 22:39	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 22:39	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 22:39	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 22:39	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 22:39	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 22:39	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 22:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596020** Date Collected: 4/6/2018 22:10 Matrix: Water

Sample ID: **Trip Blank 5** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 22:39	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 22:39	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 22:39	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 22:39	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 22:39	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 22:39	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 22:39	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 22:39	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 22:39	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 22:39	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 22:39	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 22:39	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 22:39	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 22:39	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 22:39	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 22:39	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 22:39	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 22:39	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 22:39	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 22:39	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 22:39	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 22:39	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 22:39	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 22:39	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 22:39	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 22:39	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 22:39	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 22:39	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 22:39	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 22:39	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 22:39	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 22:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307596020** Date Collected: 4/6/2018 22:10 Matrix: Water

Sample ID: **Trip Blank 5** Date Received: 4/6/2018 22:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 22:39	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 22:39	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/11/18 22:39	CJG	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/11/18 22:39	CJG	A
Dibromofluoromethane (S)	95		%	78 - 116		SW846 8260B			4/11/18 22:39	CJG	A
Toluene-d8 (S)	95.4		%	76 - 127		SW846 8260B			4/11/18 22:39	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2307596003	1	MRC-MW60B	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2307596003	2	MRC-MW60B	EPA 300.0	Nitrite-N
Analyte was analyzed past the 48 hour holding time.				
2307596003	3	MRC-MW60B	EPA 300.0	Nitrate-N
Analyte was analyzed past the 48 hour holding time.				
2307596003	4	MRC-MW60B	S4500PE-99	Orthophosphate
Analyte was analyzed past the 48 hour holding time.				

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51720 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2307596001, 2307596002, 2307596003, 2307596009, 2307596012

METHOD BLANK: 2721362

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	67.9	%	29 - 112
Fluoranthene-d10 (S)	75.6	%	45 - 130

LABORATORY CONTROL SAMPLE: 2721363

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	46.6	ug/L	1	0.47	22 - 75
2-Methylnapthalene-d10 (S)	75.4	%			29 - 112
Fluoranthene-d10 (S)	85.5	%			45 - 130

MATRIX SPIKE SAMPLE: 2721364 ORIGINAL: 2307128003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.49256	ug/L	.97	.67281	18.6*	22 - 75
2-Methylnapthalene-d10 (S)	61.4	%				29 - 112
Fluoranthene-d10 (S)	77.5	%				45 - 130

SAMPLE DUPLICATE: 2721365 ORIGINAL: 2307128005

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	1.60876	ug/L	1.48438	8.04	

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71106 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2307596003

METHOD BLANK: 2720131

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	ND	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2720132

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	97.7	mg/L	1.1	1.1	80 - 120
Iron, Total	99.3	mg/L	1.1	1.1	80 - 120
Magnesium, Total	98.7	mg/L	1.1	1.1	80 - 120
Manganese, Total	99.2	mg/L	.11	0.11	80 - 120
Potassium, Total	96.1	mg/L	22.2	21.4	80 - 120
Sodium, Total	100	mg/L	22.2	22.3	80 - 120

MATRIX SPIKE: 2720133 DUPLICATE: 2720134 ORIGINAL: 2307294004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Calcium, Total	62.86604	mg/L	1.1	63.85492	64.03269	NC	NC	75 - 125	.28	20
Iron, Total	.06522	mg/L	1.1	1.13554	1.14332	96.3	97	75 - 125	.68	20
Magnesium, Total	16.75539	mg/L	1.1	17.84427	17.85538	NC	NC	75 - 125	.06	20
Manganese, Total	.00389	mg/L	.11	.10922	.10911	94.8	94.7	75 - 125	.1	20
Potassium, Total	1.77665	mg/L	22.2	22.49978	22.54422	93.3	93.5	75 - 125	.2	20
Sodium, Total	14.47763	mg/L	22.2	36.25519	36.24408	98	97.9	75 - 125	.03	20

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71124 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2307596003, 2307596011

METHOD BLANK: 2720879

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	ND	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2720880

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	101	mg/L	.22	0.22	80 - 120
Arsenic, Total	94.6	mg/L	.22	0.21	80 - 120
Beryllium, Total	91.8	mg/L	.22	0.20	80 - 120
Cadmium, Total	95.9	mg/L	.22	0.21	80 - 120
Chromium, Total	98.6	mg/L	.22	0.22	80 - 120
Cobalt, Total	99.2	mg/L	.22	0.22	80 - 120
Copper, Total	98.2	mg/L	.22	0.22	80 - 120
Lead, Total	102	mg/L	.22	0.23	80 - 120
Nickel, Total	97.8	mg/L	.22	0.22	80 - 120
Selenium, Total	90.3	mg/L	.22	0.20	80 - 120
Silver, Total	94.6	mg/L	.11	0.11	80 - 120
Thallium, Total	100	mg/L	.22	0.22	80 - 120
Zinc, Total	85.5	mg/L	.22	0.19	80 - 120

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QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE: 2720881 DUPLICATE: 2720882 ORIGINAL: 2307588001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Antimony, Total	0	mg/L	.22	.21805	.2226	98.1	100	75 - 125	2.07	20
Arsenic, Total	.00009	mg/L	.22	.20362	.21425	91.6	96.4	75 - 125	5.08	20
Beryllium, Total	.00001	mg/L	.22	.1988	.2082	89.5	93.7	75 - 125	4.62	20
Cadmium, Total	.00006	mg/L	.22	.20772	.21233	93.4	95.5	75 - 125	2.2	20
Chromium, Total	.00105	mg/L	.22	.2096	.21964	93.8	98.4	75 - 125	4.68	20
Cobalt, Total	.00046	mg/L	.22	.20639	.21334	92.7	95.8	75 - 125	3.31	20
Copper, Total	.00325	mg/L	.22	.19934	.20931	88.2	92.7	75 - 125	4.88	20
Lead, Total	.00014	mg/L	.22	.22174	.23069	99.7	104	75 - 125	3.96	20
Nickel, Total	.00141	mg/L	.22	.2012	.20911	89.9	93.5	75 - 125	3.86	20
Selenium, Total	.00004	mg/L	.22	.19273	.20286	86.7	91.3	75 - 125	5.12	20
Silver, Total	.00001	mg/L	.11	.04545	.10494	40.9*	94.4	75 - 125	79.1	20
Thallium, Total	.00005	mg/L	.22	.22072	.23033	99.3	104	75 - 125	4.26	20
Zinc, Total	.00381	mg/L	.22	.18092	.18478	79.7	81.4	75 - 125	2.11	20

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QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71245 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2307596003, 2307596011

METHOD BLANK: 2724702

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2724703

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	101	mg/L	.002	0.0020	85 - 115

MATRIX SPIKE: 2724704 DUPLICATE: 2724705 ORIGINAL: 2308971002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00486	.00489	97.2	97.8	70 - 130	.62	20

MATRIX SPIKE: 2724706 DUPLICATE: 2724707 ORIGINAL: 2308259001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00453	.00464	90.6	92.8	70 - 130	2.4	20

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: SVGC/48838 **Analysis Method:** RSK 175

QC Batch Method: RSK 175

Associated Lab Samples: 2307596003

METHOD BLANK: 2723247

Parameter	Blank Result	Units	Reporting Limit
n-Butane	ND	ug/L	4.3
Ethane	ND	ug/L	3.3
Ethene	ND	ug/L	2.4
Isobutane	ND	ug/L	4.6
Methane	ND	ug/L	1.5
Propane	ND	ug/L	3.2

SAMPLE DUPLICATE: 2723248 ORIGINAL: 2307210001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	2.08	ug/L	2.16	3.77	20
Propane	0	ug/L	0	NC	30

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46486 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307596001, 2307596002, 2307596003, 2307596004, 2307596005, 2307596007, 2307596008, 2307596009, 2307596010, 2307596011, 2307596012, 2307596013, 2307596014, 2307596015, 2307596016, 2307596017, 2307596018

METHOD BLANK: 2720754

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	104	%	62 - 133
4-Bromofluorobenzene (S)	99.6	%	79 - 114
Dibromofluoromethane (S)	96	%	78 - 116
Toluene-d8 (S)	96.5	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2720755

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	101	ug/L	20	20.2	78 - 121
1,1,1-Trichloroethane	93.5	ug/L	20	18.7	66 - 130
1,1,2,2-Tetrachloroethane	86.9	ug/L	20	17.4	74 - 135
1,1,2-Trichloroethane	92.2	ug/L	20	18.4	82 - 126
1,1-Dichloroethane	98.1	ug/L	20	19.6	78 - 124
1,1-Dichloroethene	100	ug/L	20	20.1	63 - 128
1,2,3-Trichlorobenzene	74.6	ug/L	20	14.9	61 - 126
1,2,3-Trichloropropane	88.9	ug/L	20	17.8	75 - 132
1,2,4-Trichlorobenzene	89.9	ug/L	20	18.0	67 - 123
1,2,4-Trimethylbenzene	93.7	ug/L	20	18.7	76 - 125
1,2-Dibromo-3-chloropropane	80.5	ug/L	20	16.1	59 - 133
1,2-Dibromoethane	92.3	ug/L	20	18.5	80 - 124
1,2-Dichlorobenzene	92.9	ug/L	20	18.6	82 - 118
1,2-Dichloroethane	92	ug/L	20	18.4	70 - 133
1,2-Dichloroethene, Total	98.2	ug/L	40	39.3	78 - 125
1,2-Dichloropropane	98.7	ug/L	20	19.7	81 - 127
1,3-Dichlorobenzene	96.3	ug/L	20	19.3	81 - 118
1,3-Dichloropropane	96.2	ug/L	20	19.2	82 - 126
1,3-Dichloropropene, Total	95	ug/L	40	38.0	80 - 123
1,4-Dichlorobenzene	93.9	ug/L	20	18.8	81 - 116
2,2-Dichloropropane	91.6	ug/L	20	18.3	64 - 129
2-Butanone	85.9	ug/L	100	85.9	50 - 152
2-Chloroethylvinyl ether	76.4	ug/L	20	15.3	1 - 150
2-Hexanone	74.3	ug/L	100	74.3	65 - 154
4-Methyl-2-Pentanone(MIBK)	77.1	ug/L	100	77.1	71 - 146
Acetone	87.8	ug/L	100	87.8	40 - 151
Benzene	96.9	ug/L	20	19.4	80 - 124
Bromobenzene	99.3	ug/L	20	19.9	81 - 119
Bromochloromethane	98.8	ug/L	20	19.8	73 - 117
Bromodichloromethane	91.7	ug/L	20	18.3	79 - 126
Bromoform	85.8	ug/L	20	17.2	70 - 123
Bromomethane	45.5	ug/L	20	9.1	45 - 148
Carbon Disulfide	108	ug/L	20	21.6	57 - 131
Carbon Tetrachloride	96	ug/L	20	19.2	62 - 132
Chlorobenzene	91.4	ug/L	20	18.3	85 - 117
Chlorodibromomethane	90.5	ug/L	20	18.1	77 - 122
Chloroethane	65.3	ug/L	20	13.1	51 - 142
Chloroform	95.9	ug/L	20	19.2	78 - 122
Chloromethane	79	ug/L	20	15.8	38 - 156
Cyclohexane	111	ug/L	20	22.2	66 - 130
Dibromomethane	87.9	ug/L	20	17.6	81 - 125

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	69.2	ug/L	20	13.8	17 - 166
Diisopropyl ether	103	ug/L	20	20.5	74 - 131
Ethyl tert-butyl ether	88	ug/L	20	17.6	75 - 123
Ethylbenzene	99.5	ug/L	20	19.9	80 - 124
Freon 113	109	ug/L	20	21.8	50 - 130
Hexachlorobutadiene	103	ug/L	20	20.5	55 - 128
Isopropylbenzene	94	ug/L	20	18.8	73 - 129
Methyl acetate	82.4	ug/L	20	16.5	70 - 130
Methyl cyclohexane	129	ug/L	20	25.7	70 - 130
Methyl t-Butyl Ether	95.1	ug/L	20	19.0	69 - 115
Methylene Chloride	99	ug/L	20	19.8	76 - 121
Naphthalene	63.2	ug/L	20	12.6	56 - 134
Styrene	92.3	ug/L	20	18.5	79 - 123
Tetrachloroethene	93	ug/L	20	18.6	72 - 124
Toluene	99.9	ug/L	20	20.0	80 - 125
Total Xylenes	103	ug/L	60	61.5	79 - 125
Trichloroethene	90.6	ug/L	20	18.1	77 - 124
Trichlorofluoromethane	72.6	ug/L	20	14.5	38 - 123
Vinyl Acetate	79.1	ug/L	20	15.8	58 - 136
Vinyl Chloride	65	ug/L	20	13.0	27 - 138
cis-1,2-Dichloroethene	96.5	ug/L	20	19.3	78 - 125
cis-1,3-Dichloropropene	95.9	ug/L	20	19.2	81 - 121
mp-Xylene	103	ug/L	40	41.1	79 - 125
n-Butylbenzene	86.3	ug/L	20	17.3	71 - 130
n-Propylbenzene	92.5	ug/L	20	18.5	74 - 122
o-Chlorotoluene	93.1	ug/L	20	18.6	78 - 126
o-Xylene	102	ug/L	20	20.4	79 - 124
p-Chlorotoluene	105	ug/L	20	21.0	78 - 125
p-Isopropyltoluene	88.9	ug/L	20	17.8	72 - 123
sec-Butylbenzene	95.5	ug/L	20	19.1	72 - 127
tert-Amyl methyl ether	80.6	ug/L	20	16.1	75 - 121
tert-Butyl Alcohol	76.4	ug/L	100	76.4	17 - 168
tert-Butylbenzene	88.8	ug/L	20	17.8	72 - 124
trans-1,2-Dichloroethene	100	ug/L	20	20.0	71 - 122
trans-1,3-Dichloropropene	94.1	ug/L	20	18.8	78 - 126
1,2-Dichloroethane-d4 (S)	99.9	%			62 - 133
4-Bromofluorobenzene (S)	96.7	%			79 - 114
Dibromofluoromethane (S)	91.8	%			78 - 116
Toluene-d8 (S)	93.4	%			76 - 127

MATRIX SPIKE: 2721047 DUPLICATE: 2721048 ORIGINAL: 2307749001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

1,2-Dichloroethane-d4 (S)	101	%	101	95.6	62 - 133
4-Bromofluorobenzene (S)	95.1	%	95.1	95.5	79 - 114
Dibromofluoromethane (S)	92.9	%	92.9	92.5	78 - 116
Toluene-d8 (S)	92.4	%	92.4	91.9	76 - 127

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46497 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307596019, 2307596020

METHOD BLANK: 2721323

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Chloroform	0.70J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	102	%	62 - 133
4-Bromofluorobenzene (S)	96.9	%	79 - 114
Dibromofluoromethane (S)	92.5	%	78 - 116
Toluene-d8 (S)	94.1	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2721324

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	107	ug/L	20	21.4	78 - 121
1,1,1-Trichloroethane	103	ug/L	20	20.6	66 - 130
1,1,2,2-Tetrachloroethane	90.9	ug/L	20	18.2	74 - 135
1,1,2-Trichloroethane	94.8	ug/L	20	19.0	82 - 126
1,1-Dichloroethane	106	ug/L	20	21.3	78 - 124
1,1-Dichloroethene	110	ug/L	20	21.9	63 - 128
1,2,3-Trichlorobenzene	79.6	ug/L	20	15.9	61 - 126
1,2,3-Trichloropropane	95.8	ug/L	20	19.2	75 - 132
1,2,4-Trichlorobenzene	95.3	ug/L	20	19.1	67 - 123
1,2,4-Trimethylbenzene	100	ug/L	20	20.1	76 - 125
1,2-Dibromo-3-chloropropane	86.5	ug/L	20	17.3	59 - 133
1,2-Dibromoethane	96.8	ug/L	20	19.4	80 - 124
1,2-Dichlorobenzene	98.2	ug/L	20	19.6	82 - 118
1,2-Dichloroethane	99.2	ug/L	20	19.8	70 - 133
1,2-Dichloroethene, Total	106	ug/L	40	42.2	78 - 125
1,2-Dichloropropane	106	ug/L	20	21.1	81 - 127
1,3-Dichlorobenzene	103	ug/L	20	20.5	81 - 118
1,3-Dichloropropane	101	ug/L	20	20.3	82 - 126
1,3-Dichloropropene, Total	101	ug/L	40	40.5	80 - 123
1,4-Dichlorobenzene	98.4	ug/L	20	19.7	81 - 116
2,2-Dichloropropane	107	ug/L	20	21.4	64 - 129
2-Butanone	95	ug/L	100	95.0	50 - 152
2-Chloroethylvinyl ether	81.4	ug/L	20	16.3	1 - 150
2-Hexanone	80.7	ug/L	100	80.7	65 - 154
4-Methyl-2-Pentanone(MIBK)	82.3	ug/L	100	82.3	71 - 146
Acetone	111	ug/L	100	111	40 - 151
Benzene	105	ug/L	20	21.0	80 - 124
Bromobenzene	106	ug/L	20	21.2	81 - 119
Bromochloromethane	107	ug/L	20	21.4	73 - 117
Bromodichloromethane	98.5	ug/L	20	19.7	79 - 126
Bromoform	90.6	ug/L	20	18.1	70 - 123
Bromomethane	47.3	ug/L	20	9.5	45 - 148
Carbon Disulfide	119	ug/L	20	23.7	57 - 131
Carbon Tetrachloride	106	ug/L	20	21.2	62 - 132
Chlorobenzene	97.5	ug/L	20	19.5	85 - 117
Chlorodibromomethane	95.2	ug/L	20	19.0	77 - 122
Chloroethane	64.2	ug/L	20	12.8	51 - 142
Chloroform	103	ug/L	20	20.6	78 - 122
Chloromethane	82.1	ug/L	20	16.4	38 - 156
Cyclohexane	123	ug/L	20	24.6	66 - 130
Dibromomethane	93.3	ug/L	20	18.7	81 - 125

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	72.4	ug/L	20	14.5	17 - 166
Diisopropyl ether	109	ug/L	20	21.8	74 - 131
Ethyl tert-butyl ether	94.6	ug/L	20	18.9	75 - 123
Ethylbenzene	107	ug/L	20	21.4	80 - 124
Freon 113	120	ug/L	20	23.9	50 - 130
Hexachlorobutadiene	110	ug/L	20	22.1	55 - 128
Isopropylbenzene	101	ug/L	20	20.3	73 - 129
Methyl acetate	88.3	ug/L	20	17.7	70 - 130
Methyl cyclohexane	140*	ug/L	20	27.9	70 - 130
Methyl t-Butyl Ether	102	ug/L	20	20.4	69 - 115
Methylene Chloride	106	ug/L	20	21.2	76 - 121
Naphthalene	66.8	ug/L	20	13.4	56 - 134
Styrene	98.6	ug/L	20	19.7	79 - 123
Tetrachloroethene	99.3	ug/L	20	19.9	72 - 124
Toluene	106	ug/L	20	21.2	80 - 125
Total Xylenes	109	ug/L	60	65.4	79 - 125
Trichloroethene	100	ug/L	20	20.0	77 - 124
Trichlorofluoromethane	78.1	ug/L	20	15.6	38 - 123
Vinyl Acetate	88.5	ug/L	20	17.7	58 - 136
Vinyl Chloride	68	ug/L	20	13.6	27 - 138
cis-1,2-Dichloroethene	103	ug/L	20	20.6	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.2	81 - 121
mp-Xylene	109	ug/L	40	43.6	79 - 125
n-Butylbenzene	91.9	ug/L	20	18.4	71 - 130
n-Propylbenzene	99.7	ug/L	20	19.9	74 - 122
o-Chlorotoluene	98.6	ug/L	20	19.7	78 - 126
o-Xylene	109	ug/L	20	21.8	79 - 124
p-Chlorotoluene	112	ug/L	20	22.4	78 - 125
p-Isopropyltoluene	96.4	ug/L	20	19.3	72 - 123
sec-Butylbenzene	103	ug/L	20	20.6	72 - 127
tert-Amyl methyl ether	92.4	ug/L	20	18.5	75 - 121
tert-Butyl Alcohol	77	ug/L	100	77.0	17 - 168
tert-Butylbenzene	96.7	ug/L	20	19.3	72 - 124
trans-1,2-Dichloroethene	108	ug/L	20	21.6	71 - 122
trans-1,3-Dichloropropene	101	ug/L	20	20.2	78 - 126
1,2-Dichloroethane-d4 (S)	98.6	%			62 - 133
4-Bromofluorobenzene (S)	96.6	%			79 - 114
Dibromofluoromethane (S)	91.7	%			78 - 116
Toluene-d8 (S)	92.1	%			76 - 127

MATRIX SPIKE: 2721513 DUPLICATE: 2721514 ORIGINAL: 2307611002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	21.6128	20.4205	108	102	78 - 121	5.67	16
1,1,1-Trichloroethane	0	ug/L	20	21.4781	20.5702	107	103	66 - 130	4.32	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	18.0126	17.4264	90.1	87.1	74 - 135	3.31	16
1,1,2-Trichloroethane	0	ug/L	20	18.8408	18.0642	94.2	90.3	82 - 126	4.21	15
1,1-Dichloroethane	0	ug/L	20	21.9019	20.7947	110	104	78 - 124	5.19	15
1,1-Dichloroethene	0	ug/L	20	22.9554	21.4818	115	107	63 - 128	6.63	21
1,2,3-Trichlorobenzene	0	ug/L	20	15.5263	16.0914	77.6	80.5	61 - 126	3.57	36
1,2,3-Trichloropropane	0	ug/L	20	18.0032	17.5971	90	88	75 - 132	2.28	19
1,2,4-Trichlorobenzene	0	ug/L	20	18.467	19.2426	92.3	96.2	67 - 123	4.11	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.6919	19.4807	98.5	97.4	76 - 125	1.08	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	16.5466	16.3161	82.7	81.6	59 - 133	1.4	26
1,2-Dibromoethane	0	ug/L	20	19.2187	18.4129	96.1	92.1	80 - 124	4.28	19
1,2-Dichlorobenzene	0	ug/L	20	19.0672	19.0104	95.3	95.1	82 - 118	.3	15
1,2-Dichloroethane	.42804	ug/L	20	20.0568	19.2172	98.1	93.9	70 - 133	4.28	19
1,2-Dichloroethene, Total	0	ug/L	40	43.7885	42.0177	109	105	78 - 125	4.13	40
1,2-Dichloropropane	0	ug/L	20	20.784	20.411	104	102	81 - 127	1.81	15
1,3-Dichlorobenzene	0	ug/L	20	20.2572	19.803	101	99	81 - 118	2.27	16
1,3-Dichloropropane	0	ug/L	20	19.8741	19.2969	99.4	96.5	82 - 126	2.95	15
1,3-Dichloropropene, Total	0	ug/L	40	39.6574	37.8512	99.1	94.6	80 - 123	4.66	16
1,4-Dichlorobenzene	0	ug/L	20	19.4641	19.0594	97.3	95.3	81 - 116	2.1	15
2,2-Dichloropropane	0	ug/L	20	20.1881	18.9801	101	94.9	64 - 129	6.17	18
2-Butanone	0	ug/L	100	93.5929	88.917	93.6	88.9	50 - 152	5.12	16
2-Chloroethylvinyl ether	0	ug/L	20	0	.09391	0*	.47*	1 - 150	NC	40
2-Hexanone	0	ug/L	100	77.9373	74.5614	77.9	74.6	65 - 154	4.43	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	81.1417	80.2385	81.1	80.2	71 - 146	1.12	16
Acetone	5.4241	ug/L	100	93.2642	94.0175	87.8	88.6	40 - 151	.8	40
Benzene	0	ug/L	20	21.8707	20.722	109	104	80 - 124	5.39	26
Bromobenzene	0	ug/L	20	20.7482	20.1745	104	101	81 - 119	2.8	17
Bromochloromethane	0	ug/L	20	21.4927	20.1878	107	101	73 - 117	6.26	19
Bromodichloromethane	0	ug/L	20	20.2478	19.3871	101	96.9	79 - 126	4.34	16
Bromoform	0	ug/L	20	17.9864	17.7446	89.9	88.7	70 - 123	1.35	16
Bromomethane	0	ug/L	20	8.5177	7.4896	42.6*	37.4*	45 - 148	12.8	26
Carbon Disulfide	.56065	ug/L	20	26.0904	24.0107	128	117	57 - 131	8.3	28
Carbon Tetrachloride	0	ug/L	20	21.8944	20.6842	109	103	62 - 132	5.68	17
Chlorobenzene	.2028	ug/L	20	19.6949	19.0149	97.5	94.1	85 - 117	3.51	15
Chlorodibromomethane	0	ug/L	20	19.1279	18.2276	95.6	91.1	77 - 122	4.82	15
Chloroethane	0	ug/L	20	14.5384	12.7199	72.7	63.6	51 - 142	13.3	24
Chloroform	0	ug/L	20	20.6224	19.8025	103	99	78 - 122	4.06	16
Chloromethane	0	ug/L	20	17.1339	16.2628	85.7	81.3	38 - 156	5.22	27
Cyclohexane	0	ug/L	20	24.6442	24.1124	123	121	66 - 130	2.18	20
Dibromomethane	0	ug/L	20	18.6535	18.5731	93.3	92.9	81 - 125	.43	16
Dichlorodifluoromethane	0	ug/L	20	14.3966	14.0905	72	70.5	17 - 166	2.15	24
Diisopropyl ether	0	ug/L	20	21.8306	21.4006	109	107	74 - 131	1.99	15
Ethyl tert-butyl ether	0	ug/L	20	18.6478	18.2594	93.2	91.3	75 - 123	2.1	16
Ethylbenzene	0	ug/L	20	21.5074	20.9523	108	105	80 - 124	2.61	19
Freon 113	0	ug/L	20	24.4552	23.2145	122	116	50 - 130	5.21	26

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Hexachlorobutadiene	0	ug/L	20	22.6432	22.3993	113	112	55 - 128	1.08	35
Isopropylbenzene	0	ug/L	20	19.9725	19.887	99.9	99.4	73 - 129	.43	18
Methyl acetate	0	ug/L	20	16.993	16.3111	85	81.6	70 - 130	4.09	18
Methyl cyclohexane	0	ug/L	20	27.618	28.377	138*	142*	70 - 130	2.71	18
Methyl t-Butyl Ether	0	ug/L	20	19.8817	19.605	99.4	98	69 - 115	1.4	20
Methylene Chloride	0	ug/L	20	21.056	20.3406	105	102	76 - 121	3.46	17
Naphthalene	0	ug/L	20	12.6442	12.97	63.2	64.9	56 - 134	2.54	40
Styrene	0	ug/L	20	19.2362	18.7308	96.2	93.7	79 - 123	2.66	16
Tetrachloroethene	0	ug/L	20	19.8027	18.9554	99	94.8	72 - 124	4.37	38
Toluene	0	ug/L	20	21.6452	20.6465	108	103	80 - 125	4.72	20
Total Xylenes	0	ug/L	60	65.4846	63.2653	109	105	79 - 125	3.45	35
Trichloroethene	0	ug/L	20	20.4198	20.1105	102	101	77 - 124	1.53	18
Trichlorofluoromethane	0	ug/L	20	16.7566	15.3421	83.8	76.7	38 - 123	8.81	23
Vinyl Acetate	0	ug/L	20	16.3546	16.0256	81.8	80.1	58 - 136	2.03	17
Vinyl Chloride	0	ug/L	20	14.4273	13.4266	72.1	67.1	27 - 138	7.19	40
cis-1,2-Dichloroethene	0	ug/L	20	21.1425	20.4908	106	102	78 - 125	3.13	21
cis-1,3-Dichloropropene	0	ug/L	20	19.3605	18.6583	96.8	93.3	81 - 121	3.69	16
mp-Xylene	0	ug/L	40	44.0328	42.4883	110	106	79 - 125	3.57	21
n-Butylbenzene	0	ug/L	20	18.0538	18.7821	90.3	93.9	71 - 130	3.95	20
n-Propylbenzene	0	ug/L	20	19.6907	19.5087	98.5	97.5	74 - 122	.93	20
o-Chlorotoluene	0	ug/L	20	19.6342	19.3143	98.2	96.6	78 - 126	1.64	17
o-Xylene	0	ug/L	20	21.4518	20.777	107	104	79 - 124	3.2	19
p-Chlorotoluene	0	ug/L	20	22.1361	21.5458	111	108	78 - 125	2.7	16
p-Isopropyltoluene	0	ug/L	20	18.7485	19.3122	93.7	96.6	72 - 123	2.96	17
sec-Butylbenzene	0	ug/L	20	20.4366	20.7789	102	104	72 - 127	1.66	17
tert-Amyl methyl ether	0	ug/L	20	16.8327	16.5267	84.2	82.6	75 - 121	1.83	40
tert-Butyl Alcohol	0	ug/L	100	91.5704	88.0615	91.6	88.1	17 - 168	3.91	40
tert-Butylbenzene	0	ug/L	20	18.7925	18.8255	94	94.1	72 - 124	.18	17
trans-1,2-Dichloroethene	0	ug/L	20	22.646	21.527	113	108	71 - 122	5.07	22
trans-1,3-Dichloropropene	0	ug/L	20	20.2969	19.1929	101	96	78 - 126	5.59	18
1,2-Dichloroethane-d4 (S)	96.4	%				96.4	95.4	62 - 133		
4-Bromofluorobenzene (S)	97.5	%				97.5	95.9	79 - 114		
Dibromofluoromethane (S)	94.8	%				94.8	92.8	78 - 116		
Toluene-d8 (S)	91.6	%				91.6	91.2	76 - 127		

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46504 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307596003, 2307596004, 2307596007, 2307596008, 2307596011, 2307596012, 2307596018

METHOD BLANK: 2721779

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	103	%	62 - 133
4-Bromofluorobenzene (S)	98.9	%	79 - 114
Dibromofluoromethane (S)	95.2	%	78 - 116
Toluene-d8 (S)	95	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2721780

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	107	ug/L	20	21.5	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.8	66 - 130
1,1,2,2-Tetrachloroethane	91.1	ug/L	20	18.2	74 - 135
1,1,2-Trichloroethane	95.4	ug/L	20	19.1	82 - 126
1,1-Dichloroethane	106	ug/L	20	21.3	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.9	63 - 128
1,2,3-Trichlorobenzene	77.3	ug/L	20	15.5	61 - 126
1,2,3-Trichloropropane	92.9	ug/L	20	18.6	75 - 132
1,2,4-Trichlorobenzene	92.1	ug/L	20	18.4	67 - 123
1,2,4-Trimethylbenzene	99.1	ug/L	20	19.8	76 - 125
1,2-Dibromo-3-chloropropane	81.7	ug/L	20	16.3	59 - 133
1,2-Dibromoethane	95.2	ug/L	20	19.0	80 - 124
1,2-Dichlorobenzene	99.2	ug/L	20	19.8	82 - 118
1,2-Dichloroethane	98.2	ug/L	20	19.6	70 - 133
1,2-Dichloroethene, Total	106	ug/L	40	42.4	78 - 125
1,2-Dichloropropane	107	ug/L	20	21.3	81 - 127
1,3-Dichlorobenzene	103	ug/L	20	20.6	81 - 118
1,3-Dichloropropane	101	ug/L	20	20.2	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.0	80 - 123
1,4-Dichlorobenzene	99.8	ug/L	20	20.0	81 - 116
2,2-Dichloropropane	97.1	ug/L	20	19.4	64 - 129
2-Butanone	84	ug/L	100	84.0	50 - 152
2-Chloroethylvinyl ether	82.1	ug/L	20	16.4	1 - 150
2-Hexanone	74.7	ug/L	100	74.7	65 - 154
4-Methyl-2-Pentanone(MIBK)	77.1	ug/L	100	77.1	71 - 146
Acetone	83.6	ug/L	100	83.6	40 - 151
Benzene	105	ug/L	20	20.9	80 - 124
Bromobenzene	104	ug/L	20	20.8	81 - 119
Bromochloromethane	104	ug/L	20	20.7	73 - 117
Bromodichloromethane	101	ug/L	20	20.2	79 - 126
Bromoform	92.1	ug/L	20	18.4	70 - 123
Bromomethane	52.4	ug/L	20	10.5	45 - 148
Carbon Disulfide	118	ug/L	20	23.5	57 - 131
Carbon Tetrachloride	106	ug/L	20	21.2	62 - 132
Chlorobenzene	97.9	ug/L	20	19.6	85 - 117
Chlorodibromomethane	96.1	ug/L	20	19.2	77 - 122
Chloroethane	62.2	ug/L	20	12.4	51 - 142
Chloroform	103	ug/L	20	20.6	78 - 122
Chloromethane	72.6	ug/L	20	14.5	38 - 156
Cyclohexane	119	ug/L	20	23.8	66 - 130
Dibromomethane	95.7	ug/L	20	19.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	61.9	ug/L	20	12.4	17 - 166
Diisopropyl ether	112	ug/L	20	22.3	74 - 131
Ethyl tert-butyl ether	95	ug/L	20	19.0	75 - 123
Ethylbenzene	106	ug/L	20	21.1	80 - 124
Freon 113	116	ug/L	20	23.2	50 - 130
Hexachlorobutadiene	110	ug/L	20	21.9	55 - 128
Isopropylbenzene	102	ug/L	20	20.4	73 - 129
Methyl acetate	87.4	ug/L	20	17.5	70 - 130
Methyl cyclohexane	133*	ug/L	20	26.6	70 - 130
Methyl t-Butyl Ether	99.4	ug/L	20	19.9	69 - 115
Methylene Chloride	109	ug/L	20	21.8	76 - 121
Naphthalene	63.8	ug/L	20	12.8	56 - 134
Styrene	97.9	ug/L	20	19.6	79 - 123
Tetrachloroethene	98.5	ug/L	20	19.7	72 - 124
Toluene	107	ug/L	20	21.4	80 - 125
Total Xylenes	108	ug/L	60	65.1	79 - 125
Trichloroethene	101	ug/L	20	20.2	77 - 124
Trichlorofluoromethane	69.9	ug/L	20	14.0	38 - 123
Vinyl Acetate	83.9	ug/L	20	16.8	58 - 136
Vinyl Chloride	60.8	ug/L	20	12.2	27 - 138
cis-1,2-Dichloroethene	104	ug/L	20	20.8	78 - 125
cis-1,3-Dichloropropene	100	ug/L	20	20.0	81 - 121
mp-Xylene	109	ug/L	40	43.6	79 - 125
n-Butylbenzene	89.8	ug/L	20	18.0	71 - 130
n-Propylbenzene	100	ug/L	20	20.0	74 - 122
o-Chlorotoluene	100	ug/L	20	20.0	78 - 126
o-Xylene	107	ug/L	20	21.5	79 - 124
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
p-Isopropyltoluene	95.4	ug/L	20	19.1	72 - 123
sec-Butylbenzene	103	ug/L	20	20.5	72 - 127
tert-Amyl methyl ether	85.7	ug/L	20	17.1	75 - 121
tert-Butyl Alcohol	116	ug/L	100	116	17 - 168
tert-Butylbenzene	94.4	ug/L	20	18.9	72 - 124
trans-1,2-Dichloroethene	108	ug/L	20	21.6	71 - 122
trans-1,3-Dichloropropene	99.8	ug/L	20	20.0	78 - 126
1,2-Dichloroethane-d4 (S)	95.1	%			62 - 133
4-Bromofluorobenzene (S)	99.2	%			79 - 114
Dibromofluoromethane (S)	93.3	%			78 - 116
Toluene-d8 (S)	93.2	%			76 - 127

MATRIX SPIKE: 2721875 DUPLICATE: 2721876 ORIGINAL: 2307919003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	22.054	21.7557	110	109	78 - 121	1.36	16
1,1,1-Trichloroethane	0	ug/L	20	21.5381	21.3676	108	107	66 - 130	.79	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	17.9442	18.3462	89.7	91.7	74 - 135	2.22	16
1,1,2-Trichloroethane	0	ug/L	20	18.8481	19.0946	94.2	95.5	82 - 126	1.3	15
1,1-Dichloroethane	0	ug/L	20	22.2166	21.8046	111	109	78 - 124	1.87	15
1,1-Dichloroethene	0	ug/L	20	23.1769	22.5108	116	113	63 - 128	2.92	21
1,2,3-Trichloropropane	0	ug/L	20	17.7861	18.7093	88.9	93.5	75 - 132	5.06	19
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.9793	17.4001	79.9	87	59 - 133	8.51	26
1,2-Dibromoethane	0	ug/L	20	19.2096	19.3736	96	96.9	80 - 124	.85	19
1,2-Dichlorobenzene	0	ug/L	20	19.7368	20.1336	98.7	101	82 - 118	1.99	15
1,2-Dichloroethane	0	ug/L	20	19.5655	19.6566	97.8	98.3	70 - 133	.46	19
1,2-Dichloropropane	0	ug/L	20	21.3529	21.0611	107	105	81 - 127	1.38	15
1,4-Dichlorobenzene	0	ug/L	20	19.8321	20.0833	99.2	100	81 - 116	1.26	15
2-Butanone	0	ug/L	100	88.8146	94.8468	88.8	94.8	50 - 152	6.57	16
2-Hexanone	0	ug/L	100	74.6831	79.2616	74.7	79.3	65 - 154	5.95	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	78.6184	82.3704	78.6	82.4	71 - 146	4.66	16
Acetone	3.50032	ug/L	100	89.4972	98.8127	86	95.3	40 - 151	9.89	40
Benzene	0	ug/L	20	22.0015	21.4603	110	107	80 - 124	2.49	26
Bromochloromethane	0	ug/L	20	21.5247	21.2474	108	106	73 - 117	1.3	19
Bromodichloromethane	0	ug/L	20	20.3847	20.1242	102	101	79 - 126	1.29	16
Bromoform	0	ug/L	20	17.9794	18.4018	89.9	92	70 - 123	2.32	16
Bromomethane	0	ug/L	20	9.30652	8.068	46.5	40.3*	45 - 148	14.3	26
Carbon Disulfide	0	ug/L	20	26.3104	24.9631	132*	125	57 - 131	5.26	28
Carbon Tetrachloride	0	ug/L	20	22.4313	22.0953	112	110	62 - 132	1.51	17
Chlorobenzene	0	ug/L	20	20.0784	19.8089	100	99	85 - 117	1.35	15
Chlorodibromomethane	0	ug/L	20	19.1417	19.4786	95.7	97.4	77 - 122	1.74	15
Chloroethane	0	ug/L	20	16.9605	14.7547	84.8	73.8	51 - 142	13.9	24
Chloroform	0	ug/L	20	20.8891	20.2063	104	101	78 - 122	3.32	16
Chloromethane	0	ug/L	20	19.6956	19.9877	98.5	99.9	38 - 156	1.47	27
Dibromomethane	0	ug/L	20	19.0419	18.5549	95.2	92.8	81 - 125	2.59	16
Ethylbenzene	0	ug/L	20	21.9636	21.6151	110	108	80 - 124	1.6	19
Methyl t-Butyl Ether	0	ug/L	20	19.8547	20.3115	99.3	102	69 - 115	2.27	20
Methylene Chloride	0	ug/L	20	20.9542	20.509	105	103	76 - 121	2.15	17
Styrene	0	ug/L	20	19.7241	19.8289	98.6	99.1	79 - 123	.53	16
Tetrachloroethene	0	ug/L	20	20.3086	20.1547	102	101	72 - 124	.76	38
Toluene	0	ug/L	20	21.8406	21.9326	109	110	80 - 125	.42	20
Total Xylenes	0	ug/L	60	66.5526	66.6136	111	111	79 - 125	.09	35
Trichloroethene	0	ug/L	20	20.8508	20.5315	104	103	77 - 124	1.54	18
Trichlorofluoromethane	0	ug/L	20	19.0694	18.0091	95.3	90	38 - 123	5.72	23
Vinyl Acetate	0	ug/L	20	13.9533	14.7428	69.8	73.7	58 - 136	5.5	17
Vinyl Chloride	0	ug/L	20	16.9661	16.3681	84.8	81.8	27 - 138	3.59	40
cis-1,2-Dichloroethene	0	ug/L	20	22.5636	21.376	113	107	78 - 125	5.41	21
cis-1,3-Dichloropropene	0	ug/L	20	19.7391	19.401	98.7	97	81 - 121	1.73	16
mp-Xylene	0	ug/L	40	44.8244	44.6685	112	112	79 - 125	.35	21
o-Xylene	0	ug/L	20	21.7283	21.9451	109	110	79 - 124	.99	19
trans-1,2-Dichloroethene	0	ug/L	20	22.6842	22.4066	113	112	71 - 122	1.23	22

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

trans-1,3-Dichloropropene	0	ug/L	20	19.6594	19.6586	98.3	98.3	78 - 126	.004	18
1,2-Dichloroethane-d4 (S)	100	%				100	102	62 - 133		
4-Bromofluorobenzene (S)	95.3	%				95.3	97.7	79 - 114		
Dibromofluoromethane (S)	92.9	%				92.9	93.5	78 - 116		
Toluene-d8 (S)	91.8	%				91.8	94.3	76 - 127		

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WCPR/43239 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples: 2307596003

METHOD BLANK: 2721689

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

LABORATORY CONTROL SAMPLE: 2721690

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Phosphorus, Total	98.6	mg/L	2.5	2.5	90 - 110

SAMPLE DUPLICATE: 2721691 ORIGINAL: 2307571001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.498	mg/L	.493	1.01	10

MATRIX SPIKE SAMPLE: 2721692 ORIGINAL: 2307571001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.498	mg/L	2.5	2.975	99.1	90 - 110

SAMPLE DUPLICATE: 2721693 ORIGINAL: 2307574001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.768	mg/L	.77	.26	10

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QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE SAMPLE: 2721694 ORIGINAL: 2307574001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.768	mg/L	2.5	3.291	101	90 - 110

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202713 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2307596003

METHOD BLANK: 2719712

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2719714

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	98	mg/L	20	19.6	90 - 110
Nitrate-N	95.6	mg/L	2.5	2.4	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110
Sulfate	98.1	mg/L	20	19.6	90 - 110

METHOD BLANK: 2720471

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2720473

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	94.2	mg/L	20	18.8	90 - 110
Nitrate-N	92.4	mg/L	2.5	2.3	90 - 110
Nitrite-N	104	mg/L	.5	0.52	90 - 110
Sulfate	94.9	mg/L	20	19.0	90 - 110

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2720474

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

METHOD BLANK: 2720476

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202781 **Analysis Method:** S4500PE-99

QC Batch Method: S4500PE-99

Associated Lab Samples: 2307596003

METHOD BLANK: 2720401

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

MATRIX SPIKE: 2720403 DUPLICATE: 2720404 ORIGINAL: 2307596003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	.003	mg/L	.5	.4978	.4859	99	96.6	90 - 110	2.42	10

METHOD BLANK: 2720405

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202783 **Analysis Method:** S2320B-97

QC Batch Method: S2320B-97

Associated Lab Samples: 2307596003

METHOD BLANK: 2720414

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2720419 ORIGINAL: 2307585001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	54.28888	mg/L	51.77262	4.74	20

METHOD BLANK: 2720422

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720423 ORIGINAL: 2307586002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	209.9881	mg/L	234.27017	10.9	20

METHOD BLANK: 2720426

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720427 ORIGINAL: 2307587005

Parameter	Original Result	Units	DUP Result	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Alkalinity, Total	224.84048	mg/L	220.09041	2.14	20

METHOD BLANK: 2720430

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720431 ORIGINAL: 2307613001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	3.22486	mg/L	3.73566	14.7	20

METHOD BLANK: 2720434

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720435 ORIGINAL: 2307613007

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	32.92986	mg/L	31.98454	2.91	20

METHOD BLANK: 2720438

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720439 ORIGINAL: 2307615009

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	13.81626	mg/L	13.16808	4.8	20

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2720442

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720443 ORIGINAL: 2307658001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	12.01369	mg/L	12.86484	6.84	20

METHOD BLANK: 2720446

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720447 ORIGINAL: 2307658008

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	.7318	mg/L	.95823	26.8*	20

SAMPLE DUPLICATE: 2720451 ORIGINAL: 2307736001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	39.67753	mg/L	34.27648	14.6	20

METHOD BLANK: 2720454

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

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QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

SAMPLE DUPLICATE: 2720455 ORIGINAL: 2307736003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	75.29556	mg/L	79.00306	4.81	20

METHOD BLANK: 2720877

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	1J	mg/L	5

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QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202820 **Analysis Method:** S5310B-00

QC Batch Method: 415.1/9060/5310B

Associated Lab Samples: 2307596003

METHOD BLANK: 2720920

Parameter	Blank Result	Units	Reporting Limit
Total Organic Carbon (TOC)	ND	mg/L	0.50

LABORATORY CONTROL SAMPLE: 2720921

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Organic Carbon (TOC)	99	mg/L	1	0.99	85 - 115

MATRIX SPIKE: 2720922 DUPLICATE: 2720923 ORIGINAL: 2307741001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	1.009	mg/L	6	7.101	7.176	102	103	85 - 115	1.05	20

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202873 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2721661

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2721662

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2721663

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	100	mg/L	500	500	90 - 110

SAMPLE DUPLICATE: 2721664 ORIGINAL: 2307585004

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	639	mg/L	610	4.64	5

SAMPLE DUPLICATE: 2721665 ORIGINAL: 2307586003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	238	mg/L	248	4.12	5

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203003 **Analysis Method:** D6919-09

QC Batch Method: D6919-09

Associated Lab Samples: 2307596003

LABORATORY CONTROL SAMPLE: 2723199

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Ammonia-N	94.1	mg/L	2.5	2.35	90 - 110

METHOD BLANK: 2723200

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	0.006J	mg/L	0.010

METHOD BLANK: 2723202

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	0.004J	mg/L	0.010

MATRIX SPIKE: 2723203 DUPLICATE: 2723204 ORIGINAL: 2308488002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Ammonia-N	1.432	mg/L	10	10.471	10.55	90.4	91.2	75 - 125	.75	25

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203291 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples:

METHOD BLANK: 2726730

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2726732

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2726734

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.080J	mg/L	0.10

METHOD BLANK: 2726736

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.040J	mg/L	0.10

METHOD BLANK: 2726738

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.036J	mg/L	0.10

METHOD BLANK: 2726740

Parameter	Blank Result	Units	Reporting Limit

QUALITY CONTROL DATA

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Phosphorus, Total	0.026J	mg/L	0.10

METHOD BLANK: 2726742

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.034J	mg/L	0.10

METHOD BLANK: 2726744

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2721324	1	Lab Control Standard	SW846 8260B	Methyl cyclohexane

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 140 and the control limits were 70 to 130.

2721780	2	Lab Control Standard	SW846 8260B	Methyl cyclohexane

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 133 and the control limits were 70 to 130.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307596003	MRC-MW60B			EPA 300.0	WETC/202713
2307596003	MRC-MW60B	SW846 3015	MDIG/71106	SW846 6010C	META/61589
2307596003	MRC-MW60B	SW846 3015	MDIG/71106	SW846 6010C	META/61685
2307596003	MRC-MW60B			S4500PE-99	WETC/202781
2307596003	MRC-MW60B			S2320B-97	WETC/202783
2307596001	MRC-MW110A			SW846 8260B	VOMS/46486
2307596002	MRC-MW110B			SW846 8260B	VOMS/46486
2307596003	MRC-MW60B			SW846 8260B	VOMS/46486
2307596005	Trip Blank 2			SW846 8260B	VOMS/46486
2307596009	MRC-MW44A			SW846 8260B	VOMS/46486
2307596010	MRC-MW64A			SW846 8260B	VOMS/46486
2307596011	MRC-MW60A			SW846 8260B	VOMS/46486
2307596013	MRC-SWMW-4I			SW846 8260B	VOMS/46486
2307596014	MRC-MW70A			SW846 8260B	VOMS/46486
2307596015	MRC-MW53A			SW846 8260B	VOMS/46486
2307596016	MRC-SWMW-4S			SW846 8260B	VOMS/46486
2307596017	MRC-MW76A			SW846 8260B	VOMS/46486
2307596018	MRC-MW53B			SW846 8260B	VOMS/46486
2307596003	MRC-MW60B	SW846 3015	MDIG/71124	SW846 6020A	META/61625
2307596011	MRC-MW60A	SW846 3015	MDIG/71124	SW846 6020A	META/61625
2307596003	MRC-MW60B			S5310B-00	WETC/202820
2307596019	MRC-MW76B			SW846 8260B	VOMS/46497
2307596020	Trip Blank 5			SW846 8260B	VOMS/46497

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307596 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307596012	MRC-MW70B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30426
2307596003	MRC-MW60B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30456
2307596009	MRC-MW44A	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30456
2307596012	MRC-MW70B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30456
2307596001	MRC-MW110A	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30471
2307596002	MRC-MW110B	SW846 3510C	EXTR/51720	8270 SIM	SVMS/30471
2307596003	MRC-MW60B			S2540C-11	WETC/202873
2307596003	MRC-MW60B	EPA 365.1	WCPR/43239	EPA 365.1	WETC/203291
2307596003	MRC-MW60B			SW846 8260B	VOMS/46504
2307596004	MRC-MW62C			SW846 8260B	VOMS/46504
2307596007	MRC-MW103A			SW846 8260B	VOMS/46504
2307596008	MRC-MW103B			SW846 8260B	VOMS/46504
2307596011	MRC-MW60A			SW846 8260B	VOMS/46504
2307596012	MRC-MW70B			SW846 8260B	VOMS/46504
2307596018	MRC-MW53B			SW846 8260B	VOMS/46504
2307596003	MRC-MW60B			D6919-09	WETC/203003
2307596003	MRC-MW60B			RSK 175	SVGC/48838
2307596003	MRC-MW60B	SW846 7470A	MDIG/71245	SW846 7470A	META/61692
2307596011	MRC-MW60A	SW846 7470A	MDIG/71245	SW846 7470A	META/61692

Thursday, April 26, 2018 9:19:20 AM
Page 104 of 131
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Courier:

Tracking #:

2307596

Co. Name: AECOM

Contact (Report to): Ravi Danesa & Holly Braun Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Danesa PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] Y ravi.danesa@aecom.com
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020B/7470A)	Hexavalent Chromium (218.6)	PCB Homologs (8082A)	MEE (RSK 175)	MNA (TDS, ethane/ethene, Cl^-, NO_3, SO_4)	Alkalinity (310.2)	Ammonia-N (350.1)	TOC (415.3)
						Enter Number of Containers Per Analysis									
1 MRC-MW10A		4-5-18	1010	G	GW	2	2								
2 MRC-MW10B		4-5-18	1340	G	GW	2	2								
3 MRC-MW60B		4-5-18	1723	G	GW	2	2	1			2	1	1	1	2
4 MRC-MW62C		4-5-18	1340	G	GW	2				2					
5 Trip Blank 2		NA	NA			2									
6 ~~MRC-MW125A~~		~~4-5-18~~	~~1547~~	~~G~~	~~GW~~	~~2~~	~~2~~	~~1~~	~~1~~	~~2~~				~~HB~~	4/6
7 ~~MRC-MW125B~~		~~4-5-18~~	~~1805~~	~~G~~	~~GW~~	~~2~~	~~2~~	~~1~~	~~1~~	~~2~~				~~HB~~	4/6
8 Trip Blank 3		NA	NA			2									

***Container Type	CG	AG	PL		AG	CG	PL	PL	PL	AG
***Container Size	40 mL	1L	250		1L	40mL	500mL	250mL	250mL	40mL
Preservative	HCl	none	HNO_3		NaOH	/	/	/	H_2SO_4	HCl

ANALYSES/METHOD REQUESTED

Receipt Information (completed by Sample Receiver)
Received by: KM
Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	Y N	Y N	Y N	Y	
1					
2					
3	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	Y
5	Y	Y	Y	Y	Y
6	Y	Y	Y	Y	Y
7	Y	Y	Y	Y	Y
8	Y	Y	Y	Y	Y

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
	Y N	Y N	Y N	Y N	Y N
3	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	Y
5	Y	Y	Y	Y	Y
6	Y	Y	Y	Y	Y
7	Y	Y	Y	Y	Y
8	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Holly Braun

Project Comments: Also email noam.tavantzis@aecom.com & holly.braun@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4-6-18	1525	2 [signature] - AS	4-6-18	1525
3 [signature] / ALS			4		1730
5		2210	6 [signature]	4/6	2210
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] _____

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected in? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQUIS4-CSV Other: EARTHSOFT

DQO Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

**Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

7596

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3197

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] Y ravi.damera@aecom.com

Fax? [ ] Y No:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	Preservative	ANALYSES/METHOD REQUESTED: VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A)	Hexavalent Chromium (7196A)	RCB Hardness (SM 2340B)	MEE (RSK 175)	MNA (Cl, NO3, Na, 2540C, TDS, alkalinity-CHES)	Alkalinity (SM 2320B)	Ammonia-N (350.1)	TOC (9060A)
						CG	AG	PL									AG	
						40mL	1L	250									1L	
						HCl	cool	H2SO4									/	
1 MRC-MW108A	(103A)	4-5-18	1547	G	GW				2								2	
2 MRC-MW108B	(103B)	4-5-18	1805	G	GW				2								2	
3 MRC-MW44A		4-5-18	0915	G	GW				2	2							2	
4 MRC-MW64A	bottles labeled GG2A-KAM	4-5-18	1050	G	GW				2								2	
5 MRC-MW104A		4-5-18	1407	G	GW				2		1							
6 MRC-MW70B		4-5-18	1205	G	GW				2	2								
7 MRC-SWMW-4I		4-5-18	1625	G	GW				2									
8 MRC-MW70A		4-5-18	0955	G	GW				2									

Receipt Information (completed by Sample Receiving)
Performed by: KMG
Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers:

Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	Y	Y	Y	Y	
	N	N	N	N	N

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
	Y	Y	Y	Y	
	N	N	N	N	N

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email Naomi.tauntrise@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AECOM	4-6-18	1525	2	4/6	1525
3 Warren Lynch (AECOM)			4		1738
5		2210	6	4/6	2210
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

EDDs Required? [X] If yes, format type: EQuIS & CSV

SDWA Forms? yes / yes / yes / yes

State Samples Collected In? MD / NJ / NY / PA

Other

DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 3 of 3

Courier:

Tracking #:

COC# 7596

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? [ ] -Y No.:

***Container Type	CG
***Container Size	40mL
*** Preservative	HCl

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)									
~~1 MRC-MW53A~~	~~FB 4/6~~	~~4-5-18~~	~~1165~~	~~G~~	~~GW~~	~~2~~	~~HB~~								
2 MRC-MW53A		4-5-18	1615	G	GW	2									
3 MRC-SWMW-4S		4-5-18	1415	G	GW	2									
4 MRC-MW76A		4-5-18	1215	G	GW	2									
5 MRC-MW53B		4-5-18	1750	G	GW	2									
6 MRC-MW76B		4-5-18	1025	G	GW	2									
7 Trip Blank 5		NA	NA			2									
8															

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed in: Yes

Cooler Temp: 2°C

Therm. ID: 318

No. of Coolers:

Notes:

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?	Circle appropriate Y or N.
Y	Y	Y	Y	Y	Y
N	N	N	N	N	N
Y	Y	Y	Y	Y	Y
N	N	N	N	N	N
Y	Y	Y	Y	Y	Y
N	N	N	N	N	N
Y	Y	Y	Y	Y	Y
N	N	N	N	N	N
Y	Y	Y	Y	Y	Y
N	N	N	N	N	N
Y	Y	Y	Y	Y	Y
N	N	N	N	N	N
Y	Y	Y	Y	Y	Y
N	N	N	N	N	N

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email Naam.tavantzis@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4618	1525	2 [signature] / ALS	4/6/18	1525
3 [signature]			4 [signature]		1730
5 [signature]		2210	6 [signature]	4/6	2210
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ____ ___

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? ND [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQUIS & CSV Other

Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

April 17, 2018 Service Request No:R1803155

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2307596

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 11, 2018
For your reference, these analyses have been assigned our service request number **R1803155.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2307596
Sample Matrix: Water

Service Request: R1803155
Date Received: 04/11/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 04/11/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/12/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Method 680, 04/12/2018, R1803155-005: The recovery of one or more internal standards was outside control limits. There are no hits in the sample. The internal is not used to quantitate any of the target compounds.

Approved by _____ Date 04/17/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2307596 009			Lab ID: R1803155-004			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0033	J	0.0016	0.0047	ug/L	680
Hexachlorobiphenyls, Total	0.0052	J	0.0047	0.0094	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US
Project: UR115: 2307596

Service Request: R1803155

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803155-001	2307596 004	4/5/2018	1340
R1803155-002	2307596 007	4/5/2018	1547
R1803155-003	2307596 008	4/5/2018	1805
R1803155-004	2307596 009	4/5/2018	0915
R1803155-005	2307596 010	4/5/2018	1050

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2307596

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/20/2018 Approved By:

Email? [ ] -Y

Fax? [ ] -Y No.:

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, Full QC lab report needed, EQUIS EDD.	Sample/COC Comments
					Container Type	AN	
					Container Size	1 L	
					Preservative	None	
					Enter Number of Containers Per Sample or Field Results Below.		
1 2307596 004	4/5/18	1340	G	WT	2	*	
2 2307596 007	4/5/18	1547	G	WT	2	*	Sub to ALS Rochester
3 2307596 008	4/5/18	1805	G	WT	2	*	
4 2307596 009	4/5/18	0915	G	WT	2	*	
5 2307596 010	4/5/18	1050	G	WT	2	*	
6							
7							
8							
9							
10							

R1803155 5
ALS Environmental
UR115: 2307596

ALS Field Services: [ ] Pickup [ ] Labor [ ] Composite_Sampling [ ] Rental_Equipment [ ] Other:

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] ALS	4/10/18	1620	2 [illegible]	4/11/18	0935
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ]

PWSID # ____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- EQUIS EDD

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 8/04

Cooler Receipt and Preservation Check Form

R1803155 5
ALS Environmental
UR116: 2307696

Project/Client ALS-Middleton Folder Number

Cooler received on 4/11/18 by: @

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate? ALS/ROC	(CLIENT)
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	Y N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/11/18 Time: 1004 ID: IR#7 (IR#9) From: Temp Blank (Sample Bottle)

Observed Temp (°C)	4.1	0.8	1.3	4.3			
Correction Factor (°C)	—	—	—	—			
Corrected Temp (°C)	4.1	0.8	1.3	4.3			
Temp from:Type of bottle	—	—	—	—			
Within 0-6°C?	(Y) N	(Y) N	(Y) N	(Y) N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R002 by @ on 4/11/18 at 1034
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 4/11/18 Time: 1511 by: DLW

9.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
10.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
11.	Were correct containers used for the tests indicated?	(YES)	NO
12.	Were 5035 vials acceptable (no extra labels, not leaking)?	YES	NO (N/A)
13.	Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized	Tedlar® Bags Inflated	(N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: Client.

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: sh

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm ; WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

\# Spike was diluted out

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client: ALS Environmental - US
Project: UR115: 2307596

Service Request: R1803155

Sample Name: 2307596 004
Lab Code: R1803155-001
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307596 007
Lab Code: R1803155-002
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307596 008
Lab Code: R1803155-003
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307596 009
Lab Code: R1803155-004
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307596 010
Lab Code: R1803155-005
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-C
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	ALS Environmental - US	**Service Request:**	R1803155
Project:	UR115: 2307596	**Date Collected:**	04/05/18 13:40
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307596 004	**Units:**	ug/L
Lab Code:	R1803155-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 12:01	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0047	0.0016	1	04/12/18 12:01	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 12:01	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/12/18 12:01	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 12:01	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 12:01	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 12:01	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/12/18 12:01	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 12:01	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 12:01	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 12:01	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	105	58 - 125	04/12/18 12:01	
4,4'-DDT	118	37 - 166	04/12/18 12:01	

Client:	ALS Environmental - US	**Service Request:**	R1803155
Project:	UR115: 2307596	**Date Collected:**	04/05/18 15:47
Sample Matrix:	Water	**Date Received:**	04/11/18 09:33
Sample Name:	2307596 007	**Units:**	ug/L
Lab Code:	R1803155-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 12:30	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0047	0.0016	1	04/12/18 12:30	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 12:30	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/12/18 12:30	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 12:30	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 12:30	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 12:30	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/12/18 12:30	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 12:30	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 12:30	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 12:30	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	97	58 - 125	04/12/18 12:30	
4,4'-DDT	112	37 - 166	04/12/18 12:30	

Client:	ALS Environmental - US	**Service Request:**	R1803155
Project:	UR115: 2307596	**Date Collected:**	04/05/18 18:05
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307596 008	**Units:**	ug/L
Lab Code:	R1803155-003	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 12:59	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0047	0.0016	1	04/12/18 12:59	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 12:59	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/12/18 12:59	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 12:59	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 12:59	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 12:59	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/12/18 12:59	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 12:59	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 12:59	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 12:59	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	91	58 - 125	04/12/18 12:59	
4,4'-DDT	105	37 - 166	04/12/18 12:59	

Client:	ALS Environmental - US	**Service Request:**	R1803155
Project:	UR115: 2307596	**Date Collected:**	04/05/18 09:15
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307596 009	**Units:**	ug/L
Lab Code:	R1803155-004	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 13:28	4/11/18	
Dichlorobiphenyls, Total	**0.0033 J**	0.0047	0.0016	1	04/12/18 13:28	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 13:28	4/11/18	
Hexachlorobiphenyls, Total	**0.0052 J**	0.0094	0.0047	1	04/12/18 13:28	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 13:28	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 13:28	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 13:28	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/12/18 13:28	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 13:28	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 13:28	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 13:28	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	99	58 - 125	04/12/18 13:28	
4,4'-DDT	118	37 - 166	04/12/18 13:28	

Client:	ALS Environmental - US	**Service Request:**	R1803155
Project:	UR115: 2307596	**Date Collected:**	04/05/18 10:50
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307596 010	**Units:**	ug/L
Lab Code:	R1803155-005	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 13:57	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0047	0.0016	1	04/12/18 13:57	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 13:57	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/12/18 13:57	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 13:57	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 13:57	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 13:57	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/12/18 13:57	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 13:57	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 13:57	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 13:57	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	99	58 - 125	04/12/18 13:57	
4,4'-DDT	93	37 - 166	04/12/18 13:57	

QC Summary Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
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Semivolatile Organic Compounds by GC/MS

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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:** R1803155
Project: UR115: 2307596
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2307596 004	R1803155-001	118	105
2307596 007	R1803155-002	112	97
2307596 008	R1803155-003	105	91
2307596 009	R1803155-004	118	99
2307596 010	R1803155-005	93	99
Method Blank	RQ1803214-01	116	98
Lab Control Sample	RQ1803214-02	121	101
Duplicate Lab Control Sample	RQ1803214-03	110	92

Client:	ALS Environmental - US	**Service Request:**	R1803155
Project:	UR115: 2307596	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803214-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/12/18 07:17	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/12/18 07:17	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/12/18 07:17	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/12/18 07:17	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/12/18 07:17	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/12/18 07:17	4/11/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/12/18 07:17	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/12/18 07:17	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/12/18 07:17	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/12/18 07:17	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/12/18 07:17	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	98	58 - 125	04/12/18 07:17	
4,4'-DDT	116	37 - 166	04/12/18 07:17	

Client: ALS Environmental - US
Project: UR115: 2307596
Sample Matrix: Water

Service Request: R1803155
Date Analyzed: 04/12/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803214-02			Duplicate Lab Control Sample RQ1803214-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.704	1.25	56	0.670	1.25	54	29-162	5	30
Dichlorobiphenyls, Total	680	0.225	0.250	90	0.207	0.250	83	37-139	9	30
Heptachlorobiphenyls, Total	680	0.575	0.750	77	0.526	0.750	70	53-120	9	30
Hexachlorobiphenyls, Total	680	0.420	0.500	84	0.371	0.500	74	11-160	12	30
Monochlorobiphenyls, Total	680	0.193	0.250	77	0.184	0.250	74	34-137	5	30
Octachlorobiphenyls, Total	680	0.532	0.750	71	0.490	0.750	65	57-125	8	30
Pentachlorobiphenyls, Total	680	0.450	0.500	90	0.390	0.500	78	10-180	14	30
Tetrachlorobiphenyls, Total	680	0.475	0.500	95	0.421	0.500	84	14-153	12	30
Trichlorobiphenyls, Total	680	0.237	0.250	95	0.208	0.250	83	10-173	13	30

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 27, 2018

Ms. Victoria Kirkpatrick
AECOM - Germantown
12420 Milestone Center Dr.
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2307611**
Purchase Order:	**95840ACM**	Workorder ID:	**2018-MIDDLE RIVER COMPLEX**

Dear Ms. Kirkpatrick:

Enclosed are the analytical results for samples received by the laboratory on Monday, April 9, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Holly Brown , Mr. Ravi Damera , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2307611001	MRC-MW126A	Water	4/6/2018 12:15	4/9/2018 21:10	Ms. Holly Brown
2307611002	BRC-MW126B	Water	4/6/2018 10:40	4/9/2018 21:10	Ms. Holly Brown
2307611003	BRC-MW125B	Water	4/6/2018 16:00	4/9/2018 21:10	Ms. Holly Brown
2307611004	BRC-MW125A	Water	4/6/2018 14:30	4/9/2018 21:10	Ms. Holly Brown
2307611005	BRC-MW113A	Water	4/6/2018 17:30	4/9/2018 21:10	Ms. Holly Brown
2307611006	MRC-MW90B	Water	4/6/2018 10:45	4/9/2018 21:10	Ms. Holly Brown
2307611007	MRC-MW119B	Water	4/6/2018 19:00	4/9/2018 21:10	Ms. Holly Brown
2307611008	MRC-MW21B	Water	4/6/2018 16:25	4/9/2018 21:10	Ms. Holly Brown
2307611009	MRC-MW20A	Water	4/6/2018 18:45	4/9/2018 21:10	Ms. Holly Brown
2307611010	MRC-MW21A	Water	4/6/2018 16:05	4/9/2018 21:10	Ms. Holly Brown
2307611011	MRC-MW120B	Water	4/6/2018 15:10	4/9/2018 21:10	Ms. Holly Brown
2307611012	MRC-MW63A	Water	4/6/2018 18:35	4/9/2018 21:10	Ms. Holly Brown
2307611013	MRC-MW81B	Water	4/6/2018 12:07	4/9/2018 21:10	Ms. Holly Brown
2307611014	MRC-MW78B	Water	4/6/2018 16:26	4/9/2018 21:10	Ms. Holly Brown
2307611015	MRC-MW92C	Water	4/6/2018 18:54	4/9/2018 21:10	Ms. Holly Brown
2307611016	MRC-MW106B/C	Water	4/6/2018 10:55	4/9/2018 21:10	Ms. Holly Brown
2307611017	MRC-MW81A	Water	4/6/2018 09:40	4/9/2018 21:10	Ms. Holly Brown
2307611018	MRC-MW120A	Water	4/6/2018 15:40	4/9/2018 21:10	Ms. Holly Brown
2307611019	Trip Blank	Water	4/9/2018 21:10	4/9/2018 21:10	Ms. Holly Brown
2307611020	MRC-MW69A	Water	4/9/2018 11:05	4/9/2018 21:10	Ms. Holly Brown
2307611021	MRC-MW41A	Water	4/9/2018 09:15	4/9/2018 21:10	Ms. Holly Brown
2307611022	MRC-MW69B	Water	4/9/2018 12:10	4/9/2018 21:10	Ms. Holly Brown
2307611023	MRC-MW87B	Water	4/9/2018 11:43	4/9/2018 21:10	Ms. Holly Brown
2307611024	MRC-MW162B	Water	4/9/2018 11:05	4/9/2018 21:10	Ms. Holly Brown

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611001** Date Collected: 4/6/2018 12:15 Matrix: Water

Sample ID: **MRC-MW126A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 23:48	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 23:48	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 23:48	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 23:48	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 23:48	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 23:48	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 23:48	CJG	A
1,2,4-Trichlorobenzene	8.7		ug/L	2.0	0.82	SW846 8260B		4/11/18 23:48	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:48	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 23:48	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 23:48	CJG	A
1,2-Dichlorobenzene	0.96J	J	ug/L	1.0	0.38	SW846 8260B		4/11/18 23:48	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:48	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 23:48	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:48	CJG	A
1,3-Dichlorobenzene	6.1		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:48	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:48	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 23:48	CJG	A
1,4-Dichlorobenzene	6.3		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:48	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:48	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 23:48	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 23:48	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 23:48	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 23:48	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 23:48	CJG	A
Benzene	0.33J	J	ug/L	1.0	0.23	SW846 8260B		4/11/18 23:48	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:48	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:48	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:48	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/11/18 23:48	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 23:48	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:48	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:48	CJG	A
Chlorobenzene	39.7		ug/L	1.0	0.19	SW846 8260B		4/11/18 23:48	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 23:48	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611001** Date Collected: 4/6/2018 12:15 Matrix: Water

Sample ID: **MRC-MW126A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 23:48	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:48	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 23:48	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:48	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:48	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 23:48	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 23:48	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 23:48	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 23:48	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 23:48	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 23:48	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 23:48	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 23:48	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 23:48	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:48	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 23:48	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:48	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 23:48	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
Trichlorofluoromethane	0.96J	J	ug/L	1.0	0.24	SW846 8260B		4/11/18 23:48	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 23:48	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 23:48	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:48	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:48	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 23:48	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 23:48	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 23:48	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:48	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:48	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:48	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 23:48	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 23:48	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 23:48	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611001** Date Collected: 4/6/2018 12:15 Matrix: Water

Sample ID: **MRC-MW126A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 23:48	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 23:48	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	62 - 133		SW846 8260B			4/11/18 23:48	CJG	A
4-Bromofluorobenzene (S)	97.2		%	79 - 114		SW846 8260B			4/11/18 23:48	CJG	A
Dibromofluoromethane (S)	96.2		%	78 - 116		SW846 8260B			4/11/18 23:48	CJG	A
Toluene-d8 (S)	93		%	76 - 127		SW846 8260B			4/11/18 23:48	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.66		ug/L	0.095	0.018	8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	54		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
Fluoranthene-d10 (S)	70.4		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 17:41	CGS	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/14/18 08:44	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Arsenic, Total	0.0011J	J	mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Chromium, Total	0.0013J	J	mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Cobalt, Total	0.0051J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Copper, Total	0.0044J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:32	AXC	E2
Nickel, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
Zinc, Total	0.015		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:30	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611001** Date Collected: 4/6/2018 12:15 Matrix: Water

Sample ID: **MRC-MW126A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/12/18 09:37	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611002** Date Collected: 4/6/2018 10:40 Matrix: Water

Sample ID: **BRC-MW126B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 00:10	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 00:10	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 00:10	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 00:10	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 00:10	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 00:10	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 00:10	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 00:10	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:10	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 00:10	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 00:10	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 00:10	CJG	A
1,2-Dichloroethane	0.43J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 00:10	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 00:10	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:10	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:10	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:10	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 00:10	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:10	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:10	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 00:10	CJG	A
2-Chloroethylvinyl ether	ND	3,4, 5	ug/L	2.0	0.38	SW846 8260B		4/12/18 00:10	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 00:10	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 00:10	CJG	A
Acetone	5.4J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 00:10	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:10	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:10	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:10	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:10	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 00:10	CJG	A
Bromomethane	ND	1,2	ug/L	1.0	0.39	SW846 8260B		4/12/18 00:10	CJG	A
Carbon Disulfide	0.56J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 00:10	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:10	CJG	A
Chlorobenzene	0.20J	J	ug/L	1.0	0.19	SW846 8260B		4/12/18 00:10	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611002** Date Collected: 4/6/2018 10:40 Matrix: Water

Sample ID: **BRC-MW126B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 00:10	CJG	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 00:10	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:10	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 00:10	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:10	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:10	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 00:10	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 00:10	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 00:10	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 00:10	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 00:10	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 00:10	CJG	A
Methyl cyclohexane	ND	6,7	ug/L	1.0	0.30	SW846 8260B		4/12/18 00:10	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 00:10	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 00:10	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:10	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 00:10	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:10	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 00:10	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:10	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 00:10	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 00:10	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:10	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:10	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 00:10	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 00:10	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 00:10	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:10	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:10	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:10	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 00:10	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 00:10	CJG	A

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611002** Date Collected: 4/6/2018 10:40 Matrix: Water

Sample ID: **BRC-MW126B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/12/18 00:10	CJG	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 00:10	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 00:10	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/12/18 00:10	CJG	A
4-Bromofluorobenzene (S)	98.7		%	79 - 114		SW846 8260B			4/12/18 00:10	CJG	A
Dibromofluoromethane (S)	96.4		%	78 - 116		SW846 8260B			4/12/18 00:10	CJG	A
Toluene-d8 (S)	93.3		%	76 - 127		SW846 8260B			4/12/18 00:10	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	58.9		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
Fluoranthene-d10 (S)	95.9		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 16:48	CGS	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/14/18 08:52	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Arsenic, Total	0.0015J	J	mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Chromium, Total	0.0021J	J	mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Cobalt, Total	0.022		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Copper, Total	0.0027J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:33	AXC	E2
Nickel, Total	0.020		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
Zinc, Total	0.028		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:34	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611002** Date Collected: 4/6/2018 10:40 Matrix: Water

Sample ID: **BRC-MW126B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/12/18 10:05	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611003** Date Collected: 4/6/2018 16:00 Matrix: Water

Sample ID: **BRC-MW125B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 00:33	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 00:33	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 00:33	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 00:33	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 00:33	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 00:33	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 00:33	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 00:33	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:33	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 00:33	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 00:33	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 00:33	CJG	A
1,2-Dichloroethane	11.3		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:33	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 00:33	CJG	A
1,2-Dichloropropane	1.5		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:33	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:33	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:33	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 00:33	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:33	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:33	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 00:33	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 00:33	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 00:33	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 00:33	CJG	A
Acetone	11.5		ug/L	10.0	3.1	SW846 8260B		4/12/18 00:33	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:33	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:33	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:33	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:33	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 00:33	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 00:33	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:33	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:33	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 00:33	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 00:33	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611003** Date Collected: 4/6/2018 16:00 Matrix: Water

Sample ID: **BRC-MW125B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
Chloroform	0.22J	J	ug/L	1.0	0.21	SW846 8260B		4/12/18 00:33	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:33	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 00:33	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:33	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:33	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 00:33	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 00:33	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 00:33	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 00:33	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 00:33	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 00:33	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 00:33	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 00:33	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 00:33	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:33	CJG	A
Tetrachloroethene	1.2		ug/L	1.0	0.35	SW846 8260B		4/12/18 00:33	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:33	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 00:33	CJG	A
Trichloroethene	0.87J	J	ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
Trichlorofluoromethane	63.1		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:33	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 00:33	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 00:33	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:33	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:33	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 00:33	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 00:33	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 00:33	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:33	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:33	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:33	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 00:33	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 00:33	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 00:33	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611003** Date Collected: 4/6/2018 16:00 Matrix: Water

Sample ID: **BRC-MW125B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 00:33	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 00:33	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	107		%	62 - 133		SW846 8260B			4/12/18 00:33	CJG	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/12/18 00:33	CJG	A
Dibromofluoromethane (S)	96.6		%	78 - 116		SW846 8260B			4/12/18 00:33	CJG	A
Toluene-d8 (S)	96.1		%	76 - 127		SW846 8260B			4/12/18 00:33	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.37		ug/L	0.10	0.019	8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	47.6		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
Fluoranthene-d10 (S)	75.8		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 19:54	CGS	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/14/18 09:00	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Beryllium, Total	0.0024		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Cobalt, Total	0.027		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Copper, Total	0.0019J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:34	AXC	E2
Nickel, Total	0.048		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
Zinc, Total	0.061		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:38	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611003** Date Collected: 4/6/2018 16:00 Matrix: Water

Sample ID: **BRC-MW125B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/12/18 10:34	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611004** Date Collected: 4/6/2018 14:30 Matrix: Water

Sample ID: **BRC-MW125A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 00:56	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 00:56	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 00:56	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 00:56	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 00:56	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 00:56	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 00:56	CJG	A
1,2,4-Trichlorobenzene	1.9J	J	ug/L	2.0	0.82	SW846 8260B		4/12/18 00:56	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:56	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 00:56	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 00:56	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 00:56	CJG	A
1,2-Dichloroethane	5.8		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:56	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 00:56	CJG	A
1,2-Dichloropropane	1.4		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:56	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:56	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:56	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 00:56	CJG	A
1,4-Dichlorobenzene	0.54J	J	ug/L	1.0	0.27	SW846 8260B		4/12/18 00:56	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:56	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 00:56	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 00:56	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 00:56	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 00:56	CJG	A
Acetone	8.5J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 00:56	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:56	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:56	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:56	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 00:56	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 00:56	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 00:56	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:56	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:56	CJG	A
Chlorobenzene	0.39J	J	ug/L	1.0	0.19	SW846 8260B		4/12/18 00:56	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 00:56	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611004** Date Collected: 4/6/2018 14:30 Matrix: Water

Sample ID: **BRC-MW125A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 00:56	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:56	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 00:56	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:56	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 00:56	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 00:56	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 00:56	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 00:56	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 00:56	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 00:56	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 00:56	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 00:56	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 00:56	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 00:56	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:56	CJG	A
Tetrachloroethene	1.0		ug/L	1.0	0.35	SW846 8260B		4/12/18 00:56	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 00:56	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 00:56	CJG	A
Trichloroethene	0.85J	J	ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
Trichlorofluoromethane	46.4		ug/L	1.0	0.24	SW846 8260B		4/12/18 00:56	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 00:56	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 00:56	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:56	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:56	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 00:56	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 00:56	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 00:56	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 00:56	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 00:56	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 00:56	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 00:56	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 00:56	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 00:56	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611004** Date Collected: 4/6/2018 14:30 Matrix: Water
Sample ID: **BRC-MW125A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 00:56	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 00:56	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			4/12/18 00:56	CJG	A
4-Bromofluorobenzene (S)	99.2		%	79 - 114		SW846 8260B			4/12/18 00:56	CJG	A
Dibromofluoromethane (S)	95.6		%	78 - 116		SW846 8260B			4/12/18 00:56	CJG	A
Toluene-d8 (S)	95.9		%	76 - 127		SW846 8260B			4/12/18 00:56	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.32		ug/L	0.095	0.018	8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	49.3		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
Fluoranthene-d10 (S)	71.8		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 19:01	CGS	C
WET CHEMISTRY											
Hexavalent Chromium	0.090J	J	ug/L	0.25	0.047	EPA 218.6			4/14/18 09:08	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Beryllium, Total	0.0015		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Chromium, Total	0.0014J	J	mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Cobalt, Total	0.017		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:35	AXC	E2
Nickel, Total	0.038		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
Zinc, Total	0.034		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:42	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611004** Date Collected: 4/6/2018 14:30 Matrix: Water

Sample ID: **BRC-MW125A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/12/18 11:03	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611005** Date Collected: 4/6/2018 17:30 Matrix: Water

Sample ID: **BRC-MW113A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 01:19	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 01:19	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 01:19	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
1,1-Dichloroethane	1.6		ug/L	1.0	0.28	SW846 8260B		4/12/18 01:19	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 01:19	CJG	A
1,2,3-Trichlorobenzene	38.6		ug/L	2.0	0.93	SW846 8260B		4/12/18 01:19	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 01:19	CJG	A
1,2,4-Trichlorobenzene	188		ug/L	2.0	0.82	SW846 8260B		4/12/18 01:19	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 01:19	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 01:19	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 01:19	CJG	A
1,2-Dichlorobenzene	10.5		ug/L	1.0	0.38	SW846 8260B		4/12/18 01:19	CJG	A
1,2-Dichloroethane	1.0		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:19	CJG	A
1,2-Dichloroethene, Total	7.2		ug/L	2.0	0.45	SW846 8260B		4/12/18 01:19	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 01:19	CJG	A
1,3-Dichlorobenzene	27.0		ug/L	1.0	0.25	SW846 8260B		4/12/18 01:19	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 01:19	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 01:19	CJG	A
1,4-Dichlorobenzene	40.9		ug/L	1.0	0.27	SW846 8260B		4/12/18 01:19	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:19	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 01:19	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 01:19	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 01:19	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 01:19	CJG	A
Acetone	7.2J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 01:19	CJG	A
Benzene	0.76J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 01:19	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:19	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:19	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 01:19	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 01:19	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 01:19	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 01:19	CJG	A
Carbon Tetrachloride	1.5		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:19	CJG	A
Chlorobenzene	48.0		ug/L	1.0	0.19	SW846 8260B		4/12/18 01:19	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 01:19	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611005** Date Collected: 4/6/2018 17:30 Matrix: Water

Sample ID: **BRC-MW113A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
Chloroform	1.3		ug/L	1.0	0.21	SW846 8260B		4/12/18 01:19	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:19	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 01:19	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:19	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 01:19	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 01:19	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 01:19	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 01:19	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 01:19	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 01:19	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 01:19	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 01:19	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 01:19	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 01:19	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 01:19	CJG	A
Tetrachloroethene	57.6		ug/L	1.0	0.35	SW846 8260B		4/12/18 01:19	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 01:19	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 01:19	CJG	A
Trichloroethene	23.5		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
Trichlorofluoromethane	1400		ug/L	100	24.0	SW846 8260B		4/13/18 06:51	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 01:19	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 01:19	CJG	A
cis-1,2-Dichloroethene	6.9		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:19	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:19	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 01:19	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 01:19	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 01:19	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:19	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:19	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:19	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 01:19	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 01:19	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 01:19	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611005** Date Collected: 4/6/2018 17:30 Matrix: Water
Sample ID: **BRC-MW113A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.37J	J	ug/L	1.0	0.26	SW846 8260B			4/12/18 01:19	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 01:19	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/12/18 01:19	CJG	A
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			4/13/18 06:51	CJG	B
4-Bromofluorobenzene (S)	98.9		%	79 - 114		SW846 8260B			4/13/18 06:51	CJG	B
4-Bromofluorobenzene (S)	93.6		%	79 - 114		SW846 8260B			4/12/18 01:19	CJG	A
Dibromofluoromethane (S)	97.1		%	78 - 116		SW846 8260B			4/13/18 06:51	CJG	B
Dibromofluoromethane (S)	96.8		%	78 - 116		SW846 8260B			4/12/18 01:19	CJG	A
Toluene-d8 (S)	94.2		%	76 - 127		SW846 8260B			4/13/18 06:51	CJG	B
Toluene-d8 (S)	91.5		%	76 - 127		SW846 8260B			4/12/18 01:19	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	2.6		ug/L	1.0	0.19	8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	49.6		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
Fluoranthene-d10 (S)	60.4		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 20:41	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/12/18 11:32	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611006** Date Collected: 4/6/2018 10:45 Matrix: Water

Sample ID: **MRC-MW90B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 01:42	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 01:42	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 01:42	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 01:42	CJG	A
1,1-Dichloroethene	8.6		ug/L	1.0	0.29	SW846 8260B		4/12/18 01:42	CJG	A
1,2,3-Trichlorobenzene	1.3J	J	ug/L	2.0	0.93	SW846 8260B		4/12/18 01:42	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 01:42	CJG	A
1,2,4-Trichlorobenzene	4.2		ug/L	2.0	0.82	SW846 8260B		4/12/18 01:42	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 01:42	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 01:42	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 01:42	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 01:42	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:42	CJG	A
1,2-Dichloroethene, Total	2.2		ug/L	2.0	0.45	SW846 8260B		4/12/18 01:42	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 01:42	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 01:42	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 01:42	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 01:42	CJG	A
1,4-Dichlorobenzene	0.35J	J	ug/L	1.0	0.27	SW846 8260B		4/12/18 01:42	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:42	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 01:42	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 01:42	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 01:42	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 01:42	CJG	A
Acetone	5.3J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 01:42	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 01:42	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:42	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:42	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 01:42	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 01:42	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 01:42	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 01:42	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:42	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 01:42	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 01:42	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611006** Date Collected: 4/6/2018 10:45 Matrix: Water

Sample ID: **MRC-MW90B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
Chloroform	0.46J	J	ug/L	1.0	0.21	SW846 8260B		4/12/18 01:42	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:42	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 01:42	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:42	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 01:42	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 01:42	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 01:42	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 01:42	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 01:42	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 01:42	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 01:42	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 01:42	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 01:42	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 01:42	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 01:42	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 01:42	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 01:42	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 01:42	CJG	A
Trichloroethene	50.7		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
Trichlorofluoromethane	0.63J	J	ug/L	1.0	0.24	SW846 8260B		4/12/18 01:42	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 01:42	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 01:42	CJG	A
cis-1,2-Dichloroethene	2.2		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:42	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:42	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 01:42	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 01:42	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 01:42	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 01:42	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 01:42	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 01:42	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 01:42	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 01:42	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 01:42	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611006** Date Collected: 4/6/2018 10:45 Matrix: Water

Sample ID: **MRC-MW90B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 01:42	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 01:42	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/12/18 01:42	CJG	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/12/18 01:42	CJG	A
Dibromofluoromethane (S)	95.4		%	78 - 116		SW846 8260B			4/12/18 01:42	CJG	A
Toluene-d8 (S)	93.6		%	76 - 127		SW846 8260B			4/12/18 01:42	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	1.4		ug/L	0.94	0.18	8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C
Fluoranthene-d10 (S)	66.6		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 14:19	GEC	C

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611007** Date Collected: 4/6/2018 19:00 Matrix: Water

Sample ID: **MRC-MW119B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 02:05	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 02:05	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 02:05	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:05	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 02:05	CJG	A
1,1-Dichloroethene	8.1		ug/L	1.0	0.29	SW846 8260B		4/12/18 02:05	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 02:05	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 02:05	CJG	A
1,2,4-Trichlorobenzene	0.89J	J	ug/L	2.0	0.82	SW846 8260B		4/12/18 02:05	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 02:05	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 02:05	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 02:05	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 02:05	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:05	CJG	A
1,2-Dichloroethene, Total	376		ug/L	20.0	4.5	SW846 8260B		4/13/18 05:20	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 02:05	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 02:05	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 02:05	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 02:05	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 02:05	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:05	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 02:05	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 02:05	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 02:05	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 02:05	CJG	A
Acetone	5.6J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 02:05	CJG	A
Benzene	246		ug/L	10.0	2.3	SW846 8260B		4/13/18 05:20	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:05	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:05	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 02:05	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 02:05	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 02:05	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 02:05	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:05	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 02:05	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 02:05	CJG	A

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611007** Date Collected: 4/6/2018 19:00 Matrix: Water

Sample ID: **MRC-MW119B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:05	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 02:05	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:05	CJG	A
Cyclohexane	1.7		ug/L	1.0	0.29	SW846 8260B		4/12/18 02:05	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:05	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:05	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 02:05	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 02:05	CJG	A
Ethylbenzene	1.0		ug/L	1.0	0.34	SW846 8260B		4/12/18 02:05	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 02:05	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 02:05	CJG	A
Isopropylbenzene	1.2		ug/L	1.0	0.22	SW846 8260B		4/12/18 02:05	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 02:05	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 02:05	CJG	A
Methyl t-Butyl Ether	17.1		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:05	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 02:05	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 02:05	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 02:05	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 02:05	CJG	A
Toluene	0.44J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 02:05	CJG	A
Total Xylenes	9.9		ug/L	3.0	0.66	SW846 8260B		4/12/18 02:05	CJG	A
Trichloroethene	260		ug/L	10.0	3.3	SW846 8260B		4/13/18 05:20	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 02:05	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 02:05	CJG	A
Vinyl Chloride	12.7		ug/L	1.0	0.30	SW846 8260B		4/12/18 02:05	CJG	A
cis-1,2-Dichloroethene	342		ug/L	10.0	3.2	SW846 8260B		4/13/18 05:20	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:05	CJG	A
mp-Xylene	1.3J	J	ug/L	2.0	0.52	SW846 8260B		4/12/18 02:05	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 02:05	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:05	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 02:05	CJG	A
o-Xylene	8.6		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:05	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:05	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:05	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:05	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 02:05	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 02:05	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 02:05	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611007** Date Collected: 4/6/2018 19:00 Matrix: Water

Sample ID: **MRC-MW119B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	33.4		ug/L	1.0	0.26	SW846 8260B			4/12/18 02:05	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 02:05	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/13/18 05:20	CJG	B
1,2-Dichloroethane-d4 (S)	96.6		%	62 - 133		SW846 8260B			4/12/18 02:05	CJG	A
4-Bromofluorobenzene (S)	97.7		%	79 - 114		SW846 8260B			4/13/18 05:20	CJG	B
4-Bromofluorobenzene (S)	98.9		%	79 - 114		SW846 8260B			4/12/18 02:05	CJG	A
Dibromofluoromethane (S)	93.1		%	78 - 116		SW846 8260B			4/13/18 05:20	CJG	B
Dibromofluoromethane (S)	89.2		%	78 - 116		SW846 8260B			4/12/18 02:05	CJG	A
Toluene-d8 (S)	91.6		%	76 - 127		SW846 8260B			4/13/18 05:20	CJG	B
Toluene-d8 (S)	94		%	76 - 127		SW846 8260B			4/12/18 02:05	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	4.4		ug/L	0.98	0.19	8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46.7		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
Fluoranthene-d10 (S)	71.6		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 22:03	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/14/18 10:42	MBW	E

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611008** Date Collected: 4/6/2018 16:25 Matrix: Water

Sample ID: **MRC-MW21B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 02:27	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 02:27	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 02:27	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:27	CJG	A
1,1-Dichloroethane	20.0		ug/L	1.0	0.28	SW846 8260B		4/12/18 02:27	CJG	A
1,1-Dichloroethene	205		ug/L	20.0	5.8	SW846 8260B		4/13/18 06:05	CJG	E
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 02:27	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 02:27	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 02:27	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 02:27	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 02:27	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 02:27	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 02:27	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:27	CJG	A
1,2-Dichloroethene, Total	8.5		ug/L	2.0	0.45	SW846 8260B		4/12/18 02:27	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 02:27	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 02:27	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 02:27	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 02:27	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 02:27	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:27	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 02:27	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 02:27	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 02:27	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 02:27	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 02:27	CJG	A
Benzene	28.8		ug/L	1.0	0.23	SW846 8260B		4/12/18 02:27	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:27	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:27	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 02:27	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 02:27	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 02:27	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 02:27	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:27	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 02:27	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 02:27	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611008** Date Collected: 4/6/2018 16:25 Matrix: Water

Sample ID: **MRC-MW21B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:27	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 02:27	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:27	CJG	A
Cyclohexane	1.3		ug/L	1.0	0.29	SW846 8260B		4/12/18 02:27	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:27	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:27	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 02:27	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 02:27	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 02:27	CJG	A
Freon 113	0.98J	J	ug/L	1.0	0.26	SW846 8260B		4/12/18 02:27	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 02:27	CJG	A
Isopropylbenzene	15.0		ug/L	1.0	0.22	SW846 8260B		4/12/18 02:27	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 02:27	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 02:27	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:27	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 02:27	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 02:27	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 02:27	CJG	A
Tetrachloroethene	8.7		ug/L	1.0	0.35	SW846 8260B		4/12/18 02:27	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 02:27	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 02:27	CJG	A
Trichloroethene	522		ug/L	20.0	6.6	SW846 8260B		4/13/18 06:05	CJG	E
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 02:27	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 02:27	CJG	A
Vinyl Chloride	0.88J	J	ug/L	1.0	0.30	SW846 8260B		4/12/18 02:27	CJG	A
cis-1,2-Dichloroethene	8.5		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:27	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:27	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 02:27	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 02:27	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:27	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 02:27	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:27	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 02:27	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 02:27	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 02:27	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 02:27	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 02:27	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 02:27	CJG	A

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611008** Date Collected: 4/6/2018 16:25 Matrix: Water

Sample ID: **MRC-MW21B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 02:27	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 02:27	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/12/18 02:27	CJG	A
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/13/18 06:05	CJG	E
4-Bromofluorobenzene (S)	104		%	79 - 114		SW846 8260B			4/12/18 02:27	CJG	A
4-Bromofluorobenzene (S)	99.3		%	79 - 114		SW846 8260B			4/13/18 06:05	CJG	E
Dibromofluoromethane (S)	96.8		%	78 - 116		SW846 8260B			4/13/18 06:05	CJG	E
Dibromofluoromethane (S)	93.7		%	78 - 116		SW846 8260B			4/12/18 02:27	CJG	A
Toluene-d8 (S)	92.9		%	76 - 127		SW846 8260B			4/13/18 06:05	CJG	E
Toluene-d8 (S)	95.5		%	76 - 127		SW846 8260B			4/12/18 02:27	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	19.3		ug/L	0.94	0.18	8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46.3		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
Fluoranthene-d10 (S)	57.5		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 19:46	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/18/18 03:15	EGO	F
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/18/18 03:15	EGO	F
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/18/18 03:15	EGO	F
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/18/18 03:15	EGO	F
Methane	15.6		ug/L	1.5	0.34	RSK 175			4/18/18 03:15	EGO	F
Propane	ND		ug/L	3.2	0.22	RSK 175			4/18/18 03:15	EGO	F
WET CHEMISTRY											
Alkalinity, Total	35	1	mg/L	5	0.8	S2320B-97			4/11/18 12:49	MSA	G
Ammonia-N	0.221		mg/L	0.100	0.03	D6919-09			4/17/18 16:29	CMM	H
Chloride	83.2		mg/L	2.0	0.24	EPA 300.0			4/10/18 07:08	CHW	K
Nitrate-N	ND	3	mg/L	0.20	0.057	EPA 300.0			4/10/18 07:08	CHW	K
Nitrite-N	ND	2	mg/L	0.20	0.040	EPA 300.0			4/10/18 07:08	CHW	K
Orthophosphate	ND	5	mg/L	0.020	0.0029	S4500PE-99			4/10/18 02:22	MSA	K
Phosphorus, Total	0.070J	J	mg/L	0.10	0.017	EPA 365.1	4/13/18 13:00	C_D	4/24/18 12:08	MNP	H

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611008** Date Collected: 4/6/2018 16:25 Matrix: Water

Sample ID: **MRC-MW21B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Sulfate	2.0		mg/L	2.0	0.40	EPA 300.0		4/10/18 07:08	CHW	K
Total Dissolved Solids	296	4	mg/L	5	5	S2540C-11		4/12/18 15:36	LLJ	K
Total Organic Carbon (TOC)	0.55		mg/L	0.50	0.18	S5310B-00		4/11/18 11:34	PAG	I

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611009** Date Collected: 4/6/2018 18:45 Matrix: Water

Sample ID: **MRC-MW20A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:45	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:45	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:45	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:45	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:45	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 00:45	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:45	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 00:45	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:45	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 00:45	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:45	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 00:45	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:45	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 00:45	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:45	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:45	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:45	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 00:45	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:45	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:45	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 00:45	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 00:45	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 00:45	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 00:45	CJG	B
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/13/18 00:45	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:45	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:45	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:45	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:45	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 00:45	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 00:45	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:45	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:45	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:45	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:45	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611009** Date Collected: 4/6/2018 18:45 Matrix: Water

Sample ID: **MRC-MW20A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 00:45	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:45	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:45	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:45	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:45	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:45	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:45	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:45	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 00:45	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:45	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 00:45	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:45	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:45	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 00:45	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:45	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:45	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:45	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 00:45	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:45	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 00:45	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:45	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:45	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:45	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 00:45	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:45	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:45	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:45	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:45	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:45	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 00:45	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 00:45	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 00:45	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611009** Date Collected: 4/6/2018 18:45 Matrix: Water

Sample ID: **MRC-MW20A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 00:45	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 00:45	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/13/18 00:45	CJG	B
4-Bromofluorobenzene (S)	99.5		%	79 - 114		SW846 8260B			4/13/18 00:45	CJG	B
Dibromofluoromethane (S)	98.4		%	78 - 116		SW846 8260B			4/13/18 00:45	CJG	B
Toluene-d8 (S)	95.6		%	76 - 127		SW846 8260B			4/13/18 00:45	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	1.7		ug/L	1.0	0.19	8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	39.6		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C
Fluoranthene-d10 (S)	60.2		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 21:36	GEC	C

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611010** Date Collected: 4/6/2018 16:05 Matrix: Water

Sample ID: **MRC-MW21A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 03:13	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 03:13	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 03:13	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
1,1-Dichloroethane	2.7		ug/L	1.0	0.28	SW846 8260B		4/12/18 03:13	CJG	A
1,1-Dichloroethene	3.1		ug/L	1.0	0.29	SW846 8260B		4/12/18 03:13	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 03:13	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 03:13	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 03:13	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 03:13	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 03:13	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 03:13	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 03:13	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:13	CJG	A
1,2-Dichloroethene, Total	0.54J	J	ug/L	2.0	0.45	SW846 8260B		4/12/18 03:13	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 03:13	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 03:13	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 03:13	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 03:13	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 03:13	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:13	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 03:13	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 03:13	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 03:13	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 03:13	CJG	A
Acetone	5.8J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 03:13	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 03:13	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:13	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:13	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 03:13	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 03:13	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 03:13	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 03:13	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:13	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 03:13	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 03:13	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611010** Date Collected: 4/6/2018 16:05 Matrix: Water

Sample ID: **MRC-MW21A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 03:13	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:13	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 03:13	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:13	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 03:13	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 03:13	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 03:13	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 03:13	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 03:13	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 03:13	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 03:13	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 03:13	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 03:13	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 03:13	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 03:13	CJG	A
Tetrachloroethene	0.43J	J	ug/L	1.0	0.35	SW846 8260B		4/12/18 03:13	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 03:13	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 03:13	CJG	A
Trichloroethene	2.8		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 03:13	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 03:13	CJG	A
Vinyl Chloride	0.39J	J	ug/L	1.0	0.30	SW846 8260B		4/12/18 03:13	CJG	A
cis-1,2-Dichloroethene	0.54J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 03:13	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:13	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 03:13	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 03:13	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 03:13	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:13	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:13	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:13	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 03:13	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 03:13	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 03:13	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611010** Date Collected: 4/6/2018 16:05 Matrix: Water

Sample ID: **MRC-MW21A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 03:13	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 03:13	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/12/18 03:13	CJG	A
4-Bromofluorobenzene (S)	98.2		%	79 - 114		SW846 8260B			4/12/18 03:13	CJG	A
Dibromofluoromethane (S)	95.7		%	78 - 116		SW846 8260B			4/12/18 03:13	CJG	A
Toluene-d8 (S)	94.5		%	76 - 127		SW846 8260B			4/12/18 03:13	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.46		ug/L	0.10	0.019	8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	47		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C
Fluoranthene-d10 (S)	68.2		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 20:20	CGS	C

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611011** Date Collected: 4/6/2018 15:10 Matrix: Water

Sample ID: **MRC-MW120B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 03:36	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 03:36	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 03:36	CJG	A
1,1,2-Trichloroethane	1.1		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:36	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 03:36	CJG	A
1,1-Dichloroethene	210		ug/L	50.0	14.5	SW846 8260B		4/13/18 06:28	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 03:36	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 03:36	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 03:36	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 03:36	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 03:36	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 03:36	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 03:36	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:36	CJG	A
1,2-Dichloroethene, Total	121		ug/L	2.0	0.45	SW846 8260B		4/12/18 03:36	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 03:36	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 03:36	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 03:36	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 03:36	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 03:36	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:36	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 03:36	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 03:36	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 03:36	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 03:36	CJG	A
Acetone	9.3J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 03:36	CJG	A
Benzene	4.8		ug/L	1.0	0.23	SW846 8260B		4/12/18 03:36	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:36	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:36	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 03:36	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 03:36	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 03:36	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 03:36	CJG	A
Carbon Tetrachloride	0.33J	J	ug/L	1.0	0.31	SW846 8260B		4/12/18 03:36	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 03:36	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 03:36	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611011** Date Collected: 4/6/2018 15:10 Matrix: Water

Sample ID: **MRC-MW120B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:36	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 03:36	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:36	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 03:36	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:36	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:36	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 03:36	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 03:36	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 03:36	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 03:36	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 03:36	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 03:36	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 03:36	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 03:36	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:36	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 03:36	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 03:36	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 03:36	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 03:36	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 03:36	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 03:36	CJG	A
Trichloroethene	1260		ug/L	50.0	16.5	SW846 8260B		4/13/18 06:28	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 03:36	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 03:36	CJG	A
Vinyl Chloride	1.8		ug/L	1.0	0.30	SW846 8260B		4/12/18 03:36	CJG	A
cis-1,2-Dichloroethene	121		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:36	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:36	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 03:36	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 03:36	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:36	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 03:36	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:36	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 03:36	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 03:36	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 03:36	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 03:36	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 03:36	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 03:36	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611011** Date Collected: 4/6/2018 15:10 Matrix: Water
Sample ID: **MRC-MW120B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 03:36	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 03:36	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/12/18 03:36	CJG	A
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/13/18 06:28	CJG	B
4-Bromofluorobenzene (S)	95		%	79 - 114		SW846 8260B			4/13/18 06:28	CJG	B
4-Bromofluorobenzene (S)	97.6		%	79 - 114		SW846 8260B			4/12/18 03:36	CJG	A
Dibromofluoromethane (S)	94.4		%	78 - 116		SW846 8260B			4/12/18 03:36	CJG	A
Dibromofluoromethane (S)	96.7		%	78 - 116		SW846 8260B			4/13/18 06:28	CJG	B
Toluene-d8 (S)	94.4		%	76 - 127		SW846 8260B			4/12/18 03:36	CJG	A
Toluene-d8 (S)	93.5		%	76 - 127		SW846 8260B			4/13/18 06:28	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	21.9		ug/L	0.93	0.18	8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	61.1		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
Fluoranthene-d10 (S)	64.8		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 17:30	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/14/18 10:50	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611012** Date Collected: 4/6/2018 18:35 Matrix: Water

Sample ID: **MRC-MW63A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:22	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:22	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:22	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
1,1-Dichloroethane	4.2		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:22	CJG	B
1,1-Dichloroethene	3.3		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:22	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 00:22	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:22	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 00:22	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:22	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 00:22	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:22	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 00:22	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:22	CJG	B
1,2-Dichloroethene, Total	6.5		ug/L	2.0	0.45	SW846 8260B		4/13/18 00:22	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:22	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:22	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:22	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 00:22	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:22	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:22	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 00:22	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 00:22	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 00:22	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 00:22	CJG	B
Acetone	4.8J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 00:22	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:22	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:22	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:22	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:22	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 00:22	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 00:22	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:22	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:22	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:22	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:22	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611012** Date Collected: 4/6/2018 18:35 Matrix: Water

Sample ID: **MRC-MW63A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 00:22	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:22	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:22	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:22	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:22	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:22	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:22	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:22	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 00:22	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:22	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 00:22	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:22	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:22	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 00:22	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:22	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:22	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:22	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 00:22	CJG	B
Trichloroethene	4.6		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:22	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 00:22	CJG	B
Vinyl Chloride	1.1		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:22	CJG	B
cis-1,2-Dichloroethene	6.5		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:22	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:22	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 00:22	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:22	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:22	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:22	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:22	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:22	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 00:22	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 00:22	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 00:22	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611012** Date Collected: 4/6/2018 18:35 Matrix: Water

Sample ID: **MRC-MW63A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 00:22	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 00:22	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/13/18 00:22	CJG	B
4-Bromofluorobenzene (S)	97.5		%	79 - 114		SW846 8260B			4/13/18 00:22	CJG	B
Dibromofluoromethane (S)	95.5		%	78 - 116		SW846 8260B			4/13/18 00:22	CJG	B
Toluene-d8 (S)	94.2		%	76 - 127		SW846 8260B			4/13/18 00:22	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	1.9		ug/L	0.92	0.18	8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	43.7		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C
Fluoranthene-d10 (S)	59.3		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 21:08	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611013** Date Collected: 4/6/2018 12:07 Matrix: Water

Sample ID: **MRC-MW81B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 04:22	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 04:22	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 04:22	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 04:22	CJG	A
1,1-Dichloroethene	7.3		ug/L	1.0	0.29	SW846 8260B		4/12/18 04:22	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 04:22	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 04:22	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 04:22	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 04:22	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 04:22	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 04:22	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 04:22	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 04:22	CJG	A
1,2-Dichloroethene, Total	304		ug/L	20.0	4.5	SW846 8260B		4/13/18 05:42	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 04:22	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 04:22	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 04:22	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 04:22	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 04:22	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 04:22	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 04:22	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 04:22	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 04:22	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 04:22	CJG	A
Acetone	3.6J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 04:22	CJG	A
Benzene	0.50J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 04:22	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 04:22	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 04:22	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 04:22	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 04:22	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 04:22	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 04:22	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 04:22	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 04:22	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 04:22	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611013** Date Collected: 4/6/2018 12:07 Matrix: Water

Sample ID: **MRC-MW81B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 04:22	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 04:22	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 04:22	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 04:22	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 04:22	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 04:22	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 04:22	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 04:22	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 04:22	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 04:22	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 04:22	CJG	A
Methyl cyclohexane	0.59J	J,1	ug/L	1.0	0.30	SW846 8260B		4/12/18 04:22	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 04:22	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 04:22	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 04:22	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 04:22	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 04:22	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 04:22	CJG	A
Trichloroethene	46.8		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 04:22	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 04:22	CJG	A
Vinyl Chloride	110		ug/L	1.0	0.30	SW846 8260B		4/12/18 04:22	CJG	A
cis-1,2-Dichloroethene	301		ug/L	10.0	3.2	SW846 8260B		4/13/18 05:42	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 04:22	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 04:22	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 04:22	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 04:22	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 04:22	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 04:22	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 04:22	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 04:22	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 04:22	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 04:22	CJG	A

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611013** Date Collected: 4/6/2018 12:07 Matrix: Water

Sample ID: **MRC-MW81B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.4		ug/L	1.0	0.26	SW846 8260B			4/12/18 04:22	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 04:22	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			4/13/18 05:42	CJG	B
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/12/18 04:22	CJG	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/12/18 04:22	CJG	A
4-Bromofluorobenzene (S)	97		%	79 - 114		SW846 8260B			4/13/18 05:42	CJG	B
Dibromofluoromethane (S)	97.9		%	78 - 116		SW846 8260B			4/12/18 04:22	CJG	A
Dibromofluoromethane (S)	98.3		%	78 - 116		SW846 8260B			4/13/18 05:42	CJG	B
Toluene-d8 (S)	91		%	76 - 127		SW846 8260B			4/13/18 05:42	CJG	B
Toluene-d8 (S)	96.4		%	76 - 127		SW846 8260B			4/12/18 04:22	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.36		ug/L	0.10	0.019	8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
Fluoranthene-d10 (S)	67.4		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 17:14	CGS	C
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Chromium, Total	0.0017J	J	mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Cobalt, Total	0.038		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Copper, Total	0.0026J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:36	AXC	E2
Nickel, Total	0.066		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1
Zinc, Total	0.24		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:46	MO	E1

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611013** Date Collected: 4/6/2018 12:07 Matrix: Water

Sample ID: **MRC-MW81B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611014** Date Collected: 4/6/2018 16:26 Matrix: Water

Sample ID: **MRC-MW78B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 05:53	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 05:53	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 05:53	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 05:53	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 05:53	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 05:53	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 05:53	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 05:53	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:53	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 05:53	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 05:53	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 05:53	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:53	CJG	A
1,2-Dichloroethene, Total	0.59J	J	ug/L	2.0	0.45	SW846 8260B		4/12/18 05:53	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:53	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:53	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:53	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 05:53	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:53	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:53	CJG	A
2-Butanone	4.7J	J	ug/L	10.0	1.8	SW846 8260B		4/12/18 05:53	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 05:53	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 05:53	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 05:53	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 05:53	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:53	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:53	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:53	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:53	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 05:53	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 05:53	CJG	A
Carbon Disulfide	0.32J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 05:53	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:53	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 05:53	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 05:53	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611014** Date Collected: 4/6/2018 16:26 Matrix: Water

Sample ID: **MRC-MW78B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 05:53	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:53	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 05:53	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:53	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:53	CJG	A
Ethyl tert-butyl ether	0.49J	J	ug/L	1.0	0.19	SW846 8260B		4/12/18 05:53	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 05:53	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 05:53	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 05:53	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 05:53	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 05:53	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 05:53	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 05:53	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 05:53	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:53	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 05:53	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:53	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 05:53	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:53	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 05:53	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 05:53	CJG	A
cis-1,2-Dichloroethene	0.59J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 05:53	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:53	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 05:53	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 05:53	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 05:53	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:53	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:53	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:53	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 05:53	CJG	A
tert-Butyl Alcohol	13.7		ug/L	10.0	2.2	SW846 8260B		4/12/18 05:53	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 05:53	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611014** Date Collected: 4/6/2018 16:26 Matrix: Water

Sample ID: **MRC-MW78B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 05:53	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 05:53	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/12/18 05:53	CJG	A
4-Bromofluorobenzene (S)	99.4		%	79 - 114		SW846 8260B			4/12/18 05:53	CJG	A
Dibromofluoromethane (S)	95.1		%	78 - 116		SW846 8260B			4/12/18 05:53	CJG	A
Toluene-d8 (S)	93.4		%	76 - 127		SW846 8260B			4/12/18 05:53	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611015** Date Collected: 4/6/2018 18:54 Matrix: Water

Sample ID: **MRC-MW92C** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 23:59	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:59	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:59	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 23:59	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 23:59	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 23:59	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:59	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 23:59	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:59	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 23:59	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 23:59	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 23:59	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:59	CJG	B
1,2-Dichloroethene, Total	3.5		ug/L	2.0	0.45	SW846 8260B		4/12/18 23:59	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:59	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:59	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:59	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 23:59	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:59	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:59	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 23:59	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 23:59	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 23:59	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 23:59	CJG	B
Acetone	4.2J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 23:59	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:59	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:59	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:59	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:59	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 23:59	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 23:59	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:59	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:59	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:59	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:59	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611015** Date Collected: 4/6/2018 18:54 Matrix: Water

Sample ID: **MRC-MW92C** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 23:59	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:59	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 23:59	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:59	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:59	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:59	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:59	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:59	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 23:59	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:59	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 23:59	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:59	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:59	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 23:59	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:59	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 23:59	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:59	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 23:59	CJG	B
Trichloroethene	3.4		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:59	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 23:59	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:59	CJG	B
cis-1,2-Dichloroethene	3.5		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:59	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:59	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 23:59	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:59	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:59	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:59	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:59	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:59	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 23:59	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 23:59	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 23:59	CJG	B

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611015** Date Collected: 4/6/2018 18:54 Matrix: Water

Sample ID: **MRC-MW92C** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 23:59	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 23:59	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/12/18 23:59	CJG	B
4-Bromofluorobenzene (S)	98.6		%	79 - 114		SW846 8260B			4/12/18 23:59	CJG	B
Dibromofluoromethane (S)	94.6		%	78 - 116		SW846 8260B			4/12/18 23:59	CJG	B
Toluene-d8 (S)	92.6		%	76 - 127		SW846 8260B			4/12/18 23:59	CJG	B
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Chromium, Total	0.0028		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Cobalt, Total	0.013		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Copper, Total	0.0021J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:37	AXC	C2
Nickel, Total	0.024		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1
Zinc, Total	0.025		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 22:50	MO	C1

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611016** Date Collected: 4/6/2018 10:55 Matrix: Water

Sample ID: **MRC-MW106B/C** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 05:08	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 05:08	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 05:08	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
1,1-Dichloroethane	0.36J	J	ug/L	1.0	0.28	SW846 8260B		4/12/18 05:08	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 05:08	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 05:08	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 05:08	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 05:08	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:08	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 05:08	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 05:08	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 05:08	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:08	CJG	A
1,2-Dichloroethene, Total	0.55J	J	ug/L	2.0	0.45	SW846 8260B		4/12/18 05:08	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:08	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:08	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:08	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 05:08	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:08	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:08	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 05:08	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 05:08	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 05:08	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 05:08	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 05:08	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:08	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:08	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:08	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:08	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 05:08	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 05:08	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:08	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:08	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 05:08	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 05:08	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611016** Date Collected: 4/6/2018 10:55 Matrix: Water

Sample ID: **MRC-MW106B/C** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 05:08	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:08	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 05:08	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:08	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:08	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 05:08	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 05:08	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 05:08	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 05:08	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 05:08	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 05:08	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 05:08	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 05:08	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 05:08	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:08	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 05:08	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:08	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 05:08	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:08	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 05:08	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 05:08	CJG	A
cis-1,2-Dichloroethene	0.55J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 05:08	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:08	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 05:08	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 05:08	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 05:08	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:08	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:08	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:08	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 05:08	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 05:08	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 05:08	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611016** Date Collected: 4/6/2018 10:55 Matrix: Water

Sample ID: **MRC-MW106B/C** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 05:08	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 05:08	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/12/18 05:08	CJG	A
4-Bromofluorobenzene (S)	99.6		%	79 - 114		SW846 8260B			4/12/18 05:08	CJG	A
Dibromofluoromethane (S)	95.8		%	78 - 116		SW846 8260B			4/12/18 05:08	CJG	A
Toluene-d8 (S)	93.7		%	76 - 127		SW846 8260B			4/12/18 05:08	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611017** Date Collected: 4/6/2018 09:40 Matrix: Water

Sample ID: **MRC-MW81A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILE SIM											
1,4-Dioxane	0.30		ug/L	0.098	0.019	8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	55.4		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
Fluoranthene-d10 (S)	67.5		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 16:22	CGS	A
METALS											
Antimony, Total	0.00088J	J	mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Arsenic, Total	0.0018J	J	mg/L	0.0033	0.0011	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Chromium, Total	0.0017J	J	mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Cobalt, Total	0.0021J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Copper, Total	0.0038J	J	mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/17/18 16:00	AXC	4/18/18 11:38	AXC	C2
Nickel, Total	0.0088		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1
Zinc, Total	0.016		mg/L	0.0056	0.0019	SW846 6020A	4/11/18 12:00	DXC	4/12/18 23:05	MO	C1

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611018** Date Collected: 4/6/2018 15:40 Matrix: Water

Sample ID: **MRC-MW120A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 05:30	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 05:30	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 05:30	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 05:30	CJG	A
1,1-Dichloroethene	0.59J	J	ug/L	1.0	0.29	SW846 8260B		4/12/18 05:30	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 05:30	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 05:30	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 05:30	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:30	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 05:30	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 05:30	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 05:30	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:30	CJG	A
1,2-Dichloroethene, Total	4.1		ug/L	2.0	0.45	SW846 8260B		4/12/18 05:30	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:30	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:30	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:30	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 05:30	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:30	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:30	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 05:30	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 05:30	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 05:30	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 05:30	CJG	A
Acetone	15.7		ug/L	10.0	3.1	SW846 8260B		4/12/18 05:30	CJG	A
Benzene	8.7		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:30	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:30	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:30	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 05:30	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 05:30	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 05:30	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:30	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:30	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 05:30	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 05:30	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611018** Date Collected: 4/6/2018 15:40 Matrix: Water

Sample ID: **MRC-MW120A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 05:30	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:30	CJG	A
Cyclohexane	10.0		ug/L	1.0	0.29	SW846 8260B		4/12/18 05:30	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:30	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
Diisopropyl ether	1.4		ug/L	1.0	0.25	SW846 8260B		4/12/18 05:30	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 05:30	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 05:30	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 05:30	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 05:30	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 05:30	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 05:30	CJG	A
Methyl cyclohexane	4.4	1	ug/L	1.0	0.30	SW846 8260B		4/12/18 05:30	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 05:30	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 05:30	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:30	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 05:30	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 05:30	CJG	A
Total Xylenes	2.6J	J	ug/L	3.0	0.66	SW846 8260B		4/12/18 05:30	CJG	A
Trichloroethene	1.6		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 05:30	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 05:30	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 05:30	CJG	A
cis-1,2-Dichloroethene	4.1		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:30	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:30	CJG	A
mp-Xylene	2.6		ug/L	2.0	0.52	SW846 8260B		4/12/18 05:30	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 05:30	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 05:30	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 05:30	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 05:30	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 05:30	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 05:30	CJG	A
tert-Butyl Alcohol	5.0J	J	ug/L	10.0	2.2	SW846 8260B		4/12/18 05:30	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 05:30	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611018** Date Collected: 4/6/2018 15:40 Matrix: Water

Sample ID: **MRC-MW120A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 05:30	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 05:30	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/12/18 05:30	CJG	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/12/18 05:30	CJG	A
Dibromofluoromethane (S)	95.4		%	78 - 116		SW846 8260B			4/12/18 05:30	CJG	A
Toluene-d8 (S)	97.6		%	76 - 127		SW846 8260B			4/12/18 05:30	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	2.8		ug/L	1.1	0.20	8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
Chrysene-d12	0.50		ug/L			8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	40		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
Fluoranthene-d10 (S)	63.2		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/16/18 17:57	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/14/18 10:58	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611019** Date Collected: 4/9/2018 21:10 Matrix: Water

Sample ID: **Trip Blank** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 23:02	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 23:02	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 23:02	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 23:02	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 23:02	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/11/18 23:02	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 23:02	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/11/18 23:02	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:02	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/11/18 23:02	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/11/18 23:02	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/11/18 23:02	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:02	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/11/18 23:02	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:02	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:02	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:02	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/11/18 23:02	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:02	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:02	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/11/18 23:02	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/11/18 23:02	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/11/18 23:02	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/11/18 23:02	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/11/18 23:02	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:02	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:02	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:02	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/11/18 23:02	CJG	A
Bromoform	0.97J	J	ug/L	1.0	0.40	SW846 8260B		4/11/18 23:02	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/11/18 23:02	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:02	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:02	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 23:02	CJG	A
Chlorodibromomethane	0.50J	J	ug/L	1.0	0.45	SW846 8260B		4/11/18 23:02	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611019** Date Collected: 4/9/2018 21:10 Matrix: Water

Sample ID: **Trip Blank** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/11/18 23:02	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:02	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/11/18 23:02	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:02	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/11/18 23:02	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/11/18 23:02	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/11/18 23:02	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 23:02	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/11/18 23:02	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/11/18 23:02	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/11/18 23:02	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 23:02	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/11/18 23:02	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/11/18 23:02	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:02	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/11/18 23:02	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/11/18 23:02	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/11/18 23:02	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/11/18 23:02	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/11/18 23:02	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/11/18 23:02	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:02	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:02	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/11/18 23:02	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/11/18 23:02	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/11/18 23:02	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/11/18 23:02	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/11/18 23:02	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/11/18 23:02	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/11/18 23:02	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/11/18 23:02	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/11/18 23:02	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611019** Date Collected: 4/9/2018 21:10 Matrix: Water
Sample ID: **Trip Blank** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/11/18 23:02	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/11/18 23:02	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/11/18 23:02	CJG	A
4-Bromofluorobenzene (S)	98.7		%	79 - 114		SW846 8260B			4/11/18 23:02	CJG	A
Dibromofluoromethane (S)	94.7		%	78 - 116		SW846 8260B			4/11/18 23:02	CJG	A
Toluene-d8 (S)	96		%	76 - 127		SW846 8260B			4/11/18 23:02	CJG	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611020** Date Collected: 4/9/2018 11:05 Matrix: Water

Sample ID: **MRC-MW69A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 17:12	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 17:12	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 17:12	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 17:12	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 17:12	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 17:12	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 17:12	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 17:12	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:12	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 17:12	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 17:12	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 17:12	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:12	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 17:12	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:12	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:12	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:12	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 17:12	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:12	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:12	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 17:12	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 17:12	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 17:12	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 17:12	TMP	A
Acetone	4.2J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 17:12	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:12	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:12	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:12	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:12	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 17:12	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 17:12	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:12	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:12	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 17:12	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 17:12	TMP	A

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611020** Date Collected: 4/9/2018 11:05 Matrix: Water

Sample ID: **MRC-MW69A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 17:12	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:12	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 17:12	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:12	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:12	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 17:12	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 17:12	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 17:12	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 17:12	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 17:12	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 17:12	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 17:12	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 17:12	TMP	A
Naphthalene	0.37J	J	ug/L	2.0	0.34	SW846 8260B		4/12/18 17:12	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:12	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 17:12	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:12	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 17:12	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:12	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 17:12	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 17:12	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:12	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:12	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 17:12	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 17:12	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 17:12	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:12	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:12	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:12	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 17:12	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 17:12	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 17:12	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611020** Date Collected: 4/9/2018 11:05 Matrix: Water

Sample ID: **MRC-MW69A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 17:12	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 17:12	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	107		%	62 - 133		SW846 8260B			4/12/18 17:12	TMP	A
4-Bromofluorobenzene (S)	98.2		%	79 - 114		SW846 8260B			4/12/18 17:12	TMP	A
Dibromofluoromethane (S)	96.5		%	78 - 116		SW846 8260B			4/12/18 17:12	TMP	A
Toluene-d8 (S)	94.2		%	76 - 127		SW846 8260B			4/12/18 17:12	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	16.8		ug/L	0.96	0.18	8270 SIM	4/16/18 08:40	CAC	4/26/18 12:49	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:22	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:22	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:22	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:22	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:22	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	62.8		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 05:22	GEC	C
2-Methylnapthalene-d10 (S)	74.6		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/26/18 12:49	GEC	C
Fluoranthene-d10 (S)	98.8		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 05:22	GEC	C
Fluoranthene-d10 (S)	99.9		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/26/18 12:49	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611021** Date Collected: 4/9/2018 09:15 Matrix: Water

Sample ID: **MRC-MW41A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 17:35	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 17:35	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 17:35	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 17:35	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 17:35	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 17:35	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 17:35	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 17:35	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:35	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 17:35	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 17:35	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 17:35	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:35	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 17:35	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:35	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:35	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:35	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 17:35	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:35	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:35	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 17:35	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 17:35	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 17:35	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 17:35	TMP	A
Acetone	6.9J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 17:35	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:35	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:35	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:35	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:35	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 17:35	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 17:35	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:35	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:35	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 17:35	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 17:35	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611021** Date Collected: 4/9/2018 09:15 Matrix: Water

Sample ID: **MRC-MW41A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 17:35	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:35	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 17:35	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:35	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:35	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 17:35	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 17:35	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 17:35	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 17:35	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 17:35	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 17:35	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 17:35	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 17:35	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 17:35	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:35	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 17:35	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:35	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 17:35	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:35	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 17:35	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 17:35	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:35	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:35	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 17:35	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 17:35	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 17:35	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:35	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:35	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:35	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 17:35	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 17:35	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 17:35	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611021** Date Collected: 4/9/2018 09:15 Matrix: Water

Sample ID: **MRC-MW41A** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 17:35	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 17:35	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/12/18 17:35	TMP	A
4-Bromofluorobenzene (S)	97		%	79 - 114		SW846 8260B			4/12/18 17:35	TMP	A
Dibromofluoromethane (S)	97.4		%	78 - 116		SW846 8260B			4/12/18 17:35	TMP	A
Toluene-d8 (S)	92.7		%	76 - 127		SW846 8260B			4/12/18 17:35	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.28		ug/L	0.10	0.019	8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	64.5		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C
Fluoranthene-d10 (S)	105		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 05:51	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611022** Date Collected: 4/9/2018 12:10 Matrix: Water

Sample ID: **MRC-MW69B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 17:58	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 17:58	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 17:58	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 17:58	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 17:58	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 17:58	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 17:58	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 17:58	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:58	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 17:58	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 17:58	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 17:58	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:58	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 17:58	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:58	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:58	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:58	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 17:58	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:58	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:58	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 17:58	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 17:58	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 17:58	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 17:58	TMP	A
Acetone	6.5J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 17:58	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:58	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:58	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:58	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 17:58	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 17:58	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 17:58	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:58	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:58	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 17:58	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 17:58	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611022** Date Collected: 4/9/2018 12:10 Matrix: Water

Sample ID: **MRC-MW69B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 17:58	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:58	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 17:58	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:58	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 17:58	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 17:58	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 17:58	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 17:58	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 17:58	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 17:58	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 17:58	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 17:58	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 17:58	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 17:58	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:58	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 17:58	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 17:58	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 17:58	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 17:58	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 17:58	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 17:58	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:58	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:58	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 17:58	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 17:58	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 17:58	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 17:58	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 17:58	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 17:58	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 17:58	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 17:58	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 17:58	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611022** Date Collected: 4/9/2018 12:10 Matrix: Water

Sample ID: **MRC-MW69B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 17:58	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 17:58	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/12/18 17:58	TMP	A
4-Bromofluorobenzene (S)	98.1		%	79 - 114		SW846 8260B			4/12/18 17:58	TMP	A
Dibromofluoromethane (S)	96.7		%	78 - 116		SW846 8260B			4/12/18 17:58	TMP	A
Toluene-d8 (S)	93.2		%	76 - 127		SW846 8260B			4/12/18 17:58	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.20		ug/L	0.10	0.019	8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	58.5		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C
Fluoranthene-d10 (S)	97.2		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 06:19	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611023** Date Collected: 4/9/2018 11:43 Matrix: Water

Sample ID: **MRC-MW87B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 18:21	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 18:21	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 18:21	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 18:21	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 18:21	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 18:21	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 18:21	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 18:21	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 18:21	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 18:21	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 18:21	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 18:21	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:21	TMP	A
1,2-Dichloroethene, Total	3.2		ug/L	2.0	0.45	SW846 8260B		4/12/18 18:21	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 18:21	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 18:21	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 18:21	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 18:21	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 18:21	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:21	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 18:21	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 18:21	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 18:21	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 18:21	TMP	A
Acetone	7.2J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 18:21	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 18:21	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:21	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:21	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 18:21	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 18:21	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 18:21	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 18:21	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:21	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 18:21	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 18:21	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611023** Date Collected: 4/9/2018 11:43 Matrix: Water

Sample ID: **MRC-MW87B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 18:21	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:21	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 18:21	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:21	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 18:21	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 18:21	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 18:21	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 18:21	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 18:21	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 18:21	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 18:21	TMP	A
Methyl cyclohexane	0.65J	J,1	ug/L	1.0	0.30	SW846 8260B		4/12/18 18:21	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 18:21	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 18:21	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 18:21	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 18:21	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 18:21	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 18:21	TMP	A
Trichloroethene	55.9		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 18:21	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 18:21	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 18:21	TMP	A
cis-1,2-Dichloroethene	3.2		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:21	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:21	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 18:21	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 18:21	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 18:21	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:21	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:21	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:21	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 18:21	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 18:21	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 18:21	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611023** Date Collected: 4/9/2018 11:43 Matrix: Water

Sample ID: **MRC-MW87B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 18:21	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 18:21	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/12/18 18:21	TMP	A
4-Bromofluorobenzene (S)	98.5		%	79 - 114		SW846 8260B			4/12/18 18:21	TMP	A
Dibromofluoromethane (S)	95.1		%	78 - 116		SW846 8260B			4/12/18 18:21	TMP	A
Toluene-d8 (S)	93.9		%	76 - 127		SW846 8260B			4/12/18 18:21	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	1.1		ug/L	0.10	0.019	8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	66.6		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C
Fluoranthene-d10 (S)	103		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 06:47	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611024** Date Collected: 4/9/2018 11:05 Matrix: Water

Sample ID: **MRC-MW162B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 18:43	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 18:43	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 18:43	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 18:43	TMP	A
1,1-Dichloroethene	1.5		ug/L	1.0	0.29	SW846 8260B		4/12/18 18:43	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 18:43	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 18:43	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 18:43	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 18:43	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 18:43	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 18:43	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 18:43	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:43	TMP	A
1,2-Dichloroethene, Total	371		ug/L	20.0	4.5	SW846 8260B		4/13/18 12:47	TMP	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 18:43	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 18:43	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 18:43	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 18:43	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 18:43	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:43	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 18:43	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 18:43	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 18:43	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 18:43	TMP	A
Acetone	7.6J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 18:43	TMP	A
Benzene	0.31J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 18:43	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:43	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:43	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 18:43	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 18:43	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 18:43	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 18:43	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:43	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 18:43	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 18:43	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611024** Date Collected: 4/9/2018 11:05 Matrix: Water

Sample ID: **MRC-MW162B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 18:43	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:43	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 18:43	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:43	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 18:43	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 18:43	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 18:43	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 18:43	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 18:43	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 18:43	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 18:43	TMP	A
Methyl cyclohexane	0.99J	J,1	ug/L	1.0	0.30	SW846 8260B		4/12/18 18:43	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 18:43	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 18:43	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 18:43	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 18:43	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 18:43	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 18:43	TMP	A
Trichloroethene	84.4		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 18:43	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 18:43	TMP	A
Vinyl Chloride	0.36J	J	ug/L	1.0	0.30	SW846 8260B		4/12/18 18:43	TMP	A
cis-1,2-Dichloroethene	367		ug/L	10.0	3.2	SW846 8260B		4/13/18 12:47	TMP	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:43	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 18:43	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 18:43	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 18:43	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 18:43	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 18:43	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 18:43	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 18:43	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 18:43	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 18:43	TMP	A

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID: **2307611024** Date Collected: 4/9/2018 11:05 Matrix: Water

Sample ID: **MRC-MW162B** Date Received: 4/9/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	3.0		ug/L	1.0	0.26	SW846 8260B			4/12/18 18:43	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 18:43	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/13/18 12:47	TMP	B
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/12/18 18:43	TMP	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/12/18 18:43	TMP	A
4-Bromofluorobenzene (S)	104		%	79 - 114		SW846 8260B			4/13/18 12:47	TMP	B
Dibromofluoromethane (S)	95.9		%	78 - 116		SW846 8260B			4/13/18 12:47	TMP	B
Dibromofluoromethane (S)	94.9		%	78 - 116		SW846 8260B			4/12/18 18:43	TMP	A
Toluene-d8 (S)	93.4		%	76 - 127		SW846 8260B			4/12/18 18:43	TMP	A
Toluene-d8 (S)	92.8		%	76 - 127		SW846 8260B			4/13/18 12:47	TMP	B
SEMIVOLATILE SIM											
1,4-Dioxane	1.2		ug/L	0.096	0.018	8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	63.6		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C
Fluoranthene-d10 (S)	101		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 07:15	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2307611002	1	BRC-MW126B	SW846 8260B	Bromomethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 42.6 and the control limits were 45 to 148.				
2307611002	2	BRC-MW126B	SW846 8260B	Bromomethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromomethane. The % Recovery was reported as 37.4 and the control limits were 45 to 148.				
2307611002	3	BRC-MW126B	SW846 8260B	2-Chloroethylvinyl ether
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 150.				
2307611002	4	BRC-MW126B	SW846 8260B	2-Chloroethylvinyl ether
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .47 and the control limits were 1 to 150.				
2307611002	5	BRC-MW126B	SW846 8260B	2-Chloroethylvinyl ether
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The RPD was reported as 200 and the upper control limit is 40.				
2307611002	6	BRC-MW126B	SW846 8260B	Methyl cyclohexane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 138 and the control limits were 70 to 130.				
2307611002	7	BRC-MW126B	SW846 8260B	Methyl cyclohexane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 142 and the control limits were 70 to 130.				
2307611008	1	MRC-MW21B	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2307611008	2	MRC-MW21B	EPA 300.0	Nitrite-N
Analyte was analyzed past the 48 hour holding time.				
2307611008	3	MRC-MW21B	EPA 300.0	Nitrate-N
Analyte was analyzed past the 48 hour holding time.				
2307611008	4	MRC-MW21B	S2540C-11	Total Dissolved Solids
The RPD associated with this sample was recovered at 8%. The RPD is outside method acceptance limits of 0-5%. The results used to calculate the RPD were 296 and 272.				
2307611008	5	MRC-MW21B	S4500PE-99	Orthophosphate
Analyte was analyzed past the 48 hour holding time.				
2307611013	1	MRC-MW81B	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 140 and the control limits were 70 to 130.				
2307611018	1	MRC-MW120A	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 140 and the control limits were 70 to 130.				
2307611023	1	MRC-MW87B	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 133 and the control limits were 70 to 130.				

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ANALYTICAL RESULTS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

2307611024	1	MRC-MW162B	SW846 8260B	Methyl cyclohexane

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 133 and the control limits were 70 to 130.

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51738 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2307611001, 2307611002, 2307611003, 2307611004, 2307611005, 2307611006, 2307611007, 2307611008, 2307611009, 2307611010, 2307611011, 2307611012, 2307611013, 2307611017, 2307611018

METHOD BLANK: 2722393

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	72.3	%	29 - 112
Fluoranthene-d10 (S)	77.9	%	45 - 130

LABORATORY CONTROL SAMPLE: 2722394

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	30.8	ug/L	1	0.31	22 - 75
2-Methylnapthalene-d10 (S)	72.5	%			29 - 112
Fluoranthene-d10 (S)	75.7	%			45 - 130

MATRIX SPIKE SAMPLE: 2722395 ORIGINAL: 2307611010

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.45921	ug/L	1	.7217	26.2	22 - 75
2-Methylnapthalene-d10 (S)	52.9	%				29 - 112
Fluoranthene-d10 (S)	76.2	%				45 - 130

SAMPLE DUPLICATE: 2722396 ORIGINAL: 2307611008

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	19.2711	ug/L	18.955	1.65	

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51758 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2307611020, 2307611021, 2307611022, 2307611023, 2307611024

METHOD BLANK: 2723330

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	74.1	%	29 - 112
Fluoranthene-d10 (S)	103	%	45 - 130

LABORATORY CONTROL SAMPLE: 2723331

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	44.8	ug/L	1	0.45	22 - 75
2-Methylnapthalene-d10 (S)	77	%			29 - 112
Fluoranthene-d10 (S)	99.7	%			45 - 130

MATRIX SPIKE SAMPLE: 2723332 ORIGINAL: 2308120017

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.49888	ug/L	.94	.7617	27.9	22 - 75
2-Methylnapthalene-d10 (S)	61.2	%				29 - 112
Fluoranthene-d10 (S)	104	%				45 - 130

SAMPLE DUPLICATE: 2723333 ORIGINAL: 2308120026

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	0	ug/L	0	NC	

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71127 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2307611001, 2307611002, 2307611003, 2307611004, 2307611013, 2307611015, 2307611017

METHOD BLANK: 2720928

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	0.0035J	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2720929

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	92.2	mg/L	.22	0.20	80 - 120
Arsenic, Total	91.5	mg/L	.22	0.20	80 - 120
Beryllium, Total	86.7	mg/L	.22	0.19	80 - 120
Cadmium, Total	94.5	mg/L	.22	0.21	80 - 120
Chromium, Total	95.2	mg/L	.22	0.21	80 - 120
Cobalt, Total	94	mg/L	.22	0.21	80 - 120
Copper, Total	92.3	mg/L	.22	0.21	80 - 120
Lead, Total	96.4	mg/L	.22	0.21	80 - 120
Nickel, Total	94.2	mg/L	.22	0.21	80 - 120
Selenium, Total	88.6	mg/L	.22	0.20	80 - 120
Silver, Total	93.1	mg/L	.11	0.10	80 - 120
Thallium, Total	96	mg/L	.22	0.21	80 - 120
Zinc, Total	88.9	mg/L	.22	0.20	80 - 120

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE: 2720930 DUPLICATE: 2720931 ORIGINAL: 2307736007

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Antimony, Total	.00051	mg/L	.22	.21302	.21447	95.6	96.3	75 - 125	.68	20
Arsenic, Total	.00013	mg/L	.22	.2072	.20352	93.2	91.5	75 - 125	1.79	20
Beryllium, Total	.00008	mg/L	.22	.19684	.19578	88.5	88.1	75 - 125	.54	20
Cadmium, Total	.00004	mg/L	.22	.21364	.21617	96.1	97.3	75 - 125	1.18	20
Chromium, Total	.00248	mg/L	.22	.21555	.21645	95.9	96.3	75 - 125	.42	20
Cobalt, Total	.00278	mg/L	.22	.21347	.21338	94.8	94.8	75 - 125	.04	20
Copper, Total	.0017	mg/L	.22	.20666	.21104	92.2	94.2	75 - 125	2.1	20
Lead, Total	.00071	mg/L	.22	.21664	.21969	97.2	98.5	75 - 125	1.4	20
Nickel, Total	.00409	mg/L	.22	.21532	.21383	95.1	94.4	75 - 125	.69	20
Selenium, Total	.00015	mg/L	.22	.20461	.19944	92	89.7	75 - 125	2.56	20
Silver, Total	.00002	mg/L	.11	.10844	.10731	97.6	96.6	75 - 125	1.04	20
Thallium, Total	.00002	mg/L	.22	.2171	.21904	97.7	98.6	75 - 125	.89	20
Zinc, Total	.00878	mg/L	.22	.19935	.19931	85.8	85.7	75 - 125	.02	20

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71245 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2307611001, 2307611002, 2307611003, 2307611004, 2307611013, 2307611015, 2307611017

METHOD BLANK: 2724702

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2724703

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	101	mg/L	.002	0.0020	85 - 115

MATRIX SPIKE: 2724704 DUPLICATE: 2724705 ORIGINAL: 2308971002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00486	.00489	97.2	97.8	70 - 130	.62	20

MATRIX SPIKE: 2724706 DUPLICATE: 2724707 ORIGINAL: 2308259001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00453	.00464	90.6	92.8	70 - 130	2.4	20

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: SVGC/48873 **Analysis Method:** RSK 175

QC Batch Method: RSK 175

Associated Lab Samples: 2307611008

METHOD BLANK: 2724870

Parameter	Blank Result	Units	Reporting Limit
n-Butane	ND	ug/L	4.3
Ethane	ND	ug/L	3.3
Ethene	ND	ug/L	2.4
Isobutane	ND	ug/L	4.6
Methane	ND	ug/L	1.5
Propane	ND	ug/L	3.2

SAMPLE DUPLICATE: 2724871 ORIGINAL: 2307844001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	0	ug/L	0	NC	20
Propane	0	ug/L	0	NC	30

SAMPLE DUPLICATE: 2724872 ORIGINAL: 2308268001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	0	ug/L	0	NC	20
Propane	0	ug/L	0	NC	30

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46497 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307611001, 2307611002, 2307611003, 2307611004, 2307611005, 2307611006, 2307611007, 2307611008, 2307611009, 2307611010, 2307611011, 2307611012, 2307611013, 2307611014, 2307611015, 2307611016, 2307611018, 2307611019

METHOD BLANK: 2721323

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	0.70J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	102	%	62 - 133
4-Bromofluorobenzene (S)	96.9	%	79 - 114
Dibromofluoromethane (S)	92.5	%	78 - 116
Toluene-d8 (S)	94.1	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2721324

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	107	ug/L	20	21.4	78 - 121
1,1,1-Trichloroethane	103	ug/L	20	20.6	66 - 130
1,1,2,2-Tetrachloroethane	90.9	ug/L	20	18.2	74 - 135
1,1,2-Trichloroethane	94.8	ug/L	20	19.0	82 - 126
1,1-Dichloroethane	106	ug/L	20	21.3	78 - 124
1,1-Dichloroethene	110	ug/L	20	21.9	63 - 128
1,2,3-Trichlorobenzene	79.6	ug/L	20	15.9	61 - 126
1,2,3-Trichloropropane	95.8	ug/L	20	19.2	75 - 132
1,2,4-Trichlorobenzene	95.3	ug/L	20	19.1	67 - 123
1,2,4-Trimethylbenzene	100	ug/L	20	20.1	76 - 125
1,2-Dibromo-3-chloropropane	86.5	ug/L	20	17.3	59 - 133
1,2-Dibromoethane	96.8	ug/L	20	19.4	80 - 124
1,2-Dichlorobenzene	98.2	ug/L	20	19.6	82 - 118
1,2-Dichloroethane	99.2	ug/L	20	19.8	70 - 133
1,2-Dichloroethene, Total	106	ug/L	40	42.2	78 - 125
1,2-Dichloropropane	106	ug/L	20	21.1	81 - 127
1,3-Dichlorobenzene	103	ug/L	20	20.5	81 - 118
1,3-Dichloropropane	101	ug/L	20	20.3	82 - 126
1,3-Dichloropropene, Total	101	ug/L	40	40.5	80 - 123
1,4-Dichlorobenzene	98.4	ug/L	20	19.7	81 - 116
2,2-Dichloropropane	107	ug/L	20	21.4	64 - 129
2-Butanone	95	ug/L	100	95.0	50 - 152
2-Chloroethylvinyl ether	81.4	ug/L	20	16.3	1 - 150
2-Hexanone	80.7	ug/L	100	80.7	65 - 154
4-Methyl-2-Pentanone(MIBK)	82.3	ug/L	100	82.3	71 - 146
Acetone	111	ug/L	100	111	40 - 151
Benzene	105	ug/L	20	21.0	80 - 124
Bromobenzene	106	ug/L	20	21.2	81 - 119
Bromochloromethane	107	ug/L	20	21.4	73 - 117
Bromodichloromethane	98.5	ug/L	20	19.7	79 - 126
Bromoform	90.6	ug/L	20	18.1	70 - 123
Bromomethane	47.3	ug/L	20	9.5	45 - 148
Carbon Disulfide	119	ug/L	20	23.7	57 - 131
Carbon Tetrachloride	106	ug/L	20	21.2	62 - 132
Chlorobenzene	97.5	ug/L	20	19.5	85 - 117
Chlorodibromomethane	95.2	ug/L	20	19.0	77 - 122
Chloroethane	64.2	ug/L	20	12.8	51 - 142
Chloroform	103	ug/L	20	20.6	78 - 122
Chloromethane	82.1	ug/L	20	16.4	38 - 156
Cyclohexane	123	ug/L	20	24.6	66 - 130
Dibromomethane	93.3	ug/L	20	18.7	81 - 125

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	72.4	ug/L	20	14.5	17 - 166
Diisopropyl ether	109	ug/L	20	21.8	74 - 131
Ethyl tert-butyl ether	94.6	ug/L	20	18.9	75 - 123
Ethylbenzene	107	ug/L	20	21.4	80 - 124
Freon 113	120	ug/L	20	23.9	50 - 130
Hexachlorobutadiene	110	ug/L	20	22.1	55 - 128
Isopropylbenzene	101	ug/L	20	20.3	73 - 129
Methyl acetate	88.3	ug/L	20	17.7	70 - 130
Methyl cyclohexane	140*	ug/L	20	27.9	70 - 130
Methyl t-Butyl Ether	102	ug/L	20	20.4	69 - 115
Methylene Chloride	106	ug/L	20	21.2	76 - 121
Naphthalene	66.8	ug/L	20	13.4	56 - 134
Styrene	98.6	ug/L	20	19.7	79 - 123
Tetrachloroethene	99.3	ug/L	20	19.9	72 - 124
Toluene	106	ug/L	20	21.2	80 - 125
Total Xylenes	109	ug/L	60	65.4	79 - 125
Trichloroethene	100	ug/L	20	20.0	77 - 124
Trichlorofluoromethane	78.1	ug/L	20	15.6	38 - 123
Vinyl Acetate	88.5	ug/L	20	17.7	58 - 136
Vinyl Chloride	68	ug/L	20	13.6	27 - 138
cis-1,2-Dichloroethene	103	ug/L	20	20.6	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.2	81 - 121
mp-Xylene	109	ug/L	40	43.6	79 - 125
n-Butylbenzene	91.9	ug/L	20	18.4	71 - 130
n-Propylbenzene	99.7	ug/L	20	19.9	74 - 122
o-Chlorotoluene	98.6	ug/L	20	19.7	78 - 126
o-Xylene	109	ug/L	20	21.8	79 - 124
p-Chlorotoluene	112	ug/L	20	22.4	78 - 125
p-Isopropyltoluene	96.4	ug/L	20	19.3	72 - 123
sec-Butylbenzene	103	ug/L	20	20.6	72 - 127
tert-Amyl methyl ether	92.4	ug/L	20	18.5	75 - 121
tert-Butyl Alcohol	77	ug/L	100	77.0	17 - 168
tert-Butylbenzene	96.7	ug/L	20	19.3	72 - 124
trans-1,2-Dichloroethene	108	ug/L	20	21.6	71 - 122
trans-1,3-Dichloropropene	101	ug/L	20	20.2	78 - 126
1,2-Dichloroethane-d4 (S)	98.6	%			62 - 133
4-Bromofluorobenzene (S)	96.6	%			79 - 114
Dibromofluoromethane (S)	91.7	%			78 - 116
Toluene-d8 (S)	92.1	%			76 - 127

MATRIX SPIKE: 2721513 DUPLICATE: 2721514 ORIGINAL: 2307611002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	21.6128	20.4205	108	102	78 - 121	5.67	16
1,1,1-Trichloroethane	0	ug/L	20	21.4781	20.5702	107	103	66 - 130	4.32	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	18.0126	17.4264	90.1	87.1	74 - 135	3.31	16
1,1,2-Trichloroethane	0	ug/L	20	18.8408	18.0642	94.2	90.3	82 - 126	4.21	15
1,1-Dichloroethane	0	ug/L	20	21.9019	20.7947	110	104	78 - 124	5.19	15
1,1-Dichloroethene	0	ug/L	20	22.9554	21.4818	115	107	63 - 128	6.63	21
1,2,3-Trichlorobenzene	0	ug/L	20	15.5263	16.0914	77.6	80.5	61 - 126	3.57	36
1,2,3-Trichloropropane	0	ug/L	20	18.0032	17.5971	90	88	75 - 132	2.28	19
1,2,4-Trichlorobenzene	0	ug/L	20	18.467	19.2426	92.3	96.2	67 - 123	4.11	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.6919	19.4807	98.5	97.4	76 - 125	1.08	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	16.5466	16.3161	82.7	81.6	59 - 133	1.4	26
1,2-Dibromoethane	0	ug/L	20	19.2187	18.4129	96.1	92.1	80 - 124	4.28	19
1,2-Dichlorobenzene	0	ug/L	20	19.0672	19.0104	95.3	95.1	82 - 118	.3	15
1,2-Dichloroethane	.42804	ug/L	20	20.0568	19.2172	98.1	93.9	70 - 133	4.28	19
1,2-Dichloroethene, Total	0	ug/L	40	43.7885	42.0177	109	105	78 - 125	4.13	40
1,2-Dichloropropane	0	ug/L	20	20.784	20.411	104	102	81 - 127	1.81	15
1,3-Dichlorobenzene	0	ug/L	20	20.2572	19.803	101	99	81 - 118	2.27	16
1,3-Dichloropropane	0	ug/L	20	19.8741	19.2969	99.4	96.5	82 - 126	2.95	15
1,3-Dichloropropene, Total	0	ug/L	40	39.6574	37.8512	99.1	94.6	80 - 123	4.66	16
1,4-Dichlorobenzene	0	ug/L	20	19.4641	19.0594	97.3	95.3	81 - 116	2.1	15
2,2-Dichloropropane	0	ug/L	20	20.1881	18.9801	101	94.9	64 - 129	6.17	18
2-Butanone	0	ug/L	100	93.5929	88.917	93.6	88.9	50 - 152	5.12	16
2-Chloroethylvinyl ether	0	ug/L	20	0	.09391	0*	.47*	1 - 150	NC	40
2-Hexanone	0	ug/L	100	77.9373	74.5614	77.9	74.6	65 - 154	4.43	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	81.1417	80.2385	81.1	80.2	71 - 146	1.12	16
Acetone	5.4241	ug/L	100	93.2642	94.0175	87.8	88.6	40 - 151	.8	40
Benzene	0	ug/L	20	21.8707	20.722	109	104	80 - 124	5.39	26
Bromobenzene	0	ug/L	20	20.7482	20.1745	104	101	81 - 119	2.8	17
Bromochloromethane	0	ug/L	20	21.4927	20.1878	107	101	73 - 117	6.26	19
Bromodichloromethane	0	ug/L	20	20.2478	19.3871	101	96.9	79 - 126	4.34	16
Bromoform	0	ug/L	20	17.9864	17.7446	89.9	88.7	70 - 123	1.35	16
Bromomethane	0	ug/L	20	8.5177	7.4896	42.6*	37.4*	45 - 148	12.8	26
Carbon Disulfide	.56065	ug/L	20	26.0904	24.0107	128	117	57 - 131	8.3	28
Carbon Tetrachloride	0	ug/L	20	21.8944	20.6842	109	103	62 - 132	5.68	17
Chlorobenzene	.2028	ug/L	20	19.6949	19.0149	97.5	94.1	85 - 117	3.51	15
Chlorodibromomethane	0	ug/L	20	19.1279	18.2276	95.6	91.1	77 - 122	4.82	15
Chloroethane	0	ug/L	20	14.5384	12.7199	72.7	63.6	51 - 142	13.3	24
Chloroform	0	ug/L	20	20.6224	19.8025	103	99	78 - 122	4.06	16
Chloromethane	0	ug/L	20	17.1339	16.2628	85.7	81.3	38 - 156	5.22	27
Cyclohexane	0	ug/L	20	24.6442	24.1124	123	121	66 - 130	2.18	20
Dibromomethane	0	ug/L	20	18.6535	18.5731	93.3	92.9	81 - 125	.43	16
Dichlorodifluoromethane	0	ug/L	20	14.3966	14.0905	72	70.5	17 - 166	2.15	24
Diisopropyl ether	0	ug/L	20	21.8306	21.4006	109	107	74 - 131	1.99	15
Ethyl tert-butyl ether	0	ug/L	20	18.6478	18.2594	93.2	91.3	75 - 123	2.1	16
Ethylbenzene	0	ug/L	20	21.5074	20.9523	108	105	80 - 124	2.61	19
Freon 113	0	ug/L	20	24.4552	23.2145	122	116	50 - 130	5.21	26

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Hexachlorobutadiene	0	ug/L	20	22.6432	22.3993	113	112	55 - 128	1.08	35
Isopropylbenzene	0	ug/L	20	19.9725	19.887	99.9	99.4	73 - 129	.43	18
Methyl acetate	0	ug/L	20	16.993	16.3111	85	81.6	70 - 130	4.09	18
Methyl cyclohexane	0	ug/L	20	27.618	28.377	138*	142*	70 - 130	2.71	18
Methyl t-Butyl Ether	0	ug/L	20	19.8817	19.605	99.4	98	69 - 115	1.4	20
Methylene Chloride	0	ug/L	20	21.056	20.3406	105	102	76 - 121	3.46	17
Naphthalene	0	ug/L	20	12.6442	12.97	63.2	64.9	56 - 134	2.54	40
Styrene	0	ug/L	20	19.2362	18.7308	96.2	93.7	79 - 123	2.66	16
Tetrachloroethene	0	ug/L	20	19.8027	18.9554	99	94.8	72 - 124	4.37	38
Toluene	0	ug/L	20	21.6452	20.6465	108	103	80 - 125	4.72	20
Total Xylenes	0	ug/L	60	65.4846	63.2653	109	105	79 - 125	3.45	35
Trichloroethene	0	ug/L	20	20.4198	20.1105	102	101	77 - 124	1.53	18
Trichlorofluoromethane	0	ug/L	20	16.7566	15.3421	83.8	76.7	38 - 123	8.81	23
Vinyl Acetate	0	ug/L	20	16.3546	16.0256	81.8	80.1	58 - 136	2.03	17
Vinyl Chloride	0	ug/L	20	14.4273	13.4266	72.1	67.1	27 - 138	7.19	40
cis-1,2-Dichloroethene	0	ug/L	20	21.1425	20.4908	106	102	78 - 125	3.13	21
cis-1,3-Dichloropropene	0	ug/L	20	19.3605	18.6583	96.8	93.3	81 - 121	3.69	16
mp-Xylene	0	ug/L	40	44.0328	42.4883	110	106	79 - 125	3.57	21
n-Butylbenzene	0	ug/L	20	18.0538	18.7821	90.3	93.9	71 - 130	3.95	20
n-Propylbenzene	0	ug/L	20	19.6907	19.5087	98.5	97.5	74 - 122	.93	20
o-Chlorotoluene	0	ug/L	20	19.6342	19.3143	98.2	96.6	78 - 126	1.64	17
o-Xylene	0	ug/L	20	21.4518	20.777	107	104	79 - 124	3.2	19
p-Chlorotoluene	0	ug/L	20	22.1361	21.5458	111	108	78 - 125	2.7	16
p-Isopropyltoluene	0	ug/L	20	18.7485	19.3122	93.7	96.6	72 - 123	2.96	17
sec-Butylbenzene	0	ug/L	20	20.4366	20.7789	102	104	72 - 127	1.66	17
tert-Amyl methyl ether	0	ug/L	20	16.8327	16.5267	84.2	82.6	75 - 121	1.83	40
tert-Butyl Alcohol	0	ug/L	100	91.5704	88.0615	91.6	88.1	17 - 168	3.91	40
tert-Butylbenzene	0	ug/L	20	18.7925	18.8255	94	94.1	72 - 124	.18	17
trans-1,2-Dichloroethene	0	ug/L	20	22.646	21.527	113	108	71 - 122	5.07	22
trans-1,3-Dichloropropene	0	ug/L	20	20.2969	19.1929	101	96	78 - 126	5.59	18
1,2-Dichloroethane-d4 (S)	96.4	%				96.4	95.4	62 - 133		
4-Bromofluorobenzene (S)	97.5	%				97.5	95.9	79 - 114		
Dibromofluoromethane (S)	94.8	%				94.8	92.8	78 - 116		
Toluene-d8 (S)	91.6	%				91.6	91.2	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46504 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307611020, 2307611021, 2307611022, 2307611023, 2307611024

METHOD BLANK: 2721779

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	103	%	62 - 133
4-Bromofluorobenzene (S)	98.9	%	79 - 114
Dibromofluoromethane (S)	95.2	%	78 - 116
Toluene-d8 (S)	95	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2721780

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	107	ug/L	20	21.5	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.8	66 - 130
1,1,2,2-Tetrachloroethane	91.1	ug/L	20	18.2	74 - 135
1,1,2-Trichloroethane	95.4	ug/L	20	19.1	82 - 126
1,1-Dichloroethane	106	ug/L	20	21.3	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.9	63 - 128
1,2,3-Trichlorobenzene	77.3	ug/L	20	15.5	61 - 126
1,2,3-Trichloropropane	92.9	ug/L	20	18.6	75 - 132
1,2,4-Trichlorobenzene	92.1	ug/L	20	18.4	67 - 123
1,2,4-Trimethylbenzene	99.1	ug/L	20	19.8	76 - 125
1,2-Dibromo-3-chloropropane	81.7	ug/L	20	16.3	59 - 133
1,2-Dibromoethane	95.2	ug/L	20	19.0	80 - 124
1,2-Dichlorobenzene	99.2	ug/L	20	19.8	82 - 118
1,2-Dichloroethane	98.2	ug/L	20	19.6	70 - 133
1,2-Dichloroethene, Total	106	ug/L	40	42.4	78 - 125
1,2-Dichloropropane	107	ug/L	20	21.3	81 - 127
1,3-Dichlorobenzene	103	ug/L	20	20.6	81 - 118
1,3-Dichloropropane	101	ug/L	20	20.2	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.0	80 - 123
1,4-Dichlorobenzene	99.8	ug/L	20	20.0	81 - 116
2,2-Dichloropropane	97.1	ug/L	20	19.4	64 - 129
2-Butanone	84	ug/L	100	84.0	50 - 152
2-Chloroethylvinyl ether	82.1	ug/L	20	16.4	1 - 150
2-Hexanone	74.7	ug/L	100	74.7	65 - 154
4-Methyl-2-Pentanone(MIBK)	77.1	ug/L	100	77.1	71 - 146
Acetone	83.6	ug/L	100	83.6	40 - 151
Benzene	105	ug/L	20	20.9	80 - 124
Bromobenzene	104	ug/L	20	20.8	81 - 119
Bromochloromethane	104	ug/L	20	20.7	73 - 117
Bromodichloromethane	101	ug/L	20	20.2	79 - 126
Bromoform	92.1	ug/L	20	18.4	70 - 123
Bromomethane	52.4	ug/L	20	10.5	45 - 148
Carbon Disulfide	118	ug/L	20	23.5	57 - 131
Carbon Tetrachloride	106	ug/L	20	21.2	62 - 132
Chlorobenzene	97.9	ug/L	20	19.6	85 - 117
Chlorodibromomethane	96.1	ug/L	20	19.2	77 - 122
Chloroethane	62.2	ug/L	20	12.4	51 - 142
Chloroform	103	ug/L	20	20.6	78 - 122
Chloromethane	72.6	ug/L	20	14.5	38 - 156
Cyclohexane	119	ug/L	20	23.8	66 - 130
Dibromomethane	95.7	ug/L	20	19.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	61.9	ug/L	20	12.4	17 - 166
Diisopropyl ether	112	ug/L	20	22.3	74 - 131
Ethyl tert-butyl ether	95	ug/L	20	19.0	75 - 123
Ethylbenzene	106	ug/L	20	21.1	80 - 124
Freon 113	116	ug/L	20	23.2	50 - 130
Hexachlorobutadiene	110	ug/L	20	21.9	55 - 128
Isopropylbenzene	102	ug/L	20	20.4	73 - 129
Methyl acetate	87.4	ug/L	20	17.5	70 - 130
Methyl cyclohexane	133*	ug/L	20	26.6	70 - 130
Methyl t-Butyl Ether	99.4	ug/L	20	19.9	69 - 115
Methylene Chloride	109	ug/L	20	21.8	76 - 121
Naphthalene	63.8	ug/L	20	12.8	56 - 134
Styrene	97.9	ug/L	20	19.6	79 - 123
Tetrachloroethene	98.5	ug/L	20	19.7	72 - 124
Toluene	107	ug/L	20	21.4	80 - 125
Total Xylenes	108	ug/L	60	65.1	79 - 125
Trichloroethene	101	ug/L	20	20.2	77 - 124
Trichlorofluoromethane	69.9	ug/L	20	14.0	38 - 123
Vinyl Acetate	83.9	ug/L	20	16.8	58 - 136
Vinyl Chloride	60.8	ug/L	20	12.2	27 - 138
cis-1,2-Dichloroethene	104	ug/L	20	20.8	78 - 125
cis-1,3-Dichloropropene	100	ug/L	20	20.0	81 - 121
mp-Xylene	109	ug/L	40	43.6	79 - 125
n-Butylbenzene	89.8	ug/L	20	18.0	71 - 130
n-Propylbenzene	100	ug/L	20	20.0	74 - 122
o-Chlorotoluene	100	ug/L	20	20.0	78 - 126
o-Xylene	107	ug/L	20	21.5	79 - 124
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
p-Isopropyltoluene	95.4	ug/L	20	19.1	72 - 123
sec-Butylbenzene	103	ug/L	20	20.5	72 - 127
tert-Amyl methyl ether	85.7	ug/L	20	17.1	75 - 121
tert-Butyl Alcohol	116	ug/L	100	116	17 - 168
tert-Butylbenzene	94.4	ug/L	20	18.9	72 - 124
trans-1,2-Dichloroethene	108	ug/L	20	21.6	71 - 122
trans-1,3-Dichloropropene	99.8	ug/L	20	20.0	78 - 126
1,2-Dichloroethane-d4 (S)	95.1	%			62 - 133
4-Bromofluorobenzene (S)	99.2	%			79 - 114
Dibromofluoromethane (S)	93.3	%			78 - 116
Toluene-d8 (S)	93.2	%			76 - 127

MATRIX SPIKE: 2721875 DUPLICATE: 2721876 ORIGINAL: 2307919003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	22.054	21.7557	110	109	78 - 121	1.36	16
1,1,1-Trichloroethane	0	ug/L	20	21.5381	21.3676	108	107	66 - 130	.79	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	17.9442	18.3462	89.7	91.7	74 - 135	2.22	16
1,1,2-Trichloroethane	0	ug/L	20	18.8481	19.0946	94.2	95.5	82 - 126	1.3	15
1,1-Dichloroethane	0	ug/L	20	22.2166	21.8046	111	109	78 - 124	1.87	15
1,1-Dichloroethene	0	ug/L	20	23.1769	22.5108	116	113	63 - 128	2.92	21
1,2,3-Trichloropropane	0	ug/L	20	17.7861	18.7093	88.9	93.5	75 - 132	5.06	19
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.9793	17.4001	79.9	87	59 - 133	8.51	26
1,2-Dibromoethane	0	ug/L	20	19.2096	19.3736	96	96.9	80 - 124	.85	19
1,2-Dichlorobenzene	0	ug/L	20	19.7368	20.1336	98.7	101	82 - 118	1.99	15
1,2-Dichloroethane	0	ug/L	20	19.5655	19.6566	97.8	98.3	70 - 133	.46	19
1,2-Dichloropropane	0	ug/L	20	21.3529	21.0611	107	105	81 - 127	1.38	15
1,4-Dichlorobenzene	0	ug/L	20	19.8321	20.0833	99.2	100	81 - 116	1.26	15
2-Butanone	0	ug/L	100	88.8146	94.8468	88.8	94.8	50 - 152	6.57	16
2-Hexanone	0	ug/L	100	74.6831	79.2616	74.7	79.3	65 - 154	5.95	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	78.6184	82.3704	78.6	82.4	71 - 146	4.66	16
Acetone	3.50032	ug/L	100	89.4972	98.8127	86	95.3	40 - 151	9.89	40
Benzene	0	ug/L	20	22.0015	21.4603	110	107	80 - 124	2.49	26
Bromochloromethane	0	ug/L	20	21.5247	21.2474	108	106	73 - 117	1.3	19
Bromodichloromethane	0	ug/L	20	20.3847	20.1242	102	101	79 - 126	1.29	16
Bromoform	0	ug/L	20	17.9794	18.4018	89.9	92	70 - 123	2.32	16
Bromomethane	0	ug/L	20	9.30652	8.068	46.5	40.3*	45 - 148	14.3	26
Carbon Disulfide	0	ug/L	20	26.3104	24.9631	132*	125	57 - 131	5.26	28
Carbon Tetrachloride	0	ug/L	20	22.4313	22.0953	112	110	62 - 132	1.51	17
Chlorobenzene	0	ug/L	20	20.0784	19.8089	100	99	85 - 117	1.35	15
Chlorodibromomethane	0	ug/L	20	19.1417	19.4786	95.7	97.4	77 - 122	1.74	15
Chloroethane	0	ug/L	20	16.9605	14.7547	84.8	73.8	51 - 142	13.9	24
Chloroform	0	ug/L	20	20.8891	20.2063	104	101	78 - 122	3.32	16
Chloromethane	0	ug/L	20	19.6956	19.9877	98.5	99.9	38 - 156	1.47	27
Dibromomethane	0	ug/L	20	19.0419	18.5549	95.2	92.8	81 - 125	2.59	16
Ethylbenzene	0	ug/L	20	21.9636	21.6151	110	108	80 - 124	1.6	19
Methyl t-Butyl Ether	0	ug/L	20	19.8547	20.3115	99.3	102	69 - 115	2.27	20
Methylene Chloride	0	ug/L	20	20.9542	20.509	105	103	76 - 121	2.15	17
Styrene	0	ug/L	20	19.7241	19.8289	98.6	99.1	79 - 123	.53	16
Tetrachloroethene	0	ug/L	20	20.3086	20.1547	102	101	72 - 124	.76	38
Toluene	0	ug/L	20	21.8406	21.9326	109	110	80 - 125	.42	20
Total Xylenes	0	ug/L	60	66.5526	66.6136	111	111	79 - 125	.09	35
Trichloroethene	0	ug/L	20	20.8508	20.5315	104	103	77 - 124	1.54	18
Trichlorofluoromethane	0	ug/L	20	19.0694	18.0091	95.3	90	38 - 123	5.72	23
Vinyl Acetate	0	ug/L	20	13.9533	14.7428	69.8	73.7	58 - 136	5.5	17
Vinyl Chloride	0	ug/L	20	16.9661	16.3681	84.8	81.8	27 - 138	3.59	40
cis-1,2-Dichloroethene	0	ug/L	20	22.5636	21.376	113	107	78 - 125	5.41	21
cis-1,3-Dichloropropene	0	ug/L	20	19.7391	19.401	98.7	97	81 - 121	1.73	16
mp-Xylene	0	ug/L	40	44.8244	44.6685	112	112	79 - 125	.35	21
o-Xylene	0	ug/L	20	21.7283	21.9451	109	110	79 - 124	.99	19
trans-1,2-Dichloroethene	0	ug/L	20	22.6842	22.4066	113	112	71 - 122	1.23	22

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

trans-1,3-Dichloropropene	0	ug/L	20	19.6594	19.6586	98.3	98.3	78 - 126	.004	18
1,2-Dichloroethane-d4 (S)	100	%				100	102	62 - 133		
4-Bromofluorobenzene (S)	95.3	%				95.3	97.7	79 - 114		
Dibromofluoromethane (S)	92.9	%				92.9	93.5	78 - 116		
Toluene-d8 (S)	91.8	%				91.8	94.3	76 - 127		

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46511 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307611005, 2307611007, 2307611008, 2307611009, 2307611011, 2307611012, 2307611013, 2307611015

METHOD BLANK: 2721982

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Chloroform	0.39J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	103	%	62 - 133
4-Bromofluorobenzene (S)	99.5	%	79 - 114
Dibromofluoromethane (S)	95.8	%	78 - 116
Toluene-d8 (S)	94	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2721983

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	108	ug/L	20	21.6	78 - 121
1,1,1-Trichloroethane	105	ug/L	20	21.0	66 - 130
1,1,2,2-Tetrachloroethane	89.2	ug/L	20	17.8	74 - 135
1,1,2-Trichloroethane	94	ug/L	20	18.8	82 - 126
1,1-Dichloroethane	107	ug/L	20	21.4	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.8	63 - 128
1,2,3-Trichlorobenzene	78.3	ug/L	20	15.7	61 - 126
1,2,3-Trichloropropane	90.4	ug/L	20	18.1	75 - 132
1,2,4-Trichlorobenzene	95	ug/L	20	19.0	67 - 123
1,2,4-Trimethylbenzene	101	ug/L	20	20.3	76 - 125
1,2-Dibromo-3-chloropropane	79.4	ug/L	20	15.9	59 - 133
1,2-Dibromoethane	95.5	ug/L	20	19.1	80 - 124
1,2-Dichlorobenzene	97.4	ug/L	20	19.5	82 - 118
1,2-Dichloroethane	97.6	ug/L	20	19.5	70 - 133
1,2-Dichloroethene, Total	107	ug/L	40	42.9	78 - 125
1,2-Dichloropropane	104	ug/L	20	20.9	81 - 127
1,3-Dichlorobenzene	102	ug/L	20	20.4	81 - 118
1,3-Dichloropropane	100	ug/L	20	20.0	82 - 126
1,3-Dichloropropene, Total	103	ug/L	40	41.1	80 - 123
1,4-Dichlorobenzene	101	ug/L	20	20.2	81 - 116
2,2-Dichloropropane	108	ug/L	20	21.6	64 - 129
2-Butanone	87.7	ug/L	100	87.7	50 - 152
2-Chloroethylvinyl ether	78.8	ug/L	20	15.8	1 - 150
2-Hexanone	75.5	ug/L	100	75.5	65 - 154
4-Methyl-2-Pentanone(MIBK)	78.8	ug/L	100	78.8	71 - 146
Acetone	99	ug/L	100	99.0	40 - 151
Benzene	106	ug/L	20	21.2	80 - 124
Bromobenzene	106	ug/L	20	21.2	81 - 119
Bromochloromethane	108	ug/L	20	21.5	73 - 117
Bromodichloromethane	99.8	ug/L	20	20.0	79 - 126
Bromoform	90.8	ug/L	20	18.2	70 - 123
Bromomethane	53.2	ug/L	20	10.6	45 - 148
Carbon Disulfide	119	ug/L	20	23.7	57 - 131
Carbon Tetrachloride	110	ug/L	20	21.9	62 - 132
Chlorobenzene	98.4	ug/L	20	19.7	85 - 117
Chlorodibromomethane	95.6	ug/L	20	19.1	77 - 122
Chloroethane	75.1	ug/L	20	15.0	51 - 142
Chloroform	103	ug/L	20	20.6	78 - 122
Chloromethane	96.9	ug/L	20	19.4	38 - 156
Cyclohexane	122	ug/L	20	24.4	66 - 130
Dibromomethane	93.1	ug/L	20	18.6	81 - 125

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	87.1	ug/L	20	17.4	17 - 166
Diisopropyl ether	110	ug/L	20	21.9	74 - 131
Ethyl tert-butyl ether	95.6	ug/L	20	19.1	75 - 123
Ethylbenzene	107	ug/L	20	21.4	80 - 124
Freon 113	121	ug/L	20	24.1	50 - 130
Hexachlorobutadiene	116	ug/L	20	23.2	55 - 128
Isopropylbenzene	103	ug/L	20	20.6	73 - 129
Methyl acetate	90.8	ug/L	20	18.2	70 - 130
Methyl cyclohexane	142*	ug/L	20	28.3	70 - 130
Methyl t-Butyl Ether	100	ug/L	20	20.1	69 - 115
Methylene Chloride	109	ug/L	20	21.9	76 - 121
Naphthalene	64.8	ug/L	20	13.0	56 - 134
Styrene	96.9	ug/L	20	19.4	79 - 123
Tetrachloroethene	98.4	ug/L	20	19.7	72 - 124
Toluene	108	ug/L	20	21.6	80 - 125
Total Xylenes	109	ug/L	60	65.6	79 - 125
Trichloroethene	98.8	ug/L	20	19.8	77 - 124
Trichlorofluoromethane	86.5	ug/L	20	17.3	38 - 123
Vinyl Acetate	86.1	ug/L	20	17.2	58 - 136
Vinyl Chloride	78.3	ug/L	20	15.7	27 - 138
cis-1,2-Dichloroethene	105	ug/L	20	21.0	78 - 125
cis-1,3-Dichloropropene	103	ug/L	20	20.6	81 - 121
mp-Xylene	110	ug/L	40	44.2	79 - 125
n-Butylbenzene	96.2	ug/L	20	19.2	71 - 130
n-Propylbenzene	98.9	ug/L	20	19.8	74 - 122
o-Chlorotoluene	99.7	ug/L	20	19.9	78 - 126
o-Xylene	107	ug/L	20	21.4	79 - 124
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
p-Isopropyltoluene	96.8	ug/L	20	19.4	72 - 123
sec-Butylbenzene	104	ug/L	20	20.9	72 - 127
tert-Amyl methyl ether	87.1	ug/L	20	17.4	75 - 121
tert-Butyl Alcohol	113	ug/L	100	113	17 - 168
tert-Butylbenzene	98.8	ug/L	20	19.8	72 - 124
trans-1,2-Dichloroethene	109	ug/L	20	21.9	71 - 122
trans-1,3-Dichloropropene	102	ug/L	20	20.5	78 - 126
1,2-Dichloroethane-d4 (S)	96.7	%			62 - 133
4-Bromofluorobenzene (S)	96.4	%			79 - 114
Dibromofluoromethane (S)	90.6	%			78 - 116
Toluene-d8 (S)	91.5	%			76 - 127

MATRIX SPIKE: 2722177 DUPLICATE: 2722178 ORIGINAL: 2308177005

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	21.9312	21.5127	110	108	78 - 121	1.93	16
1,1,1-Trichloroethane	0	ug/L	20	21.686	20.5737	108	103	66 - 130	5.26	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	17.9639	18.2167	89.8	91.1	74 - 135	1.4	16
1,1,2-Trichloroethane	0	ug/L	20	19.2558	19.1711	96.3	95.9	82 - 126	.44	15
1,1-Dichloroethane	0	ug/L	20	21.9388	21.4066	110	107	78 - 124	2.46	15
1,1-Dichloroethene	0	ug/L	20	22.3994	21.4064	112	107	63 - 128	4.53	21
1,2,3-Trichloropropane	0	ug/L	20	18.6685	18.6512	93.3	93.3	75 - 132	.09	19
1,2-Dibromo-3-chloropropane	0	ug/L	20	16.4893	16.3747	82.4	81.9	59 - 133	.7	26
1,2-Dibromoethane	0	ug/L	20	19.231	19.3685	96.2	96.8	80 - 124	.71	19
1,2-Dichlorobenzene	0	ug/L	20	19.6834	19.9804	98.4	99.9	82 - 118	1.5	15
1,2-Dichloroethane	0	ug/L	20	20.034	19.806	100	99	70 - 133	1.14	19
1,2-Dichloropropane	0	ug/L	20	21.5042	20.9157	108	105	81 - 127	2.77	15
1,4-Dichlorobenzene	0	ug/L	20	20.1726	19.9631	101	99.8	81 - 116	1.04	15
2-Butanone	0	ug/L	100	81.4243	88.9215	81.4	88.9	50 - 152	8.8	16
2-Hexanone	0	ug/L	100	77.1397	79.4689	77.1	79.5	65 - 154	2.97	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	80.9151	81.5673	80.9	81.6	71 - 146	.8	16
Acetone	0	ug/L	100	87.9002	92.491	87.9	92.5	40 - 151	5.09	40
Benzene	0	ug/L	20	22.0058	21.0421	110	105	80 - 124	4.48	26
Bromochloromethane	0	ug/L	20	21.028	21.5207	105	108	73 - 117	2.32	19
Bromodichloromethane	0	ug/L	20	20.2848	20.1948	101	101	79 - 126	.44	16
Bromoform	0	ug/L	20	18.3415	18.2189	91.7	91.1	70 - 123	.67	16
Bromomethane	0	ug/L	20	10.7359	9.36877	53.7	46.8	45 - 148	13.6	26
Carbon Disulfide	0	ug/L	20	24.7336	22.7253	124	114	57 - 131	8.46	28
Carbon Tetrachloride	0	ug/L	20	22.6489	21.7027	113	109	62 - 132	4.27	17
Chlorobenzene	0	ug/L	20	20.2022	19.447	101	97.2	85 - 117	3.81	15
Chlorodibromomethane	0	ug/L	20	19.3774	19.2851	96.9	96.4	77 - 122	.48	15
Chloroethane	0	ug/L	20	17.5313	15.3315	87.7	76.7	51 - 142	13.4	24
Chloroform	0	ug/L	20	20.6927	20.5452	103	103	78 - 122	.72	16
Chloromethane	0	ug/L	20	19.8499	19.4826	99.2	97.4	38 - 156	1.87	27
Dibromomethane	0	ug/L	20	18.5174	19.3548	92.6	96.8	81 - 125	4.42	16
Ethylbenzene	0	ug/L	20	22.3004	21.3654	112	107	80 - 124	4.28	19
Methyl t-Butyl Ether	0	ug/L	20	19.7861	20.1751	98.9	101	69 - 115	1.95	20
Methylene Chloride	0	ug/L	20	21.4539	21.3967	107	107	76 - 121	.27	17
Styrene	0	ug/L	20	19.8679	19.4155	99.3	97.1	79 - 123	2.3	16
Tetrachloroethene	0	ug/L	20	20.3815	19.3645	102	96.8	72 - 124	5.12	38
Toluene	0	ug/L	20	22.0138	21.3596	110	107	80 - 125	3.02	20
Total Xylenes	0	ug/L	60	67.3217	65.9097	112	110	79 - 125	2.12	35
Trichloroethene	0	ug/L	20	20.9655	19.7391	105	98.7	77 - 124	6.03	18
Trichlorofluoromethane	0	ug/L	20	19.7104	18.0245	98.6	90.1	38 - 123	8.94	23
Vinyl Acetate	0	ug/L	20	15.3952	16.2471	77	81.2	58 - 136	5.38	17
Vinyl Chloride	0	ug/L	20	17.2918	15.8107	86.5	79.1	27 - 138	8.95	40
cis-1,2-Dichloroethene	0	ug/L	20	21.4822	20.7858	107	104	78 - 125	3.3	21
cis-1,3-Dichloropropene	0	ug/L	20	19.9032	19.3934	99.5	97	81 - 121	2.59	16
mp-Xylene	0	ug/L	40	45.7635	44.1771	114	110	79 - 125	3.53	21
o-Xylene	0	ug/L	20	21.5582	21.7326	108	109	79 - 124	.81	19
trans-1,2-Dichloroethene	0	ug/L	20	22.2782	21.7786	111	109	71 - 122	2.27	22

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

trans-1,3-Dichloropropene	0	ug/L	20	20.0908	19.9684	100	99.8	78 - 126	.61	18
1,2-Dichloroethane-d4 (S)	99.5	%				99.5	99.2	62 - 133		
4-Bromofluorobenzene (S)	93.8	%				93.8	95.1	79 - 114		
Dibromofluoromethane (S)	93.1	%				93.1	92.7	78 - 116		
Toluene-d8 (S)	90.5	%				90.5	90.6	76 - 127		

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46517 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2307611024

METHOD BLANK: 2722320

Parameter	Blank Result	Units	Reporting Limit
1,2-Dichloroethene, Total	ND	ug/L	2.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	103	%	62 - 133
4-Bromofluorobenzene (S)	96.8	%	79 - 114
Dibromofluoromethane (S)	96.7	%	78 - 116
Toluene-d8 (S)	94.8	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2722321

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2-Dichloroethene, Total	106	ug/L	40	42.3	78 - 125
cis-1,2-Dichloroethene	103	ug/L	20	20.7	78 - 125
1,1,1,2-Tetrachloroethane	105	ug/L	20	21.1	78 - 121
1,1,1-Trichloroethane	102	ug/L	20	20.4	66 - 130
1,1,2,2-Tetrachloroethane	85.8	ug/L	20	17.2	74 - 135
1,1,2-Trichloroethane	93.4	ug/L	20	18.7	82 - 126
1,1-Dichloroethane	107	ug/L	20	21.3	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.8	63 - 128
1,2,3-Trichlorobenzene	72.8	ug/L	20	14.6	61 - 126
1,2,3-Trichloropropane	90.8	ug/L	20	18.2	75 - 132
1,2,4-Trichlorobenzene	89.8	ug/L	20	18.0	67 - 123
1,2,4-Trimethylbenzene	98.9	ug/L	20	19.8	76 - 125
1,2-Dibromo-3-chloropropane	76.9	ug/L	20	15.4	59 - 133
1,2-Dibromoethane	94.2	ug/L	20	18.8	80 - 124
1,2-Dichlorobenzene	94.3	ug/L	20	18.9	82 - 118
1,2-Dichloroethane	96.1	ug/L	20	19.2	70 - 133
1,2-Dichloropropane	105	ug/L	20	21.0	81 - 127
1,3-Dichlorobenzene	98.4	ug/L	20	19.7	81 - 118
1,3-Dichloropropane	98.5	ug/L	20	19.7	82 - 126
1,3-Dichloropropene, Total	98.4	ug/L	40	39.4	80 - 123
1,4-Dichlorobenzene	97	ug/L	20	19.4	81 - 116
2,2-Dichloropropane	102	ug/L	20	20.3	64 - 129
2-Butanone	78.7	ug/L	100	78.7	50 - 152
2-Chloroethylvinyl ether	77.2	ug/L	20	15.4	1 - 150
2-Hexanone	71.4	ug/L	100	71.4	65 - 154
4-Methyl-2-Pentanone(MIBK)	74	ug/L	100	74.0	71 - 146
Acetone	85.2	ug/L	100	85.2	40 - 151
Benzene	105	ug/L	20	21.0	80 - 124
Bromobenzene	103	ug/L	20	20.6	81 - 119
Bromochloromethane	107	ug/L	20	21.5	73 - 117
Bromodichloromethane	99.4	ug/L	20	19.9	79 - 126
Bromoform	89.9	ug/L	20	18.0	70 - 123
Bromomethane	64	ug/L	20	12.8	45 - 148
Carbon Disulfide	119	ug/L	20	23.9	57 - 131
Carbon Tetrachloride	105	ug/L	20	21.0	62 - 132
Chlorobenzene	96.6	ug/L	20	19.3	85 - 117
Chlorodibromomethane	93.3	ug/L	20	18.7	77 - 122
Chloroethane	73.6	ug/L	20	14.7	51 - 142
Chloroform	103	ug/L	20	20.5	78 - 122
Chloromethane	89.3	ug/L	20	17.9	38 - 156
Cyclohexane	117	ug/L	20	23.5	66 - 130

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Dibromomethane	92.3	ug/L	20	18.5	81 - 125
Dichlorodifluoromethane	76.2	ug/L	20	15.2	17 - 166
Diisopropyl ether	108	ug/L	20	21.7	74 - 131
Ethyl tert-butyl ether	93.7	ug/L	20	18.7	75 - 123
Ethylbenzene	106	ug/L	20	21.1	80 - 124
Freon 113	120	ug/L	20	24.0	50 - 130
Hexachlorobutadiene	110	ug/L	20	21.9	55 - 128
Isopropylbenzene	99	ug/L	20	19.8	73 - 129
Methyl acetate	80.3	ug/L	20	16.1	70 - 130
Methyl cyclohexane	132*	ug/L	20	26.5	70 - 130
Methyl t-Butyl Ether	100	ug/L	20	20.1	69 - 115
Methylene Chloride	115	ug/L	20	23.0	76 - 121
Naphthalene	58.3	ug/L	20	11.7	56 - 134
Styrene	96	ug/L	20	19.2	79 - 123
Tetrachloroethene	96.2	ug/L	20	19.2	72 - 124
Toluene	105	ug/L	20	20.9	80 - 125
Total Xylenes	107	ug/L	60	64.2	79 - 125
Trichloroethene	97.9	ug/L	20	19.6	77 - 124
Trichlorofluoromethane	83.5	ug/L	20	16.7	38 - 123
Vinyl Acetate	86.6	ug/L	20	17.3	58 - 136
Vinyl Chloride	74.6	ug/L	20	14.9	27 - 138
cis-1,3-Dichloropropene	99.3	ug/L	20	19.9	81 - 121
mp-Xylene	108	ug/L	40	43.2	79 - 125
n-Butylbenzene	90.2	ug/L	20	18.0	71 - 130
n-Propylbenzene	95.3	ug/L	20	19.1	74 - 122
o-Chlorotoluene	96.9	ug/L	20	19.4	78 - 126
o-Xylene	105	ug/L	20	21.0	79 - 124
p-Chlorotoluene	110	ug/L	20	22.0	78 - 125
p-Isopropyltoluene	92	ug/L	20	18.4	72 - 123
sec-Butylbenzene	100	ug/L	20	20.0	72 - 127
tert-Amyl methyl ether	83.9	ug/L	20	16.8	75 - 121
tert-Butyl Alcohol	65.4	ug/L	100	65.4	17 - 168
tert-Butylbenzene	94.6	ug/L	20	18.9	72 - 124
trans-1,2-Dichloroethene	108	ug/L	20	21.6	71 - 122
trans-1,3-Dichloropropene	97.4	ug/L	20	19.5	78 - 126
1,2-Dichloroethane-d4 (S)	98.6	%			62 - 133
4-Bromofluorobenzene (S)	96.2	%			79 - 114
Dibromofluoromethane (S)	91.1	%			78 - 116
Toluene-d8 (S)	90.2	%			76 - 127

MATRIX SPIKE: 2722555 DUPLICATE: 2722556 ORIGINAL: 2308276001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

1,2,4-Trimethylbenzene	0	ug/L	20	20.7416	20.9685	104	105	76 - 125	1.09	24
Benzene	0	ug/L	20	22.8041	21.8038	114	109	80 - 124	4.48	26
Ethylbenzene	0	ug/L	20	23.0783	22.268	115	111	80 - 124	3.57	19
Isopropylbenzene	0	ug/L	20	21.6545	21.2307	108	106	73 - 129	1.98	18
Naphthalene	0	ug/L	20	12.597	13.8763	63	69.4	56 - 134	9.66	40
Toluene	0	ug/L	20	23.3581	22.286	117	111	80 - 125	4.7	20
Total Xylenes	0	ug/L	60	70.7608	68.9129	118	115	79 - 125	2.65	35
n-Butylbenzene	0	ug/L	20	19.1166	20.1693	95.6	101	71 - 130	5.36	20
n-Propylbenzene	0	ug/L	20	20.5721	20.7264	103	104	74 - 122	.75	20
p-Isopropyltoluene	0	ug/L	20	19.7967	20.7342	99	104	72 - 123	4.63	17
sec-Butylbenzene	0	ug/L	20	21.5076	22.3699	108	112	72 - 127	3.93	17
1,2-Dichloroethane-d4 (S)	101	%				101	97.3	62 - 133		
4-Bromofluorobenzene (S)	95.8	%				95.8	95.6	79 - 114		
Dibromofluoromethane (S)	93.8	%				93.8	91.3	78 - 116		
Toluene-d8 (S)	96.3	%				96.3	92	76 - 127		

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WCPR/43239 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples: 2307611008

METHOD BLANK: 2721689

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

LABORATORY CONTROL SAMPLE: 2721690

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Phosphorus, Total	98.6	mg/L	2.5	2.5	90 - 110

SAMPLE DUPLICATE: 2721691 ORIGINAL: 2307571001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.498	mg/L	.493	1.01	10

MATRIX SPIKE SAMPLE: 2721692 ORIGINAL: 2307571001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.498	mg/L	2.5	2.975	99.1	90 - 110

SAMPLE DUPLICATE: 2721693 ORIGINAL: 2307574001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.768	mg/L	.77	.26	10

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE SAMPLE: 2721694 ORIGINAL: 2307574001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.768	mg/L	2.5	3.291	101	90 - 110

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202713 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2307611008

METHOD BLANK: 2719712

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2719714

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	98	mg/L	20	19.6	90 - 110
Nitrate-N	95.6	mg/L	2.5	2.4	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110
Sulfate	98.1	mg/L	20	19.6	90 - 110

METHOD BLANK: 2720471

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2720473

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	94.2	mg/L	20	18.8	90 - 110
Nitrate-N	92.4	mg/L	2.5	2.3	90 - 110
Nitrite-N	104	mg/L	.5	0.52	90 - 110
Sulfate	94.9	mg/L	20	19.0	90 - 110

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2720474

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

METHOD BLANK: 2720476

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202781 **Analysis Method:** S4500PE-99

QC Batch Method: S4500PE-99

Associated Lab Samples: 2307611008

METHOD BLANK: 2720401

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

MATRIX SPIKE: 2720403 DUPLICATE: 2720404 ORIGINAL: 2307596003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	.003	mg/L	.5	.4978	.4859	99	96.6	90 - 110	2.42	10

METHOD BLANK: 2720405

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202783 **Analysis Method:** S2320B-97

QC Batch Method: S2320B-97

Associated Lab Samples: 2307611008

METHOD BLANK: 2720414

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2720419 ORIGINAL: 2307585001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	54.28888	mg/L	51.77262	4.74	20

METHOD BLANK: 2720422

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720423 ORIGINAL: 2307586002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	209.9881	mg/L	234.27017	10.9	20

METHOD BLANK: 2720426

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720427 ORIGINAL: 2307587005

Parameter	Original Result	Units	DUP Result	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Alkalinity, Total	224.84048	mg/L	220.09041	2.14	20

METHOD BLANK: 2720430

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720431 ORIGINAL: 2307613001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	3.22486	mg/L	3.73566	14.7	20

METHOD BLANK: 2720434

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720435 ORIGINAL: 2307613007

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	32.92986	mg/L	31.98454	2.91	20

METHOD BLANK: 2720438

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720439 ORIGINAL: 2307615009

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	13.81626	mg/L	13.16808	4.8	20

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2720442

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720443 ORIGINAL: 2307658001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	12.01369	mg/L	12.86484	6.84	20

METHOD BLANK: 2720446

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2720447 ORIGINAL: 2307658008

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	.7318	mg/L	.95823	26.8*	20

SAMPLE DUPLICATE: 2720451 ORIGINAL: 2307736001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	39.67753	mg/L	34.27648	14.6	20

METHOD BLANK: 2720454

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

SAMPLE DUPLICATE: 2720455 ORIGINAL: 2307736003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	75.29556	mg/L	79.00306	4.81	20

METHOD BLANK: 2720877

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	1J	mg/L	5

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202820 **Analysis Method:** S5310B-00

QC Batch Method: 415.1/9060/5310B

Associated Lab Samples: 2307611008

METHOD BLANK: 2720920

Parameter	Blank Result	Units	Reporting Limit
Total Organic Carbon (TOC)	ND	mg/L	0.50

LABORATORY CONTROL SAMPLE: 2720921

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Organic Carbon (TOC)	99	mg/L	1	0.99	85 - 115

MATRIX SPIKE: 2720922 DUPLICATE: 2720923 ORIGINAL: 2307741001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	1.009	mg/L	6	7.101	7.176	102	103	85 - 115	1.05	20

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202874 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2721668

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2721669

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2721670

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	93.2	mg/L	500	466	90 - 110

SAMPLE DUPLICATE: 2721671 ORIGINAL: 2307611008

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	296	mg/L	272	8.45*	5

SAMPLE DUPLICATE: 2721672 ORIGINAL: 2307613008

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	200	mg/L	183	8.88*	5

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202961 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2307611001, 2307611002, 2307611003, 2307611004, 2307611007, 2307611011, 2307611018

METHOD BLANK: 2722775

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

LABORATORY CONTROL SAMPLE: 2722778

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	101	ug/L	10	10.1	90 - 110

MATRIX SPIKE: 2722779 DUPLICATE: 2722780 ORIGINAL: 2308190002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	.194	ug/L	5	5.505	5.204	106	100	90 - 110	5.62	20

METHOD BLANK: 2722782

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

MATRIX SPIKE: 2722943 DUPLICATE: 2722944 ORIGINAL: 2308813001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	0	ug/L	5	5.007	5.313	100	106	90 - 110	5.93	20

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QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2722784

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203005 **Analysis Method:** D6919-09

QC Batch Method: D6919-09

Associated Lab Samples: 2307611008

LABORATORY CONTROL SAMPLE: 2723213

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Ammonia-N	93.3	mg/L	2.5	2.33	90 - 110

METHOD BLANK: 2723214

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	ND	mg/L	0.010

METHOD BLANK: 2723216

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	ND	mg/L	0.010

MATRIX SPIKE: 2723217 DUPLICATE: 2723218 ORIGINAL: 2307800002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Ammonia-N	.309	mg/L	10	9.852	9.776	95.4	94.7	75 - 125	.77	25

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203291 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples:

METHOD BLANK: 2726730

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2726732

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2726734

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.080J	mg/L	0.10

METHOD BLANK: 2726736

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.040J	mg/L	0.10

METHOD BLANK: 2726738

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.036J	mg/L	0.10

METHOD BLANK: 2726740

Parameter	Blank Result	Units	Reporting Limit

QUALITY CONTROL DATA

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Phosphorus, Total	0.026J	mg/L	0.10

METHOD BLANK: 2726742

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	0.034J	mg/L	0.10

METHOD BLANK: 2726744

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2721324	1	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 140 and the control limits were 70 to 130.				
2721780	2	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 133 and the control limits were 70 to 130.				
2721983	3	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 142 and the control limits were 70 to 130.				
2722321	4	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 132 and the control limits were 70 to 130.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307611008	MRC-MW21B			EPA 300.0	WETC/202713
2307611008	MRC-MW21B			S4500PE-99	WETC/202781
2307611008	MRC-MW21B			S2320B-97	WETC/202783
2307611008	MRC-MW21B			S5310B-00	WETC/202820
2307611001	MRC-MW126A	SW846 3015	MDIG/71127	SW846 6020A	META/61618
2307611002	BRC-MW126B	SW846 3015	MDIG/71127	SW846 6020A	META/61618
2307611003	BRC-MW125B	SW846 3015	MDIG/71127	SW846 6020A	META/61618
2307611004	BRC-MW125A	SW846 3015	MDIG/71127	SW846 6020A	META/61618
2307611013	MRC-MW81B	SW846 3015	MDIG/71127	SW846 6020A	META/61618
2307611015	MRC-MW92C	SW846 3015	MDIG/71127	SW846 6020A	META/61618
2307611017	MRC-MW81A	SW846 3015	MDIG/71127	SW846 6020A	META/61618
2307611001	MRC-MW126A			SW846 8260B	VOMS/46497
2307611002	BRC-MW126B			SW846 8260B	VOMS/46497
2307611003	BRC-MW125B			SW846 8260B	VOMS/46497
2307611004	BRC-MW125A			SW846 8260B	VOMS/46497
2307611005	BRC-MW113A			SW846 8260B	VOMS/46497
2307611006	MRC-MW90B			SW846 8260B	VOMS/46497
2307611007	MRC-MW119B			SW846 8260B	VOMS/46497
2307611008	MRC-MW21B			SW846 8260B	VOMS/46497
2307611010	MRC-MW21A			SW846 8260B	VOMS/46497
2307611011	MRC-MW120B			SW846 8260B	VOMS/46497
2307611013	MRC-MW81B			SW846 8260B	VOMS/46497
2307611014	MRC-MW78B			SW846 8260B	VOMS/46497
2307611016	MRC-MW106B/C			SW846 8260B	VOMS/46497
2307611018	MRC-MW120A			SW846 8260B	VOMS/46497
2307611019	Trip Blank			SW846 8260B	VOMS/46497

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307611008	MRC-MW21B			S2540C-11	WETC/202874
2307611008	MRC-MW21B	EPA 365.1	WCPR/43239	EPA 365.1	WETC/203291
2307611020	MRC-MW69A			SW846 8260B	VOMS/46504
2307611021	MRC-MW41A			SW846 8260B	VOMS/46504
2307611022	MRC-MW69B			SW846 8260B	VOMS/46504
2307611023	MRC-MW87B			SW846 8260B	VOMS/46504
2307611024	MRC-MW162B			SW846 8260B	VOMS/46504
2307611005	BRC-MW113A			SW846 8260B	VOMS/46511
2307611007	MRC-MW119B			SW846 8260B	VOMS/46511
2307611008	MRC-MW21B			SW846 8260B	VOMS/46511
2307611009	MRC-MW20A			SW846 8260B	VOMS/46511
2307611011	MRC-MW120B			SW846 8260B	VOMS/46511
2307611012	MRC-MW63A			SW846 8260B	VOMS/46511
2307611013	MRC-MW81B			SW846 8260B	VOMS/46511
2307611015	MRC-MW92C			SW846 8260B	VOMS/46511
2307611024	MRC-MW162B			SW846 8260B	VOMS/46517
2307611005	BRC-MW113A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611006	MRC-MW90B	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611007	MRC-MW119B	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611008	MRC-MW21B	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611009	MRC-MW20A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611011	MRC-MW120B	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611012	MRC-MW63A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611018	MRC-MW120A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30436
2307611001	MRC-MW126A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2307611002	BRC-MW126B	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307611003	BRC-MW125B	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2307611004	BRC-MW125A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2307611010	MRC-MW21A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2307611013	MRC-MW81B	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2307611017	MRC-MW81A	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2307611001	MRC-MW126A			EPA 218.6	WETC/202961
2307611002	BRC-MW126B			EPA 218.6	WETC/202961
2307611003	BRC-MW125B			EPA 218.6	WETC/202961
2307611004	BRC-MW125A			EPA 218.6	WETC/202961
2307611007	MRC-MW119B			EPA 218.6	WETC/202961
2307611011	MRC-MW120B			EPA 218.6	WETC/202961
2307611018	MRC-MW120A			EPA 218.6	WETC/202961
2307611008	MRC-MW21B			D6919-09	WETC/203005
2307611020	MRC-MW69A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2307611021	MRC-MW41A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2307611022	MRC-MW69B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2307611023	MRC-MW87B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2307611024	MRC-MW162B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2307611020	MRC-MW69A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30505
2307611001	MRC-MW126A	SW846 7470A	MDIG/71245	SW846 7470A	META/61692
2307611002	BRC-MW126B	SW846 7470A	MDIG/71245	SW846 7470A	META/61692
2307611003	BRC-MW125B	SW846 7470A	MDIG/71245	SW846 7470A	META/61692
2307611004	BRC-MW125A	SW846 7470A	MDIG/71245	SW846 7470A	META/61692
2307611013	MRC-MW81B	SW846 7470A	MDIG/71245	SW846 7470A	META/61692
2307611015	MRC-MW92C	SW846 7470A	MDIG/71245	SW846 7470A	META/61692
2307611017	MRC-MW81A	SW846 7470A	MDIG/71245	SW846 7470A	META/61692

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2307611 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2307611008	MRC-MW21B			RSK 175	SVGC/48873

Friday, April 27, 2018 6:10:27 PM
Page 132 of 160
ALS

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

23076711

Co. Name: AECOM

Contact (Report to): Ravi Danera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown MD 20876

Bill to (if different than Report to): Ravi Danera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: Normal-Standard TAT is 10-12 business days. Date Required:
Rush-Subject to ALS approval and surcharges. Approved By:

Email? X Y Ravi.Danera@aecom.com
Fax? Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	Total Metals (6010C 7470A)	Hexavalent Chromium (3185, D)	PCB Homologs (8082A)	MEE (RSK 175)	MNA (TOC, anion-IC, SO4, NO3, NO2, Fe2+)	Alkalinity	Ammonia-N (NH_3)	TOC (5310B)
1 MRC-MW126A		4-6-18	1215	G	GW	2	2	1	1	2					
2 MRC-MW126B		4-6-18	1040	G	GW	2	2	1	1	2					
3 MRC-MW125B		4-6-18	1600	G	GW	2	2	1	1	2					
4 MRC-MW125A		4-6-18	1430	G	GW	2	2	1	1	2					
5 MRC-MW113A		4-6-18	1730	G	GW	2	2			2					
6 MRC-MW96B		4-6-18	1045	G	GW	2	2								
7 MRC-MW119B		4-6-18	1900	G	GW	2	2		1						
8 MRC-MW21B		4-6-18	1625	G	GW	2	2				2	1	1	1	2

***Container Type	CG	AG	PL	PL	AG	CG	P	P	P	HG
***Container Size	40mL	1L	250mL	250mL	1L	40mL	500	250	250	40mL
Preservative	HCl	none	HNO_3	NH_4OH	none	HCl	—	—	H_2SO_4	HCl

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Analysis

(completed by Sample Receipt)
Performed by: (initials)
Cooler Temp: 1°C
Therm. ID: 318
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	Y	Y	Y	Y	
3	Y	Y	Y	Y	
4	Y	Y	Y	Y	
5	Y	Y	Y	Y	
6	Y	Y	Y	Y	
7	Y	Y	Y	Y	
8	Y	Y	Y	Y	

Custody seals Present? (if present) Seals intact? Received on Ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email data to holly.brown@aecom.com & ragum.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4-9-18	1550	2 [signature] (AM)	4/9	1550
3			4		1730
5		2110	6 [signature]	4/9	2110
7			8		
9			10		

Data Deliverables: X Standard; CLP-like; NJ-Reduced; NJ-Full; other:
EDDs Required? X If yes, format type: EQUIS & CSV EQUIS EDD
SDWA Forms? yes / yes / yes / yes
State Samples Collected in? MD NJ NY PA
Other
DOD Criteria Required?

ALS FIELD SERVICES: Pickup; Labor; Composite Sampling; Rental Equipment; Other:

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO_3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 4

Courier:

Tracking #:

7899#1

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.

Date Required:
Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

***Container Type	CG	AG	PL	PL											
***Container Size	40mL	1L	250mL	250mL											
*** Preservative	HCl	none	HNO3	NH4OH											

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	4-Dioxane (8270D SIM)	TAL Metals (6020A 7470)	Hex. chromium (218.6)						
1	MRC-MW20A		4-6-18	1845	G	GW	2	2								
2	MRC-MW21A		4-6-18	1605	G	GW	2	2								
3	MRC-MW120B		4-6-18	1510	G	GW	2	2		1						
4	MRC-MW63A		4-6-18	1835	G	GW	2	2								
5	MRC-MW81B		4-6-18	1207	G	GW	2	2	1							
6	MRC-MW78B		4-6-18	1626	G	GW	2									
7	MRC-MW92C		4-6-18	1854	G	GW	2		1							
8	MRC-MW106 B/C		4-6-18	1055	G	GW	2									

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: [signature]
Cooler Temp: 1°C
Therm. ID: 318
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	Y	Y	Y	Y	
	Y	Y	Y	Y	
	Y	Y	Y	Y	
	Y	Y	Y	Y	
	Y	Y	Y	Y	
	Y	Y	Y	Y	
	Y	Y	Y	Y	
	Y	Y	Y	Y	

Custody seals Present? (if present) Seals intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email data to holly.brown@aecom.com & moiem.tavantcis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] AECOM	4-9-18	1550	2	[signature]	4/9	1550
3	[signature] ALS			4	[signature]		1730
5	[signature]		2110	6	[signature]	4/9	2110
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] (PW)

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS & .csv Other Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 800ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 3 of 4

Courier:

Tracking #:

7/6/11

Co. Name: AECOM

Contact (Report to): Ravi Pamera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Pamera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.pamera@aecom.com
Fax? [ ] -Y No.:

***Container Type	CG	AG	PL	PL											
***Container Size	40ml	1L	250ml	250ml											
*** Preservative	HCl	none	HNO3	NH4OH											

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260 C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A 7470)	Hex Chromium (218.6)						
1 MRC-MW81A		4-6-18	0940	G	GW		2	1							
2 MRC-MW120A		4-6-18	1540	G	GW	2	2		1						
3 Trip Blank		NA	NA			2									
4 MRC-MW119A	could only obtain	4-6-18	1815	G	GW	1									
5	1 VOA prior to running														
6	dry														
7 MRC-MW69A		4-9-18	1105	G	GW	2	2								
8 MRC-MW41A		4-9-18	0915	G	GW	2	2								

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: (signature)
Cooler Temp: 1°C
Therm. ID: 318
No. of Coolers:
Notes:

Sample Description/Location	Sample Date	Military Time	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 MRC-MW81A	4-6-18	0940	Y	Y	Y	Y	Y
2 MRC-MW120A	4-6-18	1540	Y	Y	Y	Y	Y
3 Trip Blank	NA	NA	Y	Y	Y	Y	Y
4 MRC-MW119A	4-6-18	1815	Y	Y	Y	Y	Y
5							
6							
7 MRC-MW69A	4-9-18	1105	Y	Y	Y	Y	Y
8 MRC-MW41A	4-9-18	0915	Y	Y	Y	Y	Y

Correct containers? Y N
Correct sample volume? Y N
Correct preservation? Y N
Headspace/Volatiles? Y N
Circle appropriate Y or N.

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email data to holly.brown@aecom.com & naoum.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4-9-18	1550	2 [signature]	4/9	1550
3 [signature] / ALS			4 [signature]		1730
5 [signature]		2110	6 [signature]	4/9	2110
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] Other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EquIS 4 Other

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

COC# 1

Co. Name: AECOM

Contact (Report to): Ravi Ramesa & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Ramesa PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.ramesa@aecom.com
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	*** Preservative									
						CG	AG										
						40mL	1L										
						HCl	None										
						VOCs (8260)	1,4-Dioxane (8270 SIM)										
1 MRC-MW69B		4-9-18	1210	G	GW	2	2										
2 MRC-MW87B		4-9-18	1143	G	GW	2	2										
3 MRC-MW162B		4-9-18	1105	G	GW	2	2										
4																	
5																	
6																	
7																	
8																	

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: [illegible] Initials: [illegible]
Cooler Temp: 1.0C
Therm. ID: 318
No. of Coolers:
Notes:

Circle appropriate Y or N.	Container in good condition?	COC/Labels complete/accurate?	Received on ice?	(if present) Seals intact?	Custody seals Present?
N	N	N	N	N	N
N	N	N	N	N	N
N	N	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y
Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?		

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email data to holly.brown@aecom.com & maun.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] / AECOM	4-9-18	1350	2 [illegible]	4/9	1550
3			4		1730
5		2110	6 [illegible]	4/9	2110
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
SDWA Forms? yes yes yes yes
State Samples Collected In? MD NJ NY PA
EDDs Required? [X] If yes, format type: FAIS & .CSV Other
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

Friday, April 27, 2018 6:10:27 PM
Page 135 of 160
ALS

April 17, 2018 Service Request No:R1803154

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2307611

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 11, 2018
For your reference, these analyses have been assigned our service request number **R1803154.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2307611
Sample Matrix: Water

Service Request: R1803154
Date Received: 04/11/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 04/11/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/12/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Approved by _____ Date 04/17/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2307611 002			Lab ID: R1803154-002			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0019	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2307611 003			Lab ID: R1803154-003			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Heptachlorobiphenyls, Total	0.019		0.0090	0.014	ug/L	680
Hexachlorobiphenyls, Total	0.036		0.0047	0.0094	ug/L	680
Pentachlorobiphenyls, Total	0.0061	J	0.0043	0.0094	ug/L	680
Total PCBs as Sum of Homologs	0.062			0.024	ug/L	680

CLIENT ID: 2307611 004			Lab ID: R1803154-004			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0024	J	0.0016	0.0047	ug/L	680
Heptachlorobiphenyls, Total	0.012	J	0.0090	0.014	ug/L	680
Hexachlorobiphenyls, Total	0.023		0.0047	0.0094	ug/L	680
Pentachlorobiphenyls, Total	0.0066	J	0.0043	0.0094	ug/L	680
Total PCBs as Sum of Homologs	0.044			0.024	ug/L	680

CLIENT ID: 2307611 005			Lab ID: R1803154-005			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0094		0.0016	0.0047	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US
Project: UR115: 2307611

Service Request: R1803154

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803154-001	2307611 001	4/5/2018	1215
R1803154-002	2307611 002	4/5/2018	1040
R1803154-003	2307611 003	4/5/2018	1600
R1803154-004	2307611 004	4/5/2018	1430
R1803154-005	2307611 005	4/5/2018	1730

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of
ALS Quote #:	1

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2307611

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/20/2018 Approved By: ____

Email? [ ] Y ____

Fax? [ ] Y No.: ____

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

					Container Type	AN									
					Container Size	1 L									
					Preservative	None									
					ANALYSES/METHOD REQUESTED										
Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, Full QC lab report needed, EQUIS EDD.									Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below:										
1 2307611 001	4/5/18	1215	G	WT	2	*									
2 2307611 002	4/5/18	1040	G	WT	2	*									Sub to ALS Rochester
3 2307611 003	4/5/18	1600	G	WT	2	*									
4 2307611 004	4/5/18	1430	G	WT	2	*									
5 2307611 005	4/5/18	1730	G	WT	2	*									
6															
7															
8															
9															
10															

R1803154 5
ALS Environmental
UR115: 2307611

ALS Field Services: [ ] Pickup [ ] Labor
[ ] Composite_Sampling [ ] Rental_Equipment
[ ] Other: ____

Project Comments:

LOGGED BY(signature): ____ DATE ____

REVIEWED BY(signature): ____ DATE ____

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] ALS	4/10/18	1620	2 [signature] ALS	4/11/18	0925
3			4		
5			6		
7			8		
9			10		

Reportable to PADEP? Yes [ ] PWSID # ____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- EQUIS EDD

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 8/04

Cooler Receipt and Preservation Check Form

R1803154 5
ALS Environmental
UR115| 2307611

Project/Client ALS - Middleton Folder Number

Cooler received on 4/11/18 by: @ COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate? ALS/ROC	(CLIENT)
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	Y N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/11/18 Time: 1004 ID: IR#7 (IR#9) From: Temp Blank (Sample Bottle)

Observed Temp (°C)	4.1	0.8	1.3	4.3			
Correction Factor (°C)	—	—	—	—			
Corrected Temp (°C)	4.1	0.8	1.3	4.3			
Temp from:Type of bottle	—	—	—	—			
Within 0-6°C?	(Y) N	(Y) N	(Y) N	(Y) N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by @ on 4/11/18 at 1034
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 4/11/18 Time: 1511 by: clw

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (NA)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (NA)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: chem

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: ok

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm ; WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

\# Spike was diluted out

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Analyst Summary report

Client: ALS Environmental - US
Project: UR115: 2307611

Service Request: R1803154

Sample Name: 2307611 001
Lab Code: R1803154-001
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307611 002
Lab Code: R1803154-002
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307611 003
Lab Code: R1803154-003
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307611 004
Lab Code: R1803154-004
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2307611 005
Lab Code: R1803154-005
Sample Matrix: Water

Date Collected: 04/5/18
Date Received: 04/11/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-C
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803154
Project:	UR115: 2307611	**Date Collected:**	04/05/18 12:15
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307611 001	**Units:**	ug/L
Lab Code:	R1803154-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 09:37	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0047	0.0016	1	04/12/18 09:37	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 09:37	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/12/18 09:37	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 09:37	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 09:37	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 09:37	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0043	1	04/12/18 09:37	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 09:37	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 09:37	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 09:37	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	84	58 - 125	04/12/18 09:37	
4,4'-DDT	109	37 - 166	04/12/18 09:37	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803154
Project:	UR115: 2307611	**Date Collected:**	04/05/18 10:40
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307611 002	**Units:**	ug/L
Lab Code:	R1803154-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 10:05	4/11/18	
Dichlorobiphenyls, Total	**0.0019 J**	0.0047	0.0016	1	04/12/18 10:05	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 10:05	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/12/18 10:05	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 10:05	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 10:05	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 10:05	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0043	1	04/12/18 10:05	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 10:05	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 10:05	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 10:05	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	94	58 - 125	04/12/18 10:05	
4,4'-DDT	89	37 - 166	04/12/18 10:05	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803154
Project:	UR115: 2307611	**Date Collected:**	04/05/18 16:00
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307611 003	**Units:**	ug/L
Lab Code:	R1803154-003	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 10:34	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0047	0.0016	1	04/12/18 10:34	4/11/18	
Heptachlorobiphenyls, Total	**0.019**	0.014	0.0090	1	04/12/18 10:34	4/11/18	
Hexachlorobiphenyls, Total	**0.036**	0.0094	0.0047	1	04/12/18 10:34	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 10:34	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 10:34	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 10:34	4/11/18	
Pentachlorobiphenyls, Total	**0.0061 J**	0.0094	0.0048	1	04/12/18 10:34	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 10:34	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 10:34	4/11/18	
Total PCBs as Sum of Homologs	**0.062**	0.024	-	1	04/12/18 10:34	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	114	58 - 125	04/12/18 10:34	
4,4'-DDT	104	37 - 166	04/12/18 10:34	

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803154
Project:	UR115: 2307611	**Date Collected:**	04/05/18 14:30
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307611 004	**Units:**	ug/L
Lab Code:	R1803154-004	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND	U	0.024	0.012	1	04/12/18 11:03	4/11/18	
Dichlorobiphenyls, Total	**0.0024**	**J**	0.0047	0.0016	1	04/12/18 11:03	4/11/18	
Heptachlorobiphenyls, Total	**0.012**	**J**	0.014	0.0090	1	04/12/18 11:03	4/11/18	
Hexachlorobiphenyls, Total	**0.023**		0.0094	0.0047	1	04/12/18 11:03	4/11/18	
Monochlorobiphenyls, Total	ND	U	0.0047	0.00059	1	04/12/18 11:03	4/11/18	
Nonachlorobiphenyls, Total	ND	U	0.019	0.0088	1	04/12/18 11:03	4/11/18	
Octachlorobiphenyls, Total	ND	U	0.014	0.0099	1	04/12/18 11:03	4/11/18	
Pentachlorobiphenyls, Total	**0.0066**	**J**	0.0094	0.0045	1	04/12/18 11:03	4/11/18	
Tetrachlorobiphenyls, Total	ND	U	0.0094	0.0023	1	04/12/18 11:03	4/11/18	
Trichlorobiphenyls, Total	ND	U	0.0047	0.0022	1	04/12/18 11:03	4/11/18	
Total PCBs as Sum of Homologs	**0.044**		0.024	-	1	04/12/18 11:03	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	80	58 - 125	04/12/18 11:03	
4,4'-DDT	104	37 - 166	04/12/18 11:03	

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803154
Project:	UR115: 2307611	**Date Collected:**	04/05/18 17:30
Sample Matrix:	Water	**Date Received:**	04/11/18 09:35
Sample Name:	2307611 005	**Units:**	ug/L
Lab Code:	R1803154-005	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/12/18 11:32	4/11/18	
Dichlorobiphenyls, Total	**0.0094**	0.0047	0.0016	1	04/12/18 11:32	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/12/18 11:32	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/12/18 11:32	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/12/18 11:32	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/12/18 11:32	4/11/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/12/18 11:32	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/12/18 11:32	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/12/18 11:32	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/12/18 11:32	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/12/18 11:32	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	116	58 - 125	04/12/18 11:32	
4,4'-DDT	130	37 - 166	04/12/18 11:32	

QC Summary Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:** R1803154
Project: UR115: 2307611
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2307611 001	R1803154-001	109	84
2307611 002	R1803154-002	89	94
2307611 003	R1803154-003	104	114
2307611 004	R1803154-004	104	80
2307611 005	R1803154-005	130	116
Method Blank	RQ1803214-01	116	98
Lab Control Sample	RQ1803214-02	121	101
Duplicate Lab Control Sample	RQ1803214-03	110	92

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803154
Project:	UR115: 2307611	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803214-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/12/18 07:17	4/11/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/12/18 07:17	4/11/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/12/18 07:17	4/11/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/12/18 07:17	4/11/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/12/18 07:17	4/11/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/12/18 07:17	4/11/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/12/18 07:17	4/11/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/12/18 07:17	4/11/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/12/18 07:17	4/11/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/12/18 07:17	4/11/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/12/18 07:17	4/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	98	58 - 125	04/12/18 07:17	
4,4'-DDT	116	37 - 166	04/12/18 07:17	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: UR115: 2307611
Sample Matrix: Water

Service Request: R1803154
Date Analyzed: 04/12/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803214-02			Duplicate Lab Control Sample RQ1803214-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.704	1.25	56	0.670	1.25	54	29-162	5	30
Dichlorobiphenyls, Total	680	0.225	0.250	90	0.207	0.250	83	37-139	9	30
Heptachlorobiphenyls, Total	680	0.575	0.750	77	0.526	0.750	70	53-120	9	30
Hexachlorobiphenyls, Total	680	0.420	0.500	84	0.371	0.500	74	11-160	12	30
Monochlorobiphenyls, Total	680	0.193	0.250	77	0.184	0.250	74	34-137	5	30
Octachlorobiphenyls, Total	680	0.532	0.750	71	0.490	0.750	65	57-125	8	30
Pentachlorobiphenyls, Total	680	0.450	0.500	90	0.390	0.500	78	10-180	14	30
Tetrachlorobiphenyls, Total	680	0.475	0.500	95	0.421	0.500	84	14-153	12	30
Trichlorobiphenyls, Total	680	0.237	0.250	95	0.208	0.250	83	10-173	13	30

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 30, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2308120**
Purchase Order:	**95840ACM**	Workorder ID:	**2018-MIDDLE RIVER COMPLEX**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, April 10, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2308120001	EB-040618-ZN	Water	4/6/2018 15:00	4/10/2018 22:00	Ms. Holly Brown
2308120002	EB-040618-AZ	Water	4/6/2018 14:00	4/10/2018 22:00	Ms. Holly Brown
2308120003	EB-040618-TK	Water	4/6/2018 13:00	4/10/2018 22:00	Ms. Holly Brown
2308120004	EB-040618-AD	Water	4/6/2018 12:00	4/10/2018 22:00	Ms. Holly Brown
2308120005	TB-041018-1	Water	4/10/2018 22:00	4/10/2018 22:00	Ms. Holly Brown
2308120006	MRC-MW79B	Water	4/9/2018 17:00	4/10/2018 22:00	Ms. Holly Brown
2308120007	MRC-MW101B	Water	4/9/2018 15:40	4/10/2018 22:00	Ms. Holly Brown
2308120008	MRC-MW101A	Water	4/9/2018 13:45	4/10/2018 22:00	Ms. Holly Brown
2308120009	MRC-MW95B	Water	4/9/2018 17:22	4/10/2018 22:00	Ms. Holly Brown
2308120010	MRC-MW25A	Water	4/9/2018 13:56	4/10/2018 22:00	Ms. Holly Brown
2308120011	MRC-MW115A	Water	4/10/2018 09:49	4/10/2018 22:00	Ms. Holly Brown
2308120012	MRC-MW64A	Water	4/9/2018 16:30	4/10/2018 22:00	Ms. Holly Brown
2308120013	MRC-MW87A	Water	4/9/2018 09:41	4/10/2018 22:00	Ms. Holly Brown
2308120014	TB-041018-2	Water	4/10/2018 22:00	4/10/2018 22:00	Ms. Holly Brown
2308120015	MRC-MW12B	Water	4/9/2018 12:05	4/10/2018 22:00	Ms. Holly Brown
2308120016	MRC-MW117B	Water	4/9/2018 14:50	4/10/2018 22:00	Ms. Holly Brown
2308120017	MRC-MW114A	Water	4/9/2018 08:30	4/10/2018 22:00	Ms. Holly Brown
2308120018	TB-041018-3	Water	4/10/2018 22:00	4/10/2018 22:00	Ms. Holly Brown
2308120019	MRC-MW22B	Water	4/9/2018 17:20	4/10/2018 22:00	Ms. Holly Brown
2308120020	MRC-MW15A	Water	4/9/2018 15:05	4/10/2018 22:00	Ms. Holly Brown
2308120021	MRC-MW12A	Water	4/9/2018 09:40	4/10/2018 22:00	Ms. Holly Brown
2308120022	MRC-MW102A	Water	4/9/2018 10:20	4/10/2018 22:00	Ms. Holly Brown
2308120023	MRC-MW127B	Water	4/10/2018 09:00	4/10/2018 22:00	Ms. Holly Brown
2308120024	TB-041018-4	Water	4/10/2018 22:00	4/10/2018 22:00	Ms. Holly Brown
2308120025	MRC-MW17A	Water	4/10/2018 11:10	4/10/2018 22:00	Ms. Holly Brown
2308120026	MRC-MW127A	Water	4/10/2018 10:00	4/10/2018 22:00	Ms. Holly Brown
2308120027	MRC-MW109B	Water	4/10/2018 13:00	4/10/2018 22:00	Ms. Holly Brown
2308120028	MRC-MW27C	Water	4/10/2018 12:28	4/10/2018 22:00	Ms. Holly Brown
2308120029	MRC-MW50A	Water	4/10/2018 09:00	4/10/2018 22:00	Ms. Holly Brown
2308120030	TB-041018-5	Water	4/10/2018 22:00	4/10/2018 22:00	Ms. Holly Brown
2308120031	MRC-MW128A	Water	4/10/2018 12:05	4/10/2018 22:00	Ms. Holly Brown
2308120032	MRC-MW10A	Water	4/10/2018 09:40	4/10/2018 22:00	Ms. Holly Brown
2308120033	MRC-MW12C	Water	4/10/2018 13:05	4/10/2018 22:00	Ms. Holly Brown
2308120034	TB-041018-6	Water	4/10/2018 22:00	4/10/2018 22:00	Ms. Holly Brown

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Workorder Comments

The sample ID for -009 was updated to MRC-MW-95B per client request via e-mail on 4/23/18. VNB 4/24/18

Please see attached subcontracting report from ALS Rochester. VNB 4/30/18

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120001** Date Collected: 4/6/2018 15:00 Matrix: Water

Sample ID: **EB-040618-ZN** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 20:11	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 20:11	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 20:11	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 20:11	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 20:11	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 20:11	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 20:11	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 20:11	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:11	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 20:11	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 20:11	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 20:11	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:11	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 20:11	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:11	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:11	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:11	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 20:11	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:11	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:11	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 20:11	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 20:11	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 20:11	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 20:11	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 20:11	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:11	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:11	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:11	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:11	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 20:11	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 20:11	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:11	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:11	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 20:11	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 20:11	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120001** Date Collected: 4/6/2018 15:00 Matrix: Water

Sample ID: **EB-040618-ZN** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 20:11	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:11	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 20:11	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:11	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:11	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 20:11	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 20:11	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 20:11	CJG	A
Hexachlorobutadiene	1.2J	J	ug/L	5.0	1.0	SW846 8260B		4/12/18 20:11	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 20:11	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 20:11	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 20:11	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 20:11	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 20:11	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:11	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 20:11	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:11	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 20:11	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:11	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 20:11	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 20:11	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:11	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:11	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 20:11	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 20:11	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 20:11	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:11	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:11	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:11	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 20:11	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 20:11	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 20:11	CJG	A

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120001** Date Collected: 4/6/2018 15:00 Matrix: Water

Sample ID: **EB-040618-ZN** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 20:11	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 20:11	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	110		%	62 - 133		SW846 8260B			4/12/18 20:11	CJG	A
4-Bromofluorobenzene (S)	97.1		%	79 - 114		SW846 8260B			4/12/18 20:11	CJG	A
Dibromofluoromethane (S)	98.1		%	78 - 116		SW846 8260B			4/12/18 20:11	CJG	A
Toluene-d8 (S)	90.1		%	76 - 127		SW846 8260B			4/12/18 20:11	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.098	0.019	8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	66.9		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
Fluoranthene-d10 (S)	78.7		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 19:28	CGS	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/19/18 03:14	EGO	F
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/19/18 03:14	EGO	F
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/19/18 03:14	EGO	F
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/19/18 03:14	EGO	F
Methane	ND		ug/L	1.5	0.34	RSK 175			4/19/18 03:14	EGO	F
Propane	ND		ug/L	3.2	0.22	RSK 175			4/19/18 03:14	EGO	F
WET CHEMISTRY											
Alkalinity, Total	ND	1	mg/L	5	0.8	S2320B-97			4/13/18 10:29	MSA	H
Ammonia-N	0.477		mg/L	0.100	0.03	D6919-09			4/19/18 00:12	CMM	I
Chloride	ND		mg/L	1.0	0.12	EPA 300.0			4/11/18 06:12	CHW	L
Nitrate-N	ND	3	mg/L	0.10	0.028	EPA 300.0			4/11/18 06:12	CHW	L
Nitrite-N	ND	2	mg/L	0.10	0.020	EPA 300.0			4/11/18 06:12	CHW	L
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/11/18 05:01	MSA	L
Phosphorus, Total	0.040J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 16:00	BMK	4/27/18 18:20	JAM	I
Sulfate	ND		mg/L	1.0	0.20	EPA 300.0			4/11/18 06:12	CHW	L
Total Dissolved Solids	20		mg/L	5	5	S2540C-11			4/13/18 22:37	MLM	L
Total Organic Carbon (TOC)	0.19J	J	mg/L	0.50	0.18	S5310B-00			4/13/18 11:30	PAG	J

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120001** Date Collected: 4/6/2018 15:00 Matrix: Water

Sample ID: **EB-040618-ZN** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
METALS											
Silica	ND		mg/L	0.24	0.080	SW846 6010C	4/14/18 17:10	AHI	4/18/18 07:27	SRT	E
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Calcium, Total	0.26		mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:33	SRT	E
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Cobalt, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Copper, Total	0.0038J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Iron, Total	ND		mg/L	0.067	0.022	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:33	SRT	E
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Magnesium, Total	ND		mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:33	SRT	E
Manganese, Total	0.0021J	J	mg/L	0.0056	0.0020	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:33	SRT	E
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/20/18 07:45	AXC	4/20/18 11:01	AXC	E
Nickel, Total	0.0029J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Potassium, Total	ND		mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:33	SRT	E
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Sodium, Total	0.25J	J	mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:33	SRT	E
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1
Zinc, Total	0.0037J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:11	MO	E1

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120002** Date Collected: 4/6/2018 14:00 Matrix: Water

Sample ID: **EB-040618-AZ** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 20:33	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 20:33	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 20:33	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 20:33	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 20:33	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 20:33	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 20:33	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 20:33	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:33	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 20:33	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 20:33	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 20:33	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:33	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 20:33	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:33	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:33	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:33	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 20:33	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:33	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:33	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 20:33	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 20:33	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 20:33	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 20:33	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 20:33	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:33	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:33	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:33	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:33	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 20:33	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 20:33	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:33	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:33	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 20:33	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 20:33	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120002** Date Collected: 4/6/2018 14:00 Matrix: Water

Sample ID: **EB-040618-AZ** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 20:33	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:33	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 20:33	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:33	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:33	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 20:33	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 20:33	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 20:33	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 20:33	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 20:33	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 20:33	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 20:33	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 20:33	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 20:33	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:33	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 20:33	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:33	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 20:33	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:33	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 20:33	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 20:33	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:33	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:33	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 20:33	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 20:33	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 20:33	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:33	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:33	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:33	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 20:33	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 20:33	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 20:33	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120002** Date Collected: 4/6/2018 14:00 Matrix: Water

Sample ID: **EB-040618-AZ** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 20:33	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 20:33	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/12/18 20:33	CJG	A
4-Bromofluorobenzene (S)	97.8		%	79 - 114		SW846 8260B			4/12/18 20:33	CJG	A
Dibromofluoromethane (S)	108		%	78 - 116		SW846 8260B			4/12/18 20:33	CJG	A
Toluene-d8 (S)	87.4		%	76 - 127		SW846 8260B			4/12/18 20:33	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.11	0.020	8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46.4		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
Fluoranthene-d10 (S)	74.8		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 18:34	CGS	C
WET CHEMISTRY											
Hexavalent Chromium	0.087J	J	ug/L	0.25	0.047	EPA 218.6			4/18/18 04:46	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120003** Date Collected: 4/6/2018 13:00 Matrix: Water

Sample ID: **EB-040618-TK** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 20:55	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 20:55	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 20:55	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 20:55	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 20:55	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 20:55	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 20:55	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 20:55	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:55	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 20:55	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 20:55	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 20:55	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:55	CJG	A
1,2-Dichloroethene, Total	0.45J	J	ug/L	2.0	0.45	SW846 8260B		4/12/18 20:55	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:55	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:55	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:55	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 20:55	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:55	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:55	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 20:55	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 20:55	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 20:55	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 20:55	CJG	A
Acetone	4.8J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 20:55	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:55	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:55	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:55	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 20:55	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 20:55	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 20:55	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:55	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:55	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 20:55	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 20:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120003** Date Collected: 4/6/2018 13:00 Matrix: Water

Sample ID: **EB-040618-TK** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 20:55	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:55	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 20:55	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:55	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 20:55	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 20:55	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 20:55	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 20:55	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 20:55	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 20:55	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 20:55	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 20:55	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 20:55	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 20:55	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:55	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 20:55	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 20:55	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 20:55	CJG	A
Trichloroethene	0.90J	J	ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 20:55	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 20:55	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 20:55	CJG	A
cis-1,2-Dichloroethene	0.45J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 20:55	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:55	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 20:55	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 20:55	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 20:55	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 20:55	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 20:55	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 20:55	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 20:55	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 20:55	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 20:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120003** Date Collected: 4/6/2018 13:00 Matrix: Water

Sample ID: **EB-040618-TK** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 20:55	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 20:55	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	110		%	62 - 133		SW846 8260B			4/12/18 20:55	CJG	A
4-Bromofluorobenzene (S)	99.8		%	79 - 114		SW846 8260B			4/12/18 20:55	CJG	A
Dibromofluoromethane (S)	109		%	78 - 116		SW846 8260B			4/12/18 20:55	CJG	A
Toluene-d8 (S)	87.9		%	76 - 127		SW846 8260B			4/12/18 20:55	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.10	0.019	8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	47.1		%	29 - 112		8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
Fluoranthene-d10 (S)	73.3		%	45 - 130		8270 SIM	4/13/18 08:40	CAC	4/17/18 18:07	CGS	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/18/18 04:39	MBW	E
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Chromium, Total	0.0027		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Cobalt, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Copper, Total	0.0028J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 08:35	AXC	4/23/18 12:37	AXC	F2
Nickel, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
Zinc, Total	0.014		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:15	MO	F1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120003** Date Collected: 4/6/2018 13:00 Matrix: Water

Sample ID: **EB-040618-TK** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 15:59	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120004** Date Collected: 4/6/2018 12:00 Matrix: Water

Sample ID: **EB-040618-AD** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 21:17	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 21:17	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 21:17	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 21:17	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 21:17	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 21:17	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 21:17	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 21:17	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 21:17	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 21:17	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 21:17	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 21:17	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:17	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 21:17	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 21:17	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 21:17	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 21:17	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 21:17	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 21:17	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:17	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 21:17	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 21:17	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 21:17	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 21:17	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 21:17	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 21:17	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:17	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:17	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 21:17	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 21:17	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 21:17	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 21:17	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:17	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 21:17	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 21:17	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120004** Date Collected: 4/6/2018 12:00 Matrix: Water

Sample ID: **EB-040618-AD** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 21:17	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:17	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 21:17	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:17	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 21:17	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 21:17	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 21:17	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 21:17	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 21:17	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 21:17	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 21:17	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 21:17	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 21:17	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 21:17	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 21:17	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 21:17	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 21:17	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 21:17	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 21:17	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 21:17	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 21:17	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:17	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:17	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 21:17	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 21:17	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 21:17	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:17	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:17	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:17	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 21:17	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 21:17	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 21:17	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120004** Date Collected: 4/6/2018 12:00 Matrix: Water

Sample ID: **EB-040618-AD** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 21:17	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 21:17	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	110		%	62 - 133		SW846 8260B			4/12/18 21:17	CJG	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/12/18 21:17	CJG	A
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/12/18 21:17	CJG	A
Toluene-d8 (S)	90.8		%	76 - 127		SW846 8260B			4/12/18 21:17	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120005** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-1** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 02:44	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 02:44	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 02:44	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 02:44	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 02:44	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 02:44	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 02:44	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 02:44	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 02:44	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 02:44	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 02:44	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 02:44	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 02:44	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 02:44	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 02:44	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 02:44	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 02:44	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 02:44	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 02:44	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 02:44	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 02:44	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 02:44	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 02:44	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 02:44	CJG	A
Acetone	4.6J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 02:44	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 02:44	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 02:44	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 02:44	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 02:44	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 02:44	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 02:44	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 02:44	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 02:44	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 02:44	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 02:44	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120005** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-1** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 02:44	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 02:44	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 02:44	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 02:44	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 02:44	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 02:44	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 02:44	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 02:44	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 02:44	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 02:44	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 02:44	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 02:44	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 02:44	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 02:44	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 02:44	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 02:44	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 02:44	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 02:44	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 02:44	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 02:44	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 02:44	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 02:44	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 02:44	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 02:44	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 02:44	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 02:44	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 02:44	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 02:44	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 02:44	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 02:44	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 02:44	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 02:44	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120005** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-1** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 02:44	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 02:44	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/13/18 02:44	CJG	A
4-Bromofluorobenzene (S)	97.5		%	79 - 114		SW846 8260B			4/13/18 02:44	CJG	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/13/18 02:44	CJG	A
Toluene-d8 (S)	78		%	76 - 127		SW846 8260B			4/13/18 02:44	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120006** Date Collected: 4/9/2018 17:00 Matrix: Water

Sample ID: **MRC-MW79B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 21:39	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 21:39	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 21:39	CJG	A
1,1,2-Trichloroethane	1.2		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:39	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 21:39	CJG	A
1,1-Dichloroethene	26.3	1	ug/L	1.0	0.29	SW846 8260B		4/12/18 21:39	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 21:39	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 21:39	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 21:39	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 21:39	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 21:39	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 21:39	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 21:39	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:39	CJG	A
1,2-Dichloroethene, Total	2940		ug/L	200	45.0	SW846 8260B		4/14/18 04:06	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 21:39	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 21:39	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 21:39	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 21:39	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 21:39	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:39	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 21:39	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 21:39	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 21:39	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 21:39	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/12/18 21:39	CJG	A
Benzene	4.0		ug/L	1.0	0.23	SW846 8260B		4/12/18 21:39	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:39	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:39	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 21:39	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 21:39	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 21:39	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 21:39	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:39	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 21:39	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 21:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120006** Date Collected: 4/9/2018 17:00 Matrix: Water

Sample ID: **MRC-MW79B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:39	CJG	A
Chloroform	0.43J	J	ug/L	1.0	0.21	SW846 8260B		4/12/18 21:39	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:39	CJG	A
Cyclohexane	0.38J	J,2	ug/L	1.0	0.29	SW846 8260B		4/12/18 21:39	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:39	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:39	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 21:39	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 21:39	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 21:39	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 21:39	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 21:39	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 21:39	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 21:39	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 21:39	CJG	A
Methyl t-Butyl Ether	1.9		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:39	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 21:39	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 21:39	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 21:39	CJG	A
Tetrachloroethene	1.3		ug/L	1.0	0.35	SW846 8260B		4/12/18 21:39	CJG	A
Toluene	0.41J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 21:39	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 21:39	CJG	A
Trichloroethene	1670		ug/L	100	33.0	SW846 8260B		4/14/18 04:06	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 21:39	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 21:39	CJG	A
Vinyl Chloride	75.1		ug/L	1.0	0.30	SW846 8260B		4/12/18 21:39	CJG	A
cis-1,2-Dichloroethene	2910		ug/L	100	32.0	SW846 8260B		4/14/18 04:06	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:39	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 21:39	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 21:39	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:39	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 21:39	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:39	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 21:39	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 21:39	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 21:39	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 21:39	CJG	A
tert-Butyl Alcohol	4.6J	J	ug/L	10.0	2.2	SW846 8260B		4/12/18 21:39	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 21:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120006** Date Collected: 4/9/2018 17:00 Matrix: Water

Sample ID: **MRC-MW79B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	27.8		ug/L	1.0	0.26	SW846 8260B			4/12/18 21:39	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 21:39	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/14/18 04:06	CJG	B
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			4/12/18 21:39	CJG	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260B			4/12/18 21:39	CJG	A
4-Bromofluorobenzene (S)	99.5		%	79 - 114		SW846 8260B			4/14/18 04:06	CJG	B
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/14/18 04:06	CJG	B
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/12/18 21:39	CJG	A
Toluene-d8 (S)	88.6		%	76 - 127		SW846 8260B			4/12/18 21:39	CJG	A
Toluene-d8 (S)	87.6		%	76 - 127		SW846 8260B			4/14/18 04:06	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	5.9		ug/L	0.48	0.091	8270 SIM	4/16/18 08:40	CAC	4/24/18 02:36	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:43	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:43	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:43	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:43	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 07:43	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	70.6		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 02:36	GEC	C
2-Methylnapthalene-d10 (S)	61.7		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 07:43	GEC	C
Fluoranthene-d10 (S)	101		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 07:43	GEC	C
Fluoranthene-d10 (S)	84.6		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 02:36	GEC	C

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120007** Date Collected: 4/9/2018 15:40 Matrix: Water

Sample ID: **MRC-MW101B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 23:01	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 23:01	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 23:01	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
1,1-Dichloroethane	6.2		ug/L	1.0	0.28	SW846 8260B		4/13/18 23:01	CJG	B
1,1-Dichloroethene	2.3		ug/L	1.0	0.29	SW846 8260B		4/13/18 23:01	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 23:01	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 23:01	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 23:01	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:01	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 23:01	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 23:01	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 23:01	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:01	CJG	B
1,2-Dichloroethene, Total	2.2		ug/L	2.0	0.45	SW846 8260B		4/13/18 23:01	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:01	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:01	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:01	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 23:01	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:01	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:01	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 23:01	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 23:01	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 23:01	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 23:01	CJG	B
Acetone	6.3J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 23:01	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:01	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:01	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:01	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:01	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 23:01	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 23:01	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:01	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:01	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 23:01	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 23:01	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120007** Date Collected: 4/9/2018 15:40 Matrix: Water

Sample ID: **MRC-MW101B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 23:01	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:01	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 23:01	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:01	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:01	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 23:01	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 23:01	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 23:01	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 23:01	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 23:01	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 23:01	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 23:01	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 23:01	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 23:01	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:01	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 23:01	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:01	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 23:01	CJG	B
Trichloroethene	2.1		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:01	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 23:01	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 23:01	CJG	B
cis-1,2-Dichloroethene	2.2		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:01	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:01	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 23:01	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 23:01	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 23:01	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:01	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:01	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:01	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 23:01	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 23:01	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 23:01	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120007** Date Collected: 4/9/2018 15:40 Matrix: Water

Sample ID: **MRC-MW101B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 23:01	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 23:01	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/13/18 23:01	CJG	B
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260B			4/13/18 23:01	CJG	B
Dibromofluoromethane (S)	115		%	78 - 116		SW846 8260B			4/13/18 23:01	CJG	B
Toluene-d8 (S)	89.5		%	76 - 127		SW846 8260B			4/13/18 23:01	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	2.9		ug/L	0.11	0.020	8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52.6		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C
Fluoranthene-d10 (S)	98.7		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 08:12	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120008** Date Collected: 4/9/2018 13:45 Matrix: Water

Sample ID: **MRC-MW101A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 23:23	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 23:23	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 23:23	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
1,1-Dichloroethane	0.43J	J	ug/L	1.0	0.28	SW846 8260B		4/13/18 23:23	CJG	B
1,1-Dichloroethene	0.60J	J	ug/L	1.0	0.29	SW846 8260B		4/13/18 23:23	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 23:23	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 23:23	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 23:23	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:23	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 23:23	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 23:23	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 23:23	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:23	CJG	B
1,2-Dichloroethene, Total	23.2		ug/L	2.0	0.45	SW846 8260B		4/13/18 23:23	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:23	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:23	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:23	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 23:23	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:23	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:23	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 23:23	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 23:23	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 23:23	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 23:23	CJG	B
Acetone	12.8		ug/L	10.0	3.1	SW846 8260B		4/13/18 23:23	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:23	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:23	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:23	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:23	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 23:23	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 23:23	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:23	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:23	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 23:23	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 23:23	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120008** Date Collected: 4/9/2018 13:45 Matrix: Water

Sample ID: **MRC-MW101A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 23:23	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:23	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 23:23	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:23	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:23	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 23:23	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 23:23	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 23:23	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 23:23	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 23:23	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 23:23	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 23:23	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 23:23	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 23:23	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:23	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 23:23	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:23	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 23:23	CJG	B
Trichloroethene	2.6		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:23	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 23:23	CJG	B
Vinyl Chloride	1.9		ug/L	1.0	0.30	SW846 8260B		4/13/18 23:23	CJG	B
cis-1,2-Dichloroethene	22.1		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:23	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:23	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 23:23	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 23:23	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 23:23	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:23	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:23	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:23	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 23:23	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 23:23	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 23:23	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120008** Date Collected: 4/9/2018 13:45 Matrix: Water

Sample ID: **MRC-MW101A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.1		ug/L	1.0	0.26	SW846 8260B			4/13/18 23:23	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 23:23	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/13/18 23:23	CJG	B
4-Bromofluorobenzene (S)	97.6		%	79 - 114		SW846 8260B			4/13/18 23:23	CJG	B
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/13/18 23:23	CJG	B
Toluene-d8 (S)	86.6		%	76 - 127		SW846 8260B			4/13/18 23:23	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	1.3		ug/L	0.12	0.022	8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	58.3		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C
Fluoranthene-d10 (S)	99.5		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 08:40	GEC	C

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120009** Date Collected: 4/9/2018 17:22 Matrix: Water

Sample ID: **MRC-MW95B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 22:44	CJG	A
1,1,1-Trichloroethane	ND	11,12	ug/L	1.0	0.22	SW846 8260B		4/12/18 22:44	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 22:44	CJG	A
1,1,2-Trichloroethane	ND	25	ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A
1,1-Dichloroethane	ND	6	ug/L	1.0	0.28	SW846 8260B		4/12/18 22:44	CJG	A
1,1-Dichloroethene	ND	1,2	ug/L	1.0	0.29	SW846 8260B		4/12/18 22:44	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 22:44	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 22:44	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 22:44	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 22:44	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 22:44	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 22:44	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 22:44	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 22:44	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 22:44	CJG	A
1,2-Dichloropropane	ND	18	ug/L	1.0	0.24	SW846 8260B		4/12/18 22:44	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 22:44	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 22:44	CJG	A
1,3-Dichloropropene, Total	ND	29,30	ug/L	2.0	0.47	SW846 8260B		4/12/18 22:44	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 22:44	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 22:44	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 22:44	CJG	A
2-Chloroethylvinyl ether	ND	20,21	ug/L	2.0	0.38	SW846 8260B		4/12/18 22:44	CJG	A
2-Hexanone	ND	27,28	ug/L	5.0	1.3	SW846 8260B		4/12/18 22:44	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND	23	ug/L	5.0	1.5	SW846 8260B		4/12/18 22:44	CJG	A
Acetone	6.4J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 22:44	CJG	A
Benzene	ND	17	ug/L	1.0	0.23	SW846 8260B		4/12/18 22:44	CJG	A
Bromobenzene	ND	32	ug/L	1.0	0.32	SW846 8260B		4/12/18 22:44	CJG	A
Bromochloromethane	ND	7,8	ug/L	1.0	0.32	SW846 8260B		4/12/18 22:44	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 22:44	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 22:44	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 22:44	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 22:44	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120009** Date Collected: 4/9/2018 17:22 Matrix: Water

Sample ID: **MRC-MW95B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Carbon Tetrachloride	ND	15,16	ug/L	1.0	0.31	SW846 8260B		4/12/18 22:44	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 22:44	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 22:44	CJG	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A
Chloroform	ND	10,9	ug/L	1.0	0.21	SW846 8260B		4/12/18 22:44	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 22:44	CJG	A
Cyclohexane	ND	13,14	ug/L	1.0	0.29	SW846 8260B		4/12/18 22:44	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 22:44	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 22:44	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 22:44	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 22:44	CJG	A
Freon 113	ND	3,4	ug/L	1.0	0.26	SW846 8260B		4/12/18 22:44	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 22:44	CJG	A
Isopropylbenzene	ND	31	ug/L	1.0	0.22	SW846 8260B		4/12/18 22:44	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 22:44	CJG	A
Methyl cyclohexane	ND	34,35	ug/L	1.0	0.30	SW846 8260B		4/12/18 22:44	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 22:44	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 22:44	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 22:44	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 22:44	CJG	A
Toluene	ND	26	ug/L	1.0	0.23	SW846 8260B		4/12/18 22:44	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 22:44	CJG	A
Trichloroethene	1.7	19	ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 22:44	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 22:44	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 22:44	CJG	A
cis-1,2-Dichloroethene	0.41J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 22:44	CJG	A
cis-1,3-Dichloropropene	ND	22	ug/L	1.0	0.31	SW846 8260B		4/12/18 22:44	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 22:44	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 22:44	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A
o-Chlorotoluene	ND	33	ug/L	1.0	0.26	SW846 8260B		4/12/18 22:44	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 22:44	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120009** Date Collected: 4/9/2018 17:22 Matrix: Water

Sample ID: **MRC-MW95B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B			4/12/18 22:44	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B			4/12/18 22:44	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B			4/12/18 22:44	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B			4/12/18 22:44	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/12/18 22:44	CJG	A
trans-1,2-Dichloroethene	ND	5	ug/L	1.0	0.26	SW846 8260B			4/12/18 22:44	CJG	A
trans-1,3-Dichloropropene	ND	24	ug/L	1.0	0.29	SW846 8260B			4/12/18 22:44	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/12/18 22:44	CJG	A
4-Bromofluorobenzene (S)	98.7		%	79 - 114		SW846 8260B			4/12/18 22:44	CJG	A
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/12/18 22:44	CJG	A
Toluene-d8 (S)	86		%	76 - 127		SW846 8260B			4/12/18 22:44	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120010** Date Collected: 4/9/2018 13:56 Matrix: Water

Sample ID: **MRC-MW25A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 23:06	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:06	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:06	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
1,1-Dichloroethane	0.37J	J	ug/L	1.0	0.28	SW846 8260B		4/12/18 23:06	CJG	A
1,1-Dichloroethene	1.0J	J,1	ug/L	1.0	0.29	SW846 8260B		4/12/18 23:06	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 23:06	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:06	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 23:06	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:06	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 23:06	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 23:06	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 23:06	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:06	CJG	A
1,2-Dichloroethene, Total	8.4		ug/L	2.0	0.45	SW846 8260B		4/12/18 23:06	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:06	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:06	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:06	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 23:06	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:06	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:06	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 23:06	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 23:06	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 23:06	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 23:06	CJG	A
Acetone	5.5J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 23:06	CJG	A
Benzene	0.81J	J	ug/L	1.0	0.23	SW846 8260B		4/12/18 23:06	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:06	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:06	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:06	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 23:06	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 23:06	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:06	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:06	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:06	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:06	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120010** Date Collected: 4/9/2018 13:56 Matrix: Water

Sample ID: **MRC-MW25A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 23:06	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:06	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 23:06	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:06	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:06	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:06	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:06	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:06	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 23:06	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:06	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 23:06	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:06	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:06	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 23:06	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:06	CJG	A
Tetrachloroethene	0.44J	J	ug/L	1.0	0.35	SW846 8260B		4/12/18 23:06	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:06	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 23:06	CJG	A
Trichloroethene	179		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:06	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 23:06	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:06	CJG	A
cis-1,2-Dichloroethene	8.4		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:06	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:06	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 23:06	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:06	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:06	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:06	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:06	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:06	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 23:06	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 23:06	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 23:06	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120010** Date Collected: 4/9/2018 13:56 Matrix: Water

Sample ID: **MRC-MW25A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 23:06	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 23:06	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/12/18 23:06	CJG	A
4-Bromofluorobenzene (S)	98.5		%	79 - 114		SW846 8260B			4/12/18 23:06	CJG	A
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/12/18 23:06	CJG	A
Toluene-d8 (S)	88		%	76 - 127		SW846 8260B			4/12/18 23:06	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	1.1		ug/L	0.096	0.018	8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	69.2		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
Fluoranthene-d10 (S)	98.8		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 09:08	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/19/18 03:52	EGO	E
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/19/18 03:52	EGO	E
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/19/18 03:52	EGO	E
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/19/18 03:52	EGO	E
Methane	20.7		ug/L	1.5	0.34	RSK 175			4/19/18 03:52	EGO	E
Propane	ND		ug/L	3.2	0.22	RSK 175			4/19/18 03:52	EGO	E
WET CHEMISTRY											
Alkalinity, Total	76	2	mg/L	5	0.8	S2320B-97			4/13/18 11:26	MSA	G
Ammonia-N	0.219		mg/L	0.100	0.03	D6919-09			4/19/18 00:26	CMM	H
Chloride	888		mg/L	10.0	1.2	EPA 300.0			4/13/18 20:53	CHW	K
Nitrate-N	ND		mg/L	0.20	0.057	EPA 300.0			4/11/18 05:31	CHW	K
Nitrite-N	ND	3,4	mg/L	1.0	0.20	EPA 300.0			4/13/18 20:53	CHW	K
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/11/18 05:01	MSA	K
Phosphorus, Total	0.026J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 16:00	BMK	4/27/18 18:20	JAM	H
Sulfate	23.1		mg/L	2.0	0.40	EPA 300.0			4/11/18 05:31	CHW	K
Total Dissolved Solids	1370		mg/L	5	5	S2540C-11			4/16/18 11:45	BMK	K
Total Organic Carbon (TOC)	2.4		mg/L	0.50	0.18	S5310B-00			4/13/18 11:30	PAG	I

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120010** Date Collected: 4/9/2018 13:56 Matrix: Water

Sample ID: **MRC-MW25A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
METALS											
Silica	10.1		mg/L	0.24	0.080	SW846 6010C	4/19/18 14:50	DXC	4/24/18 07:47	SRT	C3
Calcium, Total	43.4		mg/L	0.11	0.036	SW846 6010C	4/19/18 14:50	DXC	4/23/18 10:40	SRT	C3
Iron, Total	25.5		mg/L	0.067	0.022	SW846 6010C	4/19/18 14:50	DXC	4/23/18 10:40	SRT	C3
Magnesium, Total	8.7		mg/L	0.11	0.036	SW846 6010C	4/19/18 14:50	DXC	4/23/18 10:40	SRT	C3
Manganese, Total	4.7		mg/L	0.0056	0.0020	SW846 6010C	4/19/18 14:50	DXC	4/23/18 10:40	SRT	C3
Potassium, Total	6.0		mg/L	0.56	0.18	SW846 6010C	4/19/18 14:50	DXC	4/23/18 10:40	SRT	C3
Sodium, Total	452		mg/L	0.56	0.18	SW846 6010C	4/19/18 14:50	DXC	4/23/18 10:40	SRT	C3

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120011** Date Collected: 4/10/2018 09:49 Matrix: Water

Sample ID: **MRC-MW115A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 23:28	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:28	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:28	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 23:28	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 23:28	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 23:28	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:28	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 23:28	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:28	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 23:28	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 23:28	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 23:28	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:28	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/12/18 23:28	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:28	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:28	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:28	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 23:28	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:28	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:28	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 23:28	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 23:28	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 23:28	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 23:28	CJG	A
Acetone	6.3J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 23:28	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:28	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:28	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:28	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:28	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 23:28	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 23:28	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:28	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:28	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:28	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:28	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120011** Date Collected: 4/10/2018 09:49 Matrix: Water

Sample ID: **MRC-MW115A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 23:28	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:28	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 23:28	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:28	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:28	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:28	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:28	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:28	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 23:28	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:28	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 23:28	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:28	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:28	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 23:28	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:28	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 23:28	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:28	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 23:28	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:28	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 23:28	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:28	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:28	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:28	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 23:28	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:28	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:28	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:28	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:28	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:28	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 23:28	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 23:28	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 23:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120011** Date Collected: 4/10/2018 09:49 Matrix: Water

Sample ID: **MRC-MW115A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 23:28	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 23:28	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/12/18 23:28	CJG	A
4-Bromofluorobenzene (S)	99.1		%	79 - 114		SW846 8260B			4/12/18 23:28	CJG	A
Dibromofluoromethane (S)	111		%	78 - 116		SW846 8260B			4/12/18 23:28	CJG	A
Toluene-d8 (S)	87.5		%	76 - 127		SW846 8260B			4/12/18 23:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120012** Date Collected: 4/9/2018 16:30 Matrix: Water

Sample ID: **MRC-MW64A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 23:50	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:50	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:50	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
1,1-Dichloroethane	0.68J	J	ug/L	1.0	0.28	SW846 8260B		4/12/18 23:50	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 23:50	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/12/18 23:50	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:50	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/12/18 23:50	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:50	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/12/18 23:50	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/12/18 23:50	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/12/18 23:50	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:50	CJG	A
1,2-Dichloroethene, Total	0.58J	J	ug/L	2.0	0.45	SW846 8260B		4/12/18 23:50	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:50	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:50	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:50	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/12/18 23:50	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:50	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:50	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/12/18 23:50	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/12/18 23:50	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/12/18 23:50	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/12/18 23:50	CJG	A
Acetone	7.7J	J	ug/L	10.0	3.1	SW846 8260B		4/12/18 23:50	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:50	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:50	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:50	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/12/18 23:50	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/12/18 23:50	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/12/18 23:50	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:50	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:50	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:50	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:50	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120012** Date Collected: 4/9/2018 16:30 Matrix: Water

Sample ID: **MRC-MW64A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/12/18 23:50	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:50	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/12/18 23:50	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:50	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/12/18 23:50	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/12/18 23:50	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/12/18 23:50	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:50	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/12/18 23:50	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/12/18 23:50	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/12/18 23:50	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:50	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/12/18 23:50	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/12/18 23:50	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:50	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/12/18 23:50	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/12/18 23:50	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/12/18 23:50	CJG	A
Trichloroethene	0.60J	J	ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/12/18 23:50	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/12/18 23:50	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/12/18 23:50	CJG	A
cis-1,2-Dichloroethene	0.58J	J	ug/L	1.0	0.32	SW846 8260B		4/12/18 23:50	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:50	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/12/18 23:50	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/12/18 23:50	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/12/18 23:50	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/12/18 23:50	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/12/18 23:50	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/12/18 23:50	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/12/18 23:50	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/12/18 23:50	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/12/18 23:50	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120012** Date Collected: 4/9/2018 16:30 Matrix: Water

Sample ID: **MRC-MW64A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/12/18 23:50	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/12/18 23:50	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/12/18 23:50	CJG	A
4-Bromofluorobenzene (S)	99.5		%	79 - 114		SW846 8260B			4/12/18 23:50	CJG	A
Dibromofluoromethane (S)	111		%	78 - 116		SW846 8260B			4/12/18 23:50	CJG	A
Toluene-d8 (S)	88.6		%	76 - 127		SW846 8260B			4/12/18 23:50	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120013** Date Collected: 4/9/2018 09:41 Matrix: Water

Sample ID: **MRC-MW87A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:12	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:12	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:12	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:12	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:12	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 00:12	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:12	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 00:12	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:12	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 00:12	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:12	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 00:12	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:12	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 00:12	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:12	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:12	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:12	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 00:12	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:12	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:12	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 00:12	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 00:12	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 00:12	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 00:12	CJG	A
Acetone	7.5J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 00:12	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:12	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:12	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:12	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:12	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 00:12	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 00:12	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:12	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:12	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:12	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:12	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120013** Date Collected: 4/9/2018 09:41 Matrix: Water

Sample ID: **MRC-MW87A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 00:12	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:12	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:12	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:12	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
Diisopropyl ether	4.0		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:12	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:12	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:12	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:12	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 00:12	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:12	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 00:12	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:12	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:12	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 00:12	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:12	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:12	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:12	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 00:12	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:12	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 00:12	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:12	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:12	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:12	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 00:12	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:12	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:12	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:12	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:12	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:12	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 00:12	CJG	A
tert-Butyl Alcohol	4.7J	J	ug/L	10.0	2.2	SW846 8260B		4/13/18 00:12	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 00:12	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120013** Date Collected: 4/9/2018 09:41 Matrix: Water

Sample ID: **MRC-MW87A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 00:12	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 00:12	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	62 - 133		SW846 8260B			4/13/18 00:12	CJG	A
4-Bromofluorobenzene (S)	93		%	79 - 114		SW846 8260B			4/13/18 00:12	CJG	A
Dibromofluoromethane (S)	109		%	78 - 116		SW846 8260B			4/13/18 00:12	CJG	A
Toluene-d8 (S)	82.5		%	76 - 127		SW846 8260B			4/13/18 00:12	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120014** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-2** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 03:06	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 03:06	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 03:06	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 03:06	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 03:06	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 03:06	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 03:06	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 03:06	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 03:06	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 03:06	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 03:06	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 03:06	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:06	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 03:06	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 03:06	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 03:06	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 03:06	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 03:06	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 03:06	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:06	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 03:06	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 03:06	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 03:06	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 03:06	CJG	A
Acetone	4.1J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 03:06	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 03:06	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:06	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:06	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 03:06	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 03:06	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 03:06	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 03:06	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:06	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 03:06	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 03:06	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120014** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-2** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 03:06	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:06	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 03:06	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:06	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 03:06	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 03:06	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 03:06	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 03:06	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 03:06	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 03:06	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 03:06	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 03:06	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 03:06	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 03:06	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 03:06	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 03:06	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 03:06	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 03:06	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 03:06	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 03:06	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 03:06	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:06	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:06	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 03:06	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 03:06	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 03:06	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:06	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:06	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:06	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 03:06	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 03:06	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 03:06	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120014** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-2** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 03:06	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 03:06	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/13/18 03:06	CJG	A
4-Bromofluorobenzene (S)	95.5		%	79 - 114		SW846 8260B			4/13/18 03:06	CJG	A
Dibromofluoromethane (S)	113		%	78 - 116		SW846 8260B			4/13/18 03:06	CJG	A
Toluene-d8 (S)	84.4		%	76 - 127		SW846 8260B			4/13/18 03:06	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120015** Date Collected: 4/9/2018 12:05 Matrix: Water

Sample ID: **MRC-MW12B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:33	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:33	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:33	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
1,1-Dichloroethane	9.2		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:33	CJG	A
1,1-Dichloroethene	2.1	1	ug/L	1.0	0.29	SW846 8260B		4/13/18 00:33	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 00:33	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:33	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 00:33	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:33	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 00:33	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:33	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 00:33	CJG	A
1,2-Dichloroethane	0.51J	J	ug/L	1.0	0.32	SW846 8260B		4/13/18 00:33	CJG	A
1,2-Dichloroethene, Total	7.7		ug/L	2.0	0.45	SW846 8260B		4/13/18 00:33	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:33	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:33	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:33	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 00:33	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:33	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:33	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 00:33	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 00:33	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 00:33	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 00:33	CJG	A
Acetone	3.4J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 00:33	CJG	A
Benzene	2.0		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:33	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:33	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:33	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:33	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 00:33	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 00:33	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:33	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:33	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:33	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:33	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120015** Date Collected: 4/9/2018 12:05 Matrix: Water

Sample ID: **MRC-MW12B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 00:33	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:33	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:33	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:33	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:33	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:33	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:33	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:33	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 00:33	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:33	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 00:33	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:33	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:33	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 00:33	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:33	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:33	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:33	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 00:33	CJG	A
Trichloroethene	9.9		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:33	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 00:33	CJG	A
Vinyl Chloride	10.3		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:33	CJG	A
cis-1,2-Dichloroethene	7.4		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:33	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:33	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 00:33	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:33	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:33	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:33	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:33	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:33	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 00:33	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 00:33	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 00:33	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120015** Date Collected: 4/9/2018 12:05 Matrix: Water

Sample ID: **MRC-MW12B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.28J	J	ug/L	1.0	0.26	SW846 8260B			4/13/18 00:33	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 00:33	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/13/18 00:33	CJG	A
4-Bromofluorobenzene (S)	99.2		%	79 - 114		SW846 8260B			4/13/18 00:33	CJG	A
Dibromofluoromethane (S)	102		%	78 - 116		SW846 8260B			4/13/18 00:33	CJG	A
Toluene-d8 (S)	78.5		%	76 - 127		SW846 8260B			4/13/18 00:33	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	61.9		ug/L	4.9	0.92	8270 SIM	4/16/18 08:40	CAC	4/24/18 03:02	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:37	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:37	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:37	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:37	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 09:37	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	59.2		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 09:37	GEC	C
2-Methylnapthalene-d10 (S)	0		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 03:02	GEC	C
Fluoranthene-d10 (S)	297		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 03:02	GEC	C
Fluoranthene-d10 (S)	103		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 09:37	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/19/18 04:09	EGO	F
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/19/18 04:09	EGO	F
Ethene	46.6		ug/L	2.4	0.40	RSK 175			4/19/18 04:09	EGO	F
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/19/18 04:09	EGO	F
Methane	588		ug/L	1.5	0.34	RSK 175			4/19/18 04:09	EGO	F
Propane	ND		ug/L	3.2	0.22	RSK 175			4/19/18 04:09	EGO	F
WET CHEMISTRY											
Alkalinity, Total	110	2	mg/L	5	0.8	S2320B-97			4/13/18 11:35	MSA	H
Ammonia-N	0.237		mg/L	0.100	0.03	D6919-09			4/19/18 00:40	CMM	I
Chloride	25.1		mg/L	2.0	0.24	EPA 300.0			4/11/18 05:45	CHW	L
Nitrate-N	ND		mg/L	0.20	0.057	EPA 300.0			4/11/18 05:45	CHW	L
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/11/18 05:45	CHW	L
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/11/18 05:01	MSA	L
Phosphorus, Total	0.032J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 16:00	BMK	4/27/18 18:20	JAM	I
Sulfate	2.1		mg/L	2.0	0.40	EPA 300.0			4/11/18 05:45	CHW	L
Total Dissolved Solids	121		mg/L	5	5	S2540C-11			4/16/18 06:30	BMK	L

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120015** Date Collected: 4/9/2018 12:05 Matrix: Water

Sample ID: **MRC-MW12B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	1.6		mg/L	0.50	0.18	S5310B-00			4/13/18 11:30	PAG	J
METALS											
Silica	10.8		mg/L	0.24	0.080	SW846 6010C	4/14/18 17:10	AHI	4/18/18 07:30	SRT	E
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Arsenic, Total	0.0023J	J	mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Calcium, Total	10.0		mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:36	SRT	E
Chromium, Total	0.0019J	J	mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Cobalt, Total	0.031		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Iron, Total	61.9		mg/L	0.067	0.022	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:36	SRT	E
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Magnesium, Total	9.5		mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:36	SRT	E
Manganese, Total	3.4		mg/L	0.0056	0.0020	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:36	SRT	E
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 08:35	AXC	4/23/18 12:38	AXC	E2
Nickel, Total	0.035		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Potassium, Total	3.0		mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:36	SRT	E
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Sodium, Total	19.3		mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:36	SRT	E
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1
Zinc, Total	0.030		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:19	MO	E1

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120016** Date Collected: 4/9/2018 14:50 Matrix: Water

Sample ID: **MRC-MW117B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:55	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:55	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:55	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:55	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:55	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 00:55	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:55	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 00:55	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:55	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 00:55	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 00:55	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 00:55	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:55	CJG	A
1,2-Dichloroethene, Total	1.1J	J	ug/L	2.0	0.45	SW846 8260B		4/13/18 00:55	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:55	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:55	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:55	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 00:55	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:55	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:55	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 00:55	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 00:55	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 00:55	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 00:55	CJG	A
Acetone	16.3		ug/L	10.0	3.1	SW846 8260B		4/13/18 00:55	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:55	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:55	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:55	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 00:55	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 00:55	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 00:55	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:55	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:55	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:55	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120016** Date Collected: 4/9/2018 14:50 Matrix: Water

Sample ID: **MRC-MW117B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 00:55	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:55	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 00:55	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:55	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 00:55	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 00:55	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 00:55	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:55	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 00:55	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 00:55	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 00:55	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:55	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 00:55	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 00:55	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:55	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 00:55	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 00:55	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 00:55	CJG	A
Trichloroethene	8.2		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 00:55	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 00:55	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 00:55	CJG	A
cis-1,2-Dichloroethene	1.1		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:55	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:55	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 00:55	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 00:55	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 00:55	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 00:55	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 00:55	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 00:55	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 00:55	CJG	A
tert-Butyl Alcohol	5.5J	J	ug/L	10.0	2.2	SW846 8260B		4/13/18 00:55	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 00:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120016** Date Collected: 4/9/2018 14:50 Matrix: Water

Sample ID: **MRC-MW117B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 00:55	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 00:55	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	62 - 133		SW846 8260B			4/13/18 00:55	CJG	A
4-Bromofluorobenzene (S)	97.1		%	79 - 114		SW846 8260B			4/13/18 00:55	CJG	A
Dibromofluoromethane (S)	111		%	78 - 116		SW846 8260B			4/13/18 00:55	CJG	A
Toluene-d8 (S)	86.5		%	76 - 127		SW846 8260B			4/13/18 00:55	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.35		ug/L	0.094	0.018	8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	66.3		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
Fluoranthene-d10 (S)	95.3		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 10:07	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/18/18 05:02	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120017** Date Collected: 4/9/2018 08:30 Matrix: Water

Sample ID: **MRC-MW114A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 01:17	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 01:17	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 01:17	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
1,1-Dichloroethane	0.29J	J	ug/L	1.0	0.28	SW846 8260B		4/13/18 01:17	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 01:17	CJG	A
1,2,3-Trichlorobenzene	116		ug/L	40.0	18.6	SW846 8260B		4/14/18 04:28	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 01:17	CJG	A
1,2,4-Trichlorobenzene	447		ug/L	40.0	16.4	SW846 8260B		4/14/18 04:28	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 01:17	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 01:17	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 01:17	CJG	A
1,2-Dichlorobenzene	44.4		ug/L	1.0	0.38	SW846 8260B		4/13/18 01:17	CJG	A
1,2-Dichloroethane	819		ug/L	20.0	6.4	SW846 8260B		4/14/18 04:28	CJG	B
1,2-Dichloroethene, Total	0.95J	J	ug/L	2.0	0.45	SW846 8260B		4/13/18 01:17	CJG	A
1,2-Dichloropropane	6.2		ug/L	1.0	0.24	SW846 8260B		4/13/18 01:17	CJG	A
1,3-Dichlorobenzene	12.4		ug/L	1.0	0.25	SW846 8260B		4/13/18 01:17	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 01:17	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 01:17	CJG	A
1,4-Dichlorobenzene	71.8		ug/L	1.0	0.27	SW846 8260B		4/13/18 01:17	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 01:17	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 01:17	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 01:17	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 01:17	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 01:17	CJG	A
Acetone	7.7J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 01:17	CJG	A
Benzene	7.1		ug/L	1.0	0.23	SW846 8260B		4/13/18 01:17	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 01:17	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 01:17	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 01:17	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 01:17	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 01:17	CJG	A
Carbon Disulfide	0.34J	J	ug/L	1.0	0.23	SW846 8260B		4/13/18 01:17	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 01:17	CJG	A
Chlorobenzene	373		ug/L	20.0	3.8	SW846 8260B		4/14/18 04:28	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 01:17	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120017** Date Collected: 4/9/2018 08:30 Matrix: Water

Sample ID: **MRC-MW114A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 01:17	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 01:17	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 01:17	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 01:17	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 01:17	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 01:17	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 01:17	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 01:17	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 01:17	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 01:17	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 01:17	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 01:17	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 01:17	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 01:17	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 01:17	CJG	A
Tetrachloroethene	3.9		ug/L	1.0	0.35	SW846 8260B		4/13/18 01:17	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 01:17	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 01:17	CJG	A
Trichloroethene	5.3		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
Trichlorofluoromethane	180		ug/L	20.0	4.8	SW846 8260B		4/14/18 04:28	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 01:17	CJG	A
Vinyl Chloride	2.2		ug/L	1.0	0.30	SW846 8260B		4/13/18 01:17	CJG	A
cis-1,2-Dichloroethene	0.95J	J	ug/L	1.0	0.32	SW846 8260B		4/13/18 01:17	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 01:17	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 01:17	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 01:17	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 01:17	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 01:17	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 01:17	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 01:17	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 01:17	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 01:17	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 01:17	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120017** Date Collected: 4/9/2018 08:30 Matrix: Water

Sample ID: **MRC-MW114A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 01:17	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 01:17	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	113		%	62 - 133		SW846 8260B			4/13/18 01:17	CJG	A
1,2-Dichloroethane-d4 (S)	97.9		%	62 - 133		SW846 8260B			4/14/18 04:28	CJG	B
4-Bromofluorobenzene (S)	98.2		%	79 - 114		SW846 8260B			4/14/18 04:28	CJG	B
4-Bromofluorobenzene (S)	87.7		%	79 - 114		SW846 8260B			4/13/18 01:17	CJG	A
Dibromofluoromethane (S)	104		%	78 - 116		SW846 8260B			4/14/18 04:28	CJG	B
Dibromofluoromethane (S)	102		%	78 - 116		SW846 8260B			4/13/18 01:17	CJG	A
Toluene-d8 (S)	86.8		%	76 - 127		SW846 8260B			4/14/18 04:28	CJG	B
Toluene-d8 (S)	73	1	%	76 - 127		SW846 8260B			4/13/18 01:17	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.50		ug/L	0.094	0.018	8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	65.3		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
Fluoranthene-d10 (S)	97.1		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 10:38	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 16:52	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120018** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-3** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 03:28	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 03:28	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 03:28	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 03:28	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 03:28	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 03:28	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 03:28	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 03:28	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 03:28	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 03:28	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 03:28	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 03:28	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:28	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 03:28	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 03:28	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 03:28	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 03:28	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 03:28	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 03:28	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:28	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 03:28	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 03:28	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 03:28	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 03:28	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/13/18 03:28	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 03:28	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:28	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:28	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 03:28	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 03:28	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 03:28	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 03:28	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:28	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 03:28	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 03:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120018** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-3** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 03:28	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:28	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 03:28	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:28	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 03:28	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 03:28	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 03:28	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 03:28	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 03:28	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 03:28	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 03:28	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 03:28	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 03:28	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 03:28	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 03:28	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 03:28	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 03:28	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 03:28	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 03:28	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 03:28	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 03:28	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:28	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:28	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 03:28	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 03:28	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 03:28	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 03:28	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 03:28	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 03:28	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 03:28	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 03:28	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 03:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120018** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-3** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 03:28	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 03:28	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/13/18 03:28	CJG	A
4-Bromofluorobenzene (S)	94.1		%	79 - 114		SW846 8260B			4/13/18 03:28	CJG	A
Dibromofluoromethane (S)	111		%	78 - 116		SW846 8260B			4/13/18 03:28	CJG	A
Toluene-d8 (S)	84.2		%	76 - 127		SW846 8260B			4/13/18 03:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120019** Date Collected: 4/9/2018 17:20 Matrix: Water

Sample ID: **MRC-MW22B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 23:44	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 23:44	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 23:44	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
1,1-Dichloroethane	1.7		ug/L	1.0	0.28	SW846 8260B		4/13/18 23:44	CJG	B
1,1-Dichloroethene	5.3		ug/L	1.0	0.29	SW846 8260B		4/13/18 23:44	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 23:44	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 23:44	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 23:44	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:44	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 23:44	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 23:44	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 23:44	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:44	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 23:44	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:44	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:44	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:44	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 23:44	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:44	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:44	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 23:44	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 23:44	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 23:44	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 23:44	CJG	B
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/13/18 23:44	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:44	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:44	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:44	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 23:44	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 23:44	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 23:44	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:44	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:44	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 23:44	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 23:44	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120019** Date Collected: 4/9/2018 17:20 Matrix: Water

Sample ID: **MRC-MW22B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 23:44	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:44	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 23:44	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:44	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 23:44	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 23:44	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 23:44	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 23:44	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 23:44	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 23:44	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 23:44	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 23:44	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 23:44	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 23:44	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:44	CJG	B
Tetrachloroethene	0.40J	J	ug/L	1.0	0.35	SW846 8260B		4/13/18 23:44	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 23:44	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 23:44	CJG	B
Trichloroethene	2.3		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 23:44	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 23:44	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 23:44	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:44	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:44	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 23:44	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 23:44	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 23:44	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 23:44	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 23:44	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 23:44	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 23:44	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 23:44	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 23:44	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120019** Date Collected: 4/9/2018 17:20 Matrix: Water

Sample ID: **MRC-MW22B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 23:44	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 23:44	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/13/18 23:44	CJG	B
4-Bromofluorobenzene (S)	99.6		%	79 - 114		SW846 8260B			4/13/18 23:44	CJG	B
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/13/18 23:44	CJG	B
Toluene-d8 (S)	87.8		%	76 - 127		SW846 8260B			4/13/18 23:44	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	4.5		ug/L	0.48	0.091	8270 SIM	4/16/18 08:40	CAC	4/24/18 03:29	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 11:36	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 11:36	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 11:36	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 11:36	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 11:36	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	65.8		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 03:29	GEC	C
2-Methylnapthalene-d10 (S)	60.1		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 11:36	GEC	C
Fluoranthene-d10 (S)	83.2		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 03:29	GEC	C
Fluoranthene-d10 (S)	96.4		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 11:36	GEC	C

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120020** Date Collected: 4/9/2018 15:05 Matrix: Water

Sample ID: **MRC-MW15A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILE SIM											
1,4-Dioxane	9.7		ug/L	0.97	0.18	8270 SIM	4/16/18 08:40	CAC	4/24/18 03:56	GEC	A
IS_Naphthalene-d8	0.50		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 12:04	GEC	A
IS_Perylene-d12	0.50		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 12:04	GEC	A
Acenaphthene-d10	0.50		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 12:04	GEC	A
Phenanthrene-d10	0.50		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 12:04	GEC	A
Chrysene-d12	0.50		ug/L			8270 SIM	4/16/18 08:40	CAC	4/21/18 12:04	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	63.1		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 03:56	GEC	A
2-Methylnapthalene-d10 (S)	59.5		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/21/18 12:04	GEC	A
Fluoranthene-d10 (S)	84		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 03:56	GEC	A
Fluoranthene-d10 (S)	98.1		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/21/18 12:04	GEC	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120021** Date Collected: 4/9/2018 09:40 Matrix: Water

Sample ID: **MRC-MW12A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 00:06	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 00:06	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 00:06	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
1,1-Dichloroethane	3.4	8,9	ug/L	1.0	0.28	SW846 8260B		4/14/18 00:06	CJG	A
1,1-Dichloroethene	6.8	1,2	ug/L	1.0	0.29	SW846 8260B		4/14/18 00:06	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/14/18 00:06	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 00:06	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/14/18 00:06	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:06	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 00:06	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 00:06	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/14/18 00:06	CJG	A
1,2-Dichloroethane	2.1		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:06	CJG	A
1,2-Dichloroethene, Total	9.5	18	ug/L	2.0	0.45	SW846 8260B		4/14/18 00:06	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:06	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:06	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:06	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 00:06	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:06	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:06	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 00:06	CJG	A
2-Chloroethylvinyl ether	ND	15,16	ug/L	2.0	0.38	SW846 8260B		4/14/18 00:06	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 00:06	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 00:06	CJG	A
Acetone	4.4J	J	ug/L	10.0	3.1	SW846 8260B		4/14/18 00:06	CJG	A
Benzene	5.5		ug/L	1.0	0.23	SW846 8260B		4/14/18 00:06	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:06	CJG	A
Bromochloromethane	ND	10,11	ug/L	1.0	0.32	SW846 8260B		4/14/18 00:06	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:06	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 00:06	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 00:06	CJG	A
Carbon Disulfide	ND	5	ug/L	1.0	0.23	SW846 8260B		4/14/18 00:06	CJG	A
Carbon Tetrachloride	ND	14	ug/L	1.0	0.31	SW846 8260B		4/14/18 00:06	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120021** Date Collected: 4/9/2018 09:40 Matrix: Water

Sample ID: **MRC-MW12A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 00:06	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 00:06	CJG	A
Chloroethane	15.1		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 00:06	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:06	CJG	A
Cyclohexane	ND	12,13	ug/L	1.0	0.29	SW846 8260B		4/14/18 00:06	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:06	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:06	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 00:06	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 00:06	CJG	A
Freon 113	ND	3,4	ug/L	1.0	0.26	SW846 8260B		4/14/18 00:06	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 00:06	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 00:06	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 00:06	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 00:06	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 00:06	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/14/18 00:06	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:06	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 00:06	CJG	A
Toluene	0.31J	J	ug/L	1.0	0.23	SW846 8260B		4/14/18 00:06	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/14/18 00:06	CJG	A
Trichloroethene	28.7		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:06	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 00:06	CJG	A
Vinyl Chloride	5.1		ug/L	1.0	0.30	SW846 8260B		4/14/18 00:06	CJG	A
cis-1,2-Dichloroethene	8.8		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:06	CJG	A
cis-1,3-Dichloropropene	ND	17	ug/L	1.0	0.31	SW846 8260B		4/14/18 00:06	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/14/18 00:06	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 00:06	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 00:06	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:06	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:06	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:06	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 00:06	CJG	A

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120021** Date Collected: 4/9/2018 09:40 Matrix: Water

Sample ID: **MRC-MW12A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B			4/14/18 00:06	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/14/18 00:06	CJG	A
trans-1,2-Dichloroethene	0.66J	J,6,7	ug/L	1.0	0.26	SW846 8260B			4/14/18 00:06	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/14/18 00:06	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/14/18 00:06	CJG	A
4-Bromofluorobenzene (S)	99.7		%	79 - 114		SW846 8260B			4/14/18 00:06	CJG	A
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/14/18 00:06	CJG	A
Toluene-d8 (S)	89.9		%	76 - 127		SW846 8260B			4/14/18 00:06	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	140		ug/L	9.3	1.8	8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	0	19	%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
Fluoranthene-d10 (S)	221	20	%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 04:24	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/19/18 03:31	EGO	F
Ethane	38.9		ug/L	3.3	0.23	RSK 175			4/19/18 03:31	EGO	F
Ethene	6.3		ug/L	2.4	0.40	RSK 175			4/19/18 03:31	EGO	F
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/19/18 03:31	EGO	F
Methane	8110		ug/L	1.5	0.34	RSK 175			4/19/18 03:31	EGO	F
Propane	ND		ug/L	3.2	0.22	RSK 175			4/19/18 03:31	EGO	F
WET CHEMISTRY											
Alkalinity, Total	116	21	mg/L	5	0.8	S2320B-97			4/13/18 11:45	MSA	H
Ammonia-N	0.230		mg/L	0.100	0.03	D6919-09			4/19/18 00:53	CMM	I
Chloride	64.3		mg/L	2.0	0.24	EPA 300.0			4/11/18 05:58	CHW	L
Nitrate-N	ND		mg/L	0.20	0.057	EPA 300.0			4/11/18 05:58	CHW	L
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/11/18 05:58	CHW	L
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/11/18 05:01	MSA	L
Phosphorus, Total	0.056J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 16:00	BMK	4/27/18 18:20	JAM	I
Sulfate	1.4J	J	mg/L	2.0	0.40	EPA 300.0			4/11/18 05:58	CHW	L

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120021** Date Collected: 4/9/2018 09:40 Matrix: Water

Sample ID: **MRC-MW12A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	172		mg/L	5	5	S2540C-11			4/16/18 06:30	BMK	L
Total Organic Carbon (TOC)	2.7		mg/L	0.50	0.18	S5310B-00			4/13/18 11:30	PAG	J
METALS											
Silica	14.7		mg/L	0.24	0.080	SW846 6010C	4/14/18 17:10	AHI	4/18/18 07:32	SRT	E
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Arsenic, Total	0.0029J	J	mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Beryllium, Total	0.00043J	J	mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Calcium, Total	11.8		mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:58	SRT	E
Chromium, Total	0.0030		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Cobalt, Total	0.0069		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Copper, Total	0.0031J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Iron, Total	74.2		mg/L	0.067	0.022	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:58	SRT	E
Lead, Total	0.0011J	J	mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/13/18 16:27	MO	E1
Magnesium, Total	12.1		mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:58	SRT	E
Manganese, Total	3.9		mg/L	0.0056	0.0020	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:58	SRT	E
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 08:35	AXC	4/23/18 12:41	AXC	E2
Nickel, Total	0.0038J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Potassium, Total	2.8		mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:58	SRT	E
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Sodium, Total	29.2		mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/17/18 12:58	SRT	E
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1
Zinc, Total	0.0078		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:23	MO	E1

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120022** Date Collected: 4/9/2018 10:20 Matrix: Water

Sample ID: **MRC-MW102A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 00:28	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 00:28	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 00:28	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 00:28	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 00:28	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/14/18 00:28	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 00:28	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/14/18 00:28	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:28	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 00:28	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 00:28	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/14/18 00:28	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:28	CJG	A
1,2-Dichloroethene, Total	1.6J	J	ug/L	2.0	0.45	SW846 8260B		4/14/18 00:28	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:28	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:28	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:28	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 00:28	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:28	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:28	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 00:28	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/14/18 00:28	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 00:28	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 00:28	CJG	A
Acetone	5.4J	J	ug/L	10.0	3.1	SW846 8260B		4/14/18 00:28	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 00:28	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:28	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:28	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:28	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 00:28	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 00:28	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 00:28	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:28	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 00:28	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 00:28	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120022** Date Collected: 4/9/2018 10:20 Matrix: Water

Sample ID: **MRC-MW102A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 00:28	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:28	CJG	A
Cyclohexane	0.90J	J	ug/L	1.0	0.29	SW846 8260B		4/14/18 00:28	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:28	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:28	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 00:28	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 00:28	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 00:28	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 00:28	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 00:28	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 00:28	CJG	A
Methyl cyclohexane	0.37J	J	ug/L	1.0	0.30	SW846 8260B		4/14/18 00:28	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 00:28	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/14/18 00:28	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:28	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 00:28	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 00:28	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/14/18 00:28	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:28	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 00:28	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 00:28	CJG	A
cis-1,2-Dichloroethene	1.6		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:28	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:28	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/14/18 00:28	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 00:28	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 00:28	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:28	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:28	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:28	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 00:28	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/14/18 00:28	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/14/18 00:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120022** Date Collected: 4/9/2018 10:20 Matrix: Water

Sample ID: **MRC-MW102A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/14/18 00:28	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/14/18 00:28	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/14/18 00:28	CJG	A
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/14/18 00:28	CJG	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/14/18 00:28	CJG	A
Toluene-d8 (S)	88.5		%	76 - 127		SW846 8260B			4/14/18 00:28	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120023** Date Collected: 4/10/2018 09:00 Matrix: Water

Sample ID: **MRC-MW127B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 00:49	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 00:49	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 00:49	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
1,1-Dichloroethane	0.41J	J	ug/L	1.0	0.28	SW846 8260B		4/14/18 00:49	CJG	A
1,1-Dichloroethene	0.35J	J	ug/L	1.0	0.29	SW846 8260B		4/14/18 00:49	CJG	A
1,2,3-Trichlorobenzene	5.1		ug/L	2.0	0.93	SW846 8260B		4/14/18 00:49	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 00:49	CJG	A
1,2,4-Trichlorobenzene	19.9		ug/L	2.0	0.82	SW846 8260B		4/14/18 00:49	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:49	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 00:49	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 00:49	CJG	A
1,2-Dichlorobenzene	0.40J	J	ug/L	1.0	0.38	SW846 8260B		4/14/18 00:49	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:49	CJG	A
1,2-Dichloroethene, Total	19.3		ug/L	2.0	0.45	SW846 8260B		4/14/18 00:49	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:49	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:49	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:49	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 00:49	CJG	A
1,4-Dichlorobenzene	0.50J	J	ug/L	1.0	0.27	SW846 8260B		4/14/18 00:49	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:49	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 00:49	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/14/18 00:49	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 00:49	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 00:49	CJG	A
Acetone	9.0J	J	ug/L	10.0	3.1	SW846 8260B		4/14/18 00:49	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 00:49	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:49	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:49	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 00:49	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 00:49	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 00:49	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 00:49	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:49	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 00:49	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 00:49	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120023** Date Collected: 4/10/2018 09:00 Matrix: Water

Sample ID: **MRC-MW127B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 00:49	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:49	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 00:49	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:49	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 00:49	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 00:49	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 00:49	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 00:49	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 00:49	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 00:49	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 00:49	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 00:49	CJG	A
Methyl t-Butyl Ether	5.7		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 00:49	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/14/18 00:49	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:49	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 00:49	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 00:49	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/14/18 00:49	CJG	A
Trichloroethene	5.7		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 00:49	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 00:49	CJG	A
Vinyl Chloride	0.80J	J	ug/L	1.0	0.30	SW846 8260B		4/14/18 00:49	CJG	A
cis-1,2-Dichloroethene	18.0		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:49	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:49	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/14/18 00:49	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 00:49	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 00:49	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 00:49	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 00:49	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 00:49	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 00:49	CJG	A
tert-Butyl Alcohol	4.0J	J	ug/L	10.0	2.2	SW846 8260B		4/14/18 00:49	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/14/18 00:49	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120023** Date Collected: 4/10/2018 09:00 Matrix: Water

Sample ID: **MRC-MW127B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.3		ug/L	1.0	0.26	SW846 8260B			4/14/18 00:49	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/14/18 00:49	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/14/18 00:49	CJG	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/14/18 00:49	CJG	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/14/18 00:49	CJG	A
Toluene-d8 (S)	88.5		%	76 - 127		SW846 8260B			4/14/18 00:49	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.084J	J	ug/L	0.096	0.018	8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	63.9		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
Fluoranthene-d10 (S)	108		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 04:50	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/18/18 05:10	MBW	H
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Beryllium, Total	0.013		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Chromium, Total	0.00086J	J	mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Cobalt, Total	0.062		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 08:35	AXC	4/23/18 12:42	AXC	E2
Nickel, Total	0.086		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
Zinc, Total	0.13		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:27	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120023** Date Collected: 4/10/2018 09:00 Matrix: Water

Sample ID: **MRC-MW127B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 16:57	SUB	F

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120024** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-4** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 21:55	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 21:55	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 21:55	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 21:55	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 21:55	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 21:55	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 21:55	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 21:55	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 21:55	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 21:55	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 21:55	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 21:55	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 21:55	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 21:55	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 21:55	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 21:55	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 21:55	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 21:55	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 21:55	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 21:55	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 21:55	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 21:55	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 21:55	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 21:55	CJG	A
Acetone	5.7J	J	ug/L	10.0	3.1	SW846 8260B		4/13/18 21:55	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 21:55	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 21:55	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 21:55	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 21:55	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 21:55	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 21:55	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 21:55	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 21:55	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 21:55	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 21:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120024** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-4** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 21:55	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 21:55	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 21:55	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 21:55	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 21:55	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 21:55	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 21:55	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 21:55	CJG	A
Hexachlorobutadiene	1.2J	J	ug/L	5.0	1.0	SW846 8260B		4/13/18 21:55	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 21:55	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 21:55	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 21:55	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 21:55	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 21:55	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 21:55	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 21:55	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 21:55	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 21:55	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 21:55	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 21:55	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 21:55	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 21:55	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 21:55	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 21:55	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 21:55	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 21:55	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 21:55	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 21:55	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 21:55	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 21:55	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 21:55	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 21:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120024** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-4** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 21:55	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 21:55	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99		%	62 - 133		SW846 8260B			4/13/18 21:55	CJG	A
4-Bromofluorobenzene (S)	98		%	79 - 114		SW846 8260B			4/13/18 21:55	CJG	A
Dibromofluoromethane (S)	103		%	78 - 116		SW846 8260B			4/13/18 21:55	CJG	A
Toluene-d8 (S)	87.2		%	76 - 127		SW846 8260B			4/13/18 21:55	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120025** Date Collected: 4/10/2018 11:10 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 01:11	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 01:11	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 01:11	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
1,1-Dichloroethane	0.30J	J	ug/L	1.0	0.28	SW846 8260B		4/14/18 01:11	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 01:11	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/14/18 01:11	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 01:11	CJG	A
1,2,4-Trichlorobenzene	1.3J	J	ug/L	2.0	0.82	SW846 8260B		4/14/18 01:11	CJG	A
1,2,4-Trimethylbenzene	2.4		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:11	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 01:11	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 01:11	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/14/18 01:11	CJG	A
1,2-Dichloroethane	0.99J	J	ug/L	1.0	0.32	SW846 8260B		4/14/18 01:11	CJG	A
1,2-Dichloroethene, Total	1.2J	J	ug/L	2.0	0.45	SW846 8260B		4/14/18 01:11	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:11	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:11	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:11	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 01:11	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:11	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:11	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 01:11	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/14/18 01:11	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 01:11	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 01:11	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/14/18 01:11	CJG	A
Benzene	180		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:11	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:11	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:11	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:11	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 01:11	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 01:11	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:11	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:11	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 01:11	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 01:11	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120025** Date Collected: 4/10/2018 11:10 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 01:11	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:11	CJG	A
Cyclohexane	35.9		ug/L	1.0	0.29	SW846 8260B		4/14/18 01:11	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:11	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
Diisopropyl ether	8.4		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:11	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 01:11	CJG	A
Ethylbenzene	60.1		ug/L	1.0	0.34	SW846 8260B		4/14/18 01:11	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 01:11	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 01:11	CJG	A
Isopropylbenzene	4.1		ug/L	1.0	0.22	SW846 8260B		4/14/18 01:11	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 01:11	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 01:11	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 01:11	CJG	A
Naphthalene	6.1		ug/L	2.0	0.34	SW846 8260B		4/14/18 01:11	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:11	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 01:11	CJG	A
Toluene	28.8		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:11	CJG	A
Total Xylenes	26.6		ug/L	3.0	0.66	SW846 8260B		4/14/18 01:11	CJG	A
Trichloroethene	8.0		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
Trichlorofluoromethane	0.35J	J	ug/L	1.0	0.24	SW846 8260B		4/14/18 01:11	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 01:11	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 01:11	CJG	A
cis-1,2-Dichloroethene	1.2		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:11	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:11	CJG	A
mp-Xylene	24.6		ug/L	2.0	0.52	SW846 8260B		4/14/18 01:11	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 01:11	CJG	A
n-Propylbenzene	7.4		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 01:11	CJG	A
o-Xylene	2.0		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:11	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:11	CJG	A
sec-Butylbenzene	0.60J	J	ug/L	1.0	0.31	SW846 8260B		4/14/18 01:11	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 01:11	CJG	A
tert-Butyl Alcohol	4.1J	J	ug/L	10.0	2.2	SW846 8260B		4/14/18 01:11	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/14/18 01:11	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120025** Date Collected: 4/10/2018 11:10 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/14/18 01:11	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/14/18 01:11	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	96.3		%	62 - 133		SW846 8260B			4/14/18 01:11	CJG	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260B			4/14/18 01:11	CJG	A
Dibromofluoromethane (S)	103		%	78 - 116		SW846 8260B			4/14/18 01:11	CJG	A
Toluene-d8 (S)	89.3		%	76 - 127		SW846 8260B			4/14/18 01:11	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	1.8		ug/L	0.093	0.018	8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	84		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C
Fluoranthene-d10 (S)	104		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 14:49	GEC	C

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120026** Date Collected: 4/10/2018 10:00 Matrix: Water

Sample ID: **MRC-MW127A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 01:33	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 01:33	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 01:33	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 01:33	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 01:33	CJG	A
1,2,3-Trichlorobenzene	153		ug/L	2.0	0.93	SW846 8260B		4/14/18 01:33	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 01:33	CJG	A
1,2,4-Trichlorobenzene	269		ug/L	10.0	4.1	SW846 8260B		4/17/18 05:10	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:33	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 01:33	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 01:33	CJG	A
1,2-Dichlorobenzene	7.6		ug/L	1.0	0.38	SW846 8260B		4/14/18 01:33	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:33	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/14/18 01:33	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:33	CJG	A
1,3-Dichlorobenzene	13.2		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:33	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:33	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 01:33	CJG	A
1,4-Dichlorobenzene	17.2		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:33	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:33	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 01:33	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/14/18 01:33	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 01:33	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 01:33	CJG	A
Acetone	9.5J	J	ug/L	10.0	3.1	SW846 8260B		4/14/18 01:33	CJG	A
Benzene	0.48J	J	ug/L	1.0	0.23	SW846 8260B		4/14/18 01:33	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:33	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:33	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:33	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 01:33	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 01:33	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:33	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:33	CJG	A
Chlorobenzene	13.4		ug/L	1.0	0.19	SW846 8260B		4/14/18 01:33	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 01:33	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120026** Date Collected: 4/10/2018 10:00 Matrix: Water

Sample ID: **MRC-MW127A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 01:33	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:33	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 01:33	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:33	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:33	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 01:33	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 01:33	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 01:33	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 01:33	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 01:33	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 01:33	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 01:33	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 01:33	CJG	A
Naphthalene	0.89J	J	ug/L	2.0	0.34	SW846 8260B		4/14/18 01:33	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:33	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 01:33	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:33	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/14/18 01:33	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:33	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 01:33	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 01:33	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:33	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:33	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/14/18 01:33	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 01:33	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 01:33	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:33	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:33	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:33	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 01:33	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/14/18 01:33	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/14/18 01:33	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120026** Date Collected: 4/10/2018 10:00 Matrix: Water

Sample ID: **MRC-MW127A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/14/18 01:33	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/14/18 01:33	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/14/18 01:33	CJG	A
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/17/18 05:10	CJG	A
4-Bromofluorobenzene (S)	98.6		%	79 - 114		SW846 8260B			4/17/18 05:10	CJG	A
4-Bromofluorobenzene (S)	93		%	79 - 114		SW846 8260B			4/14/18 01:33	CJG	A
Dibromofluoromethane (S)	105		%	78 - 116		SW846 8260B			4/14/18 01:33	CJG	A
Dibromofluoromethane (S)	98.3		%	78 - 116		SW846 8260B			4/17/18 05:10	CJG	A
Toluene-d8 (S)	87.7		%	76 - 127		SW846 8260B			4/14/18 01:33	CJG	A
Toluene-d8 (S)	91.6		%	76 - 127		SW846 8260B			4/17/18 05:10	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.097	0.018	8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	68.5		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
Fluoranthene-d10 (S)	111		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 15:16	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/18/18 05:18	MBW	H
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Beryllium, Total	0.0015		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Chromium, Total	0.00082J	J	mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Cobalt, Total	0.024		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Copper, Total	0.0025J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 08:35	AXC	4/23/18 12:43	AXC	E2
Nickel, Total	0.015		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120026** Date Collected: 4/10/2018 10:00 Matrix: Water

Sample ID: **MRC-MW127A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	*Cntr*
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
Zinc, Total	0.026		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:31	MO	E1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/24/18 17:26	SUB	F

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120027** Date Collected: 4/10/2018 13:00 Matrix: Water

Sample ID: **MRC-MW109B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 01:55	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 01:55	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 01:55	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 01:55	CJG	A
1,1-Dichloroethene	1.6		ug/L	1.0	0.29	SW846 8260B		4/14/18 01:55	CJG	A
1,2,3-Trichlorobenzene	8.7		ug/L	2.0	0.93	SW846 8260B		4/14/18 01:55	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 01:55	CJG	A
1,2,4-Trichlorobenzene	12.4		ug/L	2.0	0.82	SW846 8260B		4/14/18 01:55	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:55	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 01:55	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 01:55	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/14/18 01:55	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:55	CJG	A
1,2-Dichloroethene, Total	338		ug/L	10.0	2.3	SW846 8260B		4/17/18 05:33	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:55	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:55	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:55	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 01:55	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:55	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:55	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 01:55	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/14/18 01:55	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 01:55	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 01:55	CJG	A
Acetone	5.7J	J	ug/L	10.0	3.1	SW846 8260B		4/14/18 01:55	CJG	A
Benzene	46.6		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:55	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:55	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:55	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 01:55	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 01:55	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 01:55	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:55	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:55	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 01:55	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 01:55	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120027** Date Collected: 4/10/2018 13:00 Matrix: Water

Sample ID: **MRC-MW109B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 01:55	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:55	CJG	A
Cyclohexane	0.90J	J	ug/L	1.0	0.29	SW846 8260B		4/14/18 01:55	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:55	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 01:55	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 01:55	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 01:55	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 01:55	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 01:55	CJG	A
Isopropylbenzene	1.0		ug/L	1.0	0.22	SW846 8260B		4/14/18 01:55	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 01:55	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 01:55	CJG	A
Methyl t-Butyl Ether	5.9		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 01:55	CJG	A
Naphthalene	2.2		ug/L	2.0	0.34	SW846 8260B		4/14/18 01:55	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:55	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 01:55	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 01:55	CJG	A
Total Xylenes	2.3J	J	ug/L	3.0	0.66	SW846 8260B		4/14/18 01:55	CJG	A
Trichloroethene	76.8		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 01:55	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 01:55	CJG	A
Vinyl Chloride	15.6		ug/L	1.0	0.30	SW846 8260B		4/14/18 01:55	CJG	A
cis-1,2-Dichloroethene	314		ug/L	5.0	1.6	SW846 8260B		4/17/18 05:33	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 01:55	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/14/18 01:55	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 01:55	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 01:55	CJG	A
o-Xylene	2.3		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 01:55	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 01:55	CJG	A
sec-Butylbenzene	0.40J	J	ug/L	1.0	0.31	SW846 8260B		4/14/18 01:55	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 01:55	CJG	A
tert-Butyl Alcohol	2.2J	J	ug/L	10.0	2.2	SW846 8260B		4/14/18 01:55	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/14/18 01:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120027** Date Collected: 4/10/2018 13:00 Matrix: Water

Sample ID: **MRC-MW109B** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	23.5		ug/L	1.0	0.26	SW846 8260B		4/14/18 01:55	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 01:55	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	97.4		%	62 - 133		SW846 8260B		4/14/18 01:55	CJG	A
1,2-Dichloroethane-d4 (S)	99.7		%	62 - 133		SW846 8260B		4/17/18 05:33	CJG	A
4-Bromofluorobenzene (S)	97.8		%	79 - 114		SW846 8260B		4/17/18 05:33	CJG	A
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260B		4/14/18 01:55	CJG	A
Dibromofluoromethane (S)	97.2		%	78 - 116		SW846 8260B		4/17/18 05:33	CJG	A
Dibromofluoromethane (S)	103		%	78 - 116		SW846 8260B		4/14/18 01:55	CJG	A
Toluene-d8 (S)	88.5		%	76 - 127		SW846 8260B		4/14/18 01:55	CJG	A
Toluene-d8 (S)	92.2		%	76 - 127		SW846 8260B		4/17/18 05:33	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120028** Date Collected: 4/10/2018 12:28 Matrix: Water

Sample ID: **MRC-MW27C** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/16/18 23:49	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/16/18 23:49	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/16/18 23:49	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/16/18 23:49	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/16/18 23:49	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/16/18 23:49	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/16/18 23:49	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/16/18 23:49	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/16/18 23:49	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/16/18 23:49	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/16/18 23:49	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/16/18 23:49	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:49	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/16/18 23:49	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/16/18 23:49	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/16/18 23:49	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/16/18 23:49	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/16/18 23:49	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/16/18 23:49	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:49	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/16/18 23:49	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/16/18 23:49	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/16/18 23:49	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/16/18 23:49	CJG	A
Acetone	3.6J	J	ug/L	10.0	3.1	SW846 8260B		4/16/18 23:49	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/16/18 23:49	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:49	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:49	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/16/18 23:49	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/16/18 23:49	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/16/18 23:49	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/16/18 23:49	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:49	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/16/18 23:49	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/16/18 23:49	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120028** Date Collected: 4/10/2018 12:28 Matrix: Water

Sample ID: **MRC-MW27C** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/16/18 23:49	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:49	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/16/18 23:49	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:49	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/16/18 23:49	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/16/18 23:49	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/16/18 23:49	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/16/18 23:49	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/16/18 23:49	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/16/18 23:49	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/16/18 23:49	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/16/18 23:49	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/16/18 23:49	CJG	A
Naphthalene	ND	1	ug/L	2.0	0.34	SW846 8260B		4/16/18 23:49	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/16/18 23:49	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/16/18 23:49	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/16/18 23:49	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/16/18 23:49	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/16/18 23:49	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/16/18 23:49	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/16/18 23:49	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:49	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:49	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/16/18 23:49	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/16/18 23:49	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/16/18 23:49	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:49	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:49	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:49	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/16/18 23:49	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/16/18 23:49	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/16/18 23:49	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120028** Date Collected: 4/10/2018 12:28 Matrix: Water

Sample ID: **MRC-MW27C** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/16/18 23:49	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/16/18 23:49	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/16/18 23:49	CJG	A
4-Bromofluorobenzene (S)	98.1		%	79 - 114		SW846 8260B			4/16/18 23:49	CJG	A
Dibromofluoromethane (S)	98.5		%	78 - 116		SW846 8260B			4/16/18 23:49	CJG	A
Toluene-d8 (S)	91.8		%	76 - 127		SW846 8260B			4/16/18 23:49	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120029** Date Collected: 4/10/2018 09:00 Matrix: Water

Sample ID: **MRC-MW50A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 02:39	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 02:39	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 02:39	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 02:39	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 02:39	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/14/18 02:39	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 02:39	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/14/18 02:39	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 02:39	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 02:39	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 02:39	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/14/18 02:39	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 02:39	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/14/18 02:39	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 02:39	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 02:39	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 02:39	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 02:39	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 02:39	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 02:39	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 02:39	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/14/18 02:39	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 02:39	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 02:39	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/14/18 02:39	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 02:39	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 02:39	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 02:39	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 02:39	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 02:39	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 02:39	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 02:39	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 02:39	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 02:39	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 02:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120029** Date Collected: 4/10/2018 09:00 Matrix: Water

Sample ID: **MRC-MW50A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 02:39	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 02:39	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 02:39	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 02:39	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 02:39	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 02:39	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 02:39	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 02:39	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 02:39	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 02:39	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 02:39	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 02:39	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 02:39	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/14/18 02:39	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 02:39	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 02:39	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 02:39	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/14/18 02:39	CJG	A
Trichloroethene	6.1		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 02:39	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 02:39	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 02:39	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 02:39	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 02:39	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/14/18 02:39	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 02:39	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 02:39	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 02:39	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 02:39	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 02:39	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 02:39	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/14/18 02:39	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/14/18 02:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120029** Date Collected: 4/10/2018 09:00 Matrix: Water

Sample ID: **MRC-MW50A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/14/18 02:39	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/14/18 02:39	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/14/18 02:39	CJG	A
4-Bromofluorobenzene (S)	99.9		%	79 - 114		SW846 8260B			4/14/18 02:39	CJG	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/14/18 02:39	CJG	A
Toluene-d8 (S)	87.4		%	76 - 127		SW846 8260B			4/14/18 02:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120030** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-5** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 22:17	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 22:17	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 22:17	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 22:17	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 22:17	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 22:17	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 22:17	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 22:17	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 22:17	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 22:17	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 22:17	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 22:17	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:17	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 22:17	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 22:17	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 22:17	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 22:17	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 22:17	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 22:17	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:17	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 22:17	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 22:17	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 22:17	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 22:17	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/13/18 22:17	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 22:17	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:17	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:17	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 22:17	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 22:17	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 22:17	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 22:17	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:17	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 22:17	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 22:17	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120030** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-5** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 22:17	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:17	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 22:17	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:17	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 22:17	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 22:17	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 22:17	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 22:17	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 22:17	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 22:17	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 22:17	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 22:17	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 22:17	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 22:17	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 22:17	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 22:17	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 22:17	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 22:17	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 22:17	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 22:17	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 22:17	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:17	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:17	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 22:17	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 22:17	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 22:17	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:17	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:17	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:17	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 22:17	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 22:17	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 22:17	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120030** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-5** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 22:17	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 22:17	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/13/18 22:17	CJG	A
4-Bromofluorobenzene (S)	94.2		%	79 - 114		SW846 8260B			4/13/18 22:17	CJG	A
Dibromofluoromethane (S)	105		%	78 - 116		SW846 8260B			4/13/18 22:17	CJG	A
Toluene-d8 (S)	85.6		%	76 - 127		SW846 8260B			4/13/18 22:17	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120031** Date Collected: 4/10/2018 12:05 Matrix: Water

Sample ID: **MRC-MW128A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 03:01	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 03:01	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 03:01	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
1,1-Dichloroethane	0.49J	J	ug/L	1.0	0.28	SW846 8260B		4/14/18 03:01	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 03:01	CJG	A
1,2,3-Trichlorobenzene	76.3		ug/L	2.0	0.93	SW846 8260B		4/14/18 03:01	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 03:01	CJG	A
1,2,4-Trichlorobenzene	226		ug/L	10.0	4.1	SW846 8260B		4/17/18 05:55	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 03:01	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/14/18 03:01	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/14/18 03:01	CJG	A
1,2-Dichlorobenzene	2.3		ug/L	1.0	0.38	SW846 8260B		4/14/18 03:01	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 03:01	CJG	A
1,2-Dichloroethene, Total	9.8		ug/L	2.0	0.45	SW846 8260B		4/14/18 03:01	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 03:01	CJG	A
1,3-Dichlorobenzene	2.6		ug/L	1.0	0.25	SW846 8260B		4/14/18 03:01	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 03:01	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/14/18 03:01	CJG	A
1,4-Dichlorobenzene	3.8		ug/L	1.0	0.27	SW846 8260B		4/14/18 03:01	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 03:01	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/14/18 03:01	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/14/18 03:01	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/14/18 03:01	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/14/18 03:01	CJG	A
Acetone	6.0J	J	ug/L	10.0	3.1	SW846 8260B		4/14/18 03:01	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 03:01	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 03:01	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 03:01	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/14/18 03:01	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/14/18 03:01	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/14/18 03:01	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 03:01	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 03:01	CJG	A
Chlorobenzene	0.25J	J	ug/L	1.0	0.19	SW846 8260B		4/14/18 03:01	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 03:01	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120031** Date Collected: 4/10/2018 12:05 Matrix: Water

Sample ID: **MRC-MW128A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/14/18 03:01	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 03:01	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/14/18 03:01	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 03:01	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/14/18 03:01	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/14/18 03:01	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/14/18 03:01	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 03:01	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/14/18 03:01	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/14/18 03:01	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/14/18 03:01	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/14/18 03:01	CJG	A
Methyl t-Butyl Ether	8.1		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/14/18 03:01	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/14/18 03:01	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 03:01	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/14/18 03:01	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/14/18 03:01	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/14/18 03:01	CJG	A
Trichloroethene	2.6		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/14/18 03:01	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/14/18 03:01	CJG	A
Vinyl Chloride	0.53J	J	ug/L	1.0	0.30	SW846 8260B		4/14/18 03:01	CJG	A
cis-1,2-Dichloroethene	9.0		ug/L	1.0	0.32	SW846 8260B		4/14/18 03:01	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 03:01	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/14/18 03:01	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/14/18 03:01	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/14/18 03:01	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/14/18 03:01	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/14/18 03:01	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/14/18 03:01	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/14/18 03:01	CJG	A
tert-Butyl Alcohol	2.4J	J	ug/L	10.0	2.2	SW846 8260B		4/14/18 03:01	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/14/18 03:01	CJG	A

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120031** Date Collected: 4/10/2018 12:05 Matrix: Water

Sample ID: **MRC-MW128A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.84J	J	ug/L	1.0	0.26	SW846 8260B			4/14/18 03:01	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/14/18 03:01	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/17/18 05:55	CJG	A
1,2-Dichloroethane-d4 (S)	99.8		%	62 - 133		SW846 8260B			4/14/18 03:01	CJG	A
4-Bromofluorobenzene (S)	98.2		%	79 - 114		SW846 8260B			4/17/18 05:55	CJG	A
4-Bromofluorobenzene (S)	94.8		%	79 - 114		SW846 8260B			4/14/18 03:01	CJG	A
Dibromofluoromethane (S)	98.5		%	78 - 116		SW846 8260B			4/17/18 05:55	CJG	A
Dibromofluoromethane (S)	105		%	78 - 116		SW846 8260B			4/14/18 03:01	CJG	A
Toluene-d8 (S)	86.5		%	76 - 127		SW846 8260B			4/14/18 03:01	CJG	A
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/17/18 05:55	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.086J	J	ug/L	0.099	0.019	8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	71.6		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
Fluoranthene-d10 (S)	108		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 16:09	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/18/18 05:26	MBW	H
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Beryllium, Total	0.010		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Chromium, Total	0.0010J	J	mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Cobalt, Total	0.035		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Copper, Total	0.0038J	J	mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 08:35	AXC	4/23/18 12:47	AXC	E2
Nickel, Total	0.074		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120031** Date Collected: 4/10/2018 12:05 Matrix: Water

Sample ID: **MRC-MW128A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	*Cntr*
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
Zinc, Total	0.13		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:34	MO	E1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/24/18 17:55	SUB	F

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120032** Date Collected: 4/10/2018 09:40 Matrix: Water

Sample ID: **MRC-MW10A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 00:12	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 00:12	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 00:12	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 00:12	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 00:12	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 00:12	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 00:12	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 00:12	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 00:12	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 00:12	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 00:12	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 00:12	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 00:12	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 00:12	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 00:12	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 00:12	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 00:12	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 00:12	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 00:12	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 00:12	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 00:12	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 00:12	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 00:12	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 00:12	CJG	A
Acetone	5.7J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 00:12	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 00:12	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 00:12	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 00:12	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 00:12	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 00:12	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 00:12	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 00:12	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 00:12	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 00:12	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 00:12	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120032** Date Collected: 4/10/2018 09:40 Matrix: Water

Sample ID: **MRC-MW10A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 00:12	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 00:12	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 00:12	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 00:12	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 00:12	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 00:12	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 00:12	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 00:12	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 00:12	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 00:12	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 00:12	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 00:12	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 00:12	CJG	A
Naphthalene	ND	1	ug/L	2.0	0.34	SW846 8260B		4/17/18 00:12	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 00:12	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 00:12	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 00:12	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 00:12	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 00:12	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 00:12	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 00:12	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 00:12	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 00:12	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 00:12	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 00:12	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 00:12	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 00:12	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 00:12	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 00:12	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 00:12	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 00:12	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 00:12	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120032** Date Collected: 4/10/2018 09:40 Matrix: Water

Sample ID: **MRC-MW10A** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 00:12	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 00:12	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			4/17/18 00:12	CJG	A
4-Bromofluorobenzene (S)	99		%	79 - 114		SW846 8260B			4/17/18 00:12	CJG	A
Dibromofluoromethane (S)	99.2		%	78 - 116		SW846 8260B			4/17/18 00:12	CJG	A
Toluene-d8 (S)	92.8		%	76 - 127		SW846 8260B			4/17/18 00:12	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.55		ug/L	0.096	0.018	8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	83.7		%	29 - 112		8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C
Fluoranthene-d10 (S)	112		%	45 - 130		8270 SIM	4/16/18 08:40	CAC	4/24/18 16:36	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120033** Date Collected: 4/10/2018 13:05 Matrix: Water

Sample ID: **MRC-MW12C** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/16/18 23:26	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/16/18 23:26	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/16/18 23:26	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/16/18 23:26	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/16/18 23:26	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/16/18 23:26	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/16/18 23:26	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/16/18 23:26	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/16/18 23:26	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/16/18 23:26	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/16/18 23:26	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/16/18 23:26	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:26	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/16/18 23:26	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/16/18 23:26	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/16/18 23:26	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/16/18 23:26	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/16/18 23:26	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/16/18 23:26	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:26	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/16/18 23:26	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/16/18 23:26	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/16/18 23:26	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/16/18 23:26	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/16/18 23:26	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/16/18 23:26	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:26	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:26	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/16/18 23:26	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/16/18 23:26	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/16/18 23:26	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/16/18 23:26	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:26	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/16/18 23:26	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/16/18 23:26	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120033** Date Collected: 4/10/2018 13:05 Matrix: Water

Sample ID: **MRC-MW12C** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/16/18 23:26	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:26	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/16/18 23:26	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:26	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/16/18 23:26	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/16/18 23:26	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/16/18 23:26	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/16/18 23:26	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/16/18 23:26	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/16/18 23:26	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/16/18 23:26	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/16/18 23:26	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/16/18 23:26	CJG	A
Naphthalene	ND	1	ug/L	2.0	0.34	SW846 8260B		4/16/18 23:26	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/16/18 23:26	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/16/18 23:26	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/16/18 23:26	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/16/18 23:26	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/16/18 23:26	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/16/18 23:26	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/16/18 23:26	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:26	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:26	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/16/18 23:26	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/16/18 23:26	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/16/18 23:26	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/16/18 23:26	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/16/18 23:26	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/16/18 23:26	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/16/18 23:26	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/16/18 23:26	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/16/18 23:26	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120033** Date Collected: 4/10/2018 13:05 Matrix: Water

Sample ID: **MRC-MW12C** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/16/18 23:26	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/16/18 23:26	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/16/18 23:26	CJG	A
4-Bromofluorobenzene (S)	97.4		%	79 - 114		SW846 8260B			4/16/18 23:26	CJG	A
Dibromofluoromethane (S)	96.4		%	78 - 116		SW846 8260B			4/16/18 23:26	CJG	A
Toluene-d8 (S)	91.1		%	76 - 127		SW846 8260B			4/16/18 23:26	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	48.5		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
Fluoranthene-d10 (S)	77.4		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 00:11	GEC	C
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Arsenic, Total	0.0016J	J	mg/L	0.0033	0.0011	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Beryllium, Total	0.00072J	J	mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Chromium, Total	0.014		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Cobalt, Total	0.0090		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Copper, Total	0.015		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Lead, Total	0.0064		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 08:35	AXC	4/23/18 12:48	AXC	E2
Nickel, Total	0.015		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1
Zinc, Total	0.10		mg/L	0.0056	0.0019	SW846 6020A	4/12/18 11:00	DXC	4/12/18 16:38	MO	E1

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120033** Date Collected: 4/10/2018 13:05 Matrix: Water
Sample ID: **MRC-MW12C** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*

Vanessa N. Badman
Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120034** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-6** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 22:39	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 22:39	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 22:39	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 22:39	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 22:39	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/13/18 22:39	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 22:39	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/13/18 22:39	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 22:39	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/13/18 22:39	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/13/18 22:39	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/13/18 22:39	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:39	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/13/18 22:39	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 22:39	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 22:39	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 22:39	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/13/18 22:39	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 22:39	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:39	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/13/18 22:39	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/13/18 22:39	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/13/18 22:39	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/13/18 22:39	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/13/18 22:39	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 22:39	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:39	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:39	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/13/18 22:39	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/13/18 22:39	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/13/18 22:39	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 22:39	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:39	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 22:39	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 22:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120034** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-6** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/13/18 22:39	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:39	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/13/18 22:39	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:39	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/13/18 22:39	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/13/18 22:39	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/13/18 22:39	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 22:39	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/13/18 22:39	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/13/18 22:39	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/13/18 22:39	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 22:39	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/13/18 22:39	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/13/18 22:39	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 22:39	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/13/18 22:39	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/13/18 22:39	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/13/18 22:39	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/13/18 22:39	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/13/18 22:39	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/13/18 22:39	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:39	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:39	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/13/18 22:39	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/13/18 22:39	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/13/18 22:39	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/13/18 22:39	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/13/18 22:39	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/13/18 22:39	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/13/18 22:39	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/13/18 22:39	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/13/18 22:39	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308120034** Date Collected: 4/10/2018 22:00 Matrix: Water

Sample ID: **TB-041018-6** Date Received: 4/10/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/13/18 22:39	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/13/18 22:39	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100		%	62 - 133		SW846 8260B			4/13/18 22:39	CJG	A
4-Bromofluorobenzene (S)	99.2		%	79 - 114		SW846 8260B			4/13/18 22:39	CJG	A
Dibromofluoromethane (S)	105		%	78 - 116		SW846 8260B			4/13/18 22:39	CJG	A
Toluene-d8 (S)	88.5		%	76 - 127		SW846 8260B			4/13/18 22:39	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2308120001	1	EB-040618-ZN	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2308120001	2	EB-040618-ZN	EPA 300.0	Nitrite-N
Analyte was analyzed past the 48 hour holding time.				
2308120001	3	EB-040618-ZN	EPA 300.0	Nitrate-N
Analyte was analyzed past the 48 hour holding time.				
2308120006	1	MRC-MW79B	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.				
2308120006	2	MRC-MW79B	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 135 and the control limits were 66 to 130.				
2308120009	1	MRC-MW95B	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 134 and the control limits were 63 to 128.				
2308120009	2	MRC-MW95B	SW846 8260B	1,1-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 132 and the control limits were 63 to 128.				
2308120009	3	MRC-MW95B	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 145 and the control limits were 50 to 130.				
2308120009	4	MRC-MW95B	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 145 and the control limits were 50 to 130.				
2308120009	5	MRC-MW95B	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 124 and the control limits were 71 to 122.				
2308120009	6	MRC-MW95B	SW846 8260B	1,1-Dichloroethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 132 and the control limits were 78 to 124.				
2308120009	7	MRC-MW95B	SW846 8260B	Bromochloromethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 126 and the control limits were 73 to 117.				
2308120009	8	MRC-MW95B	SW846 8260B	Bromochloromethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 126 and the control limits were 73 to 117.				
2308120009	9	MRC-MW95B	SW846 8260B	Chloroform
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Chloroform. The % Recovery was reported as 128 and the control limits were 78 to 122.				
2308120009	10	MRC-MW95B	SW846 8260B	Chloroform
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Chloroform. The % Recovery was reported as 128 and the control limits were 78 to 122.				

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

2308120009	11	MRC-MW95B	SW846 8260B	1,1,1-Trichloroethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1,1-Trichloroethane. The % Recovery was reported as 141 and the control limits were 66 to 130.

2308120009	12	MRC-MW95B	SW846 8260B	1,1,1-Trichloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1,1-Trichloroethane. The % Recovery was reported as 141 and the control limits were 66 to 130.

2308120009	13	MRC-MW95B	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 156 and the control limits were 66 to 130.

2308120009	14	MRC-MW95B	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 161 and the control limits were 66 to 130.

2308120009	15	MRC-MW95B	SW846 8260B	Carbon Tetrachloride

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Tetrachloride. The % Recovery was reported as 152 and the control limits were 62 to 132.

2308120009	16	MRC-MW95B	SW846 8260B	Carbon Tetrachloride

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Tetrachloride. The % Recovery was reported as 147 and the control limits were 62 to 132.

2308120009	17	MRC-MW95B	SW846 8260B	Benzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Benzene. The % Recovery was reported as 129 and the control limits were 80 to 124.

2308120009	18	MRC-MW95B	SW846 8260B	1,2-Dichloropropane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloropropane. The % Recovery was reported as 131 and the control limits were 81 to 127.

2308120009	19	MRC-MW95B	SW846 8260B	Trichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 126 and the control limits were 77 to 124.

2308120009	20	MRC-MW95B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .46 and the control limits were 1 to 150.

2308120009	21	MRC-MW95B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .68 and the control limits were 1 to 150.

2308120009	22	MRC-MW95B	SW846 8260B	cis-1,3-Dichloropropene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 71.2 and the control limits were 81 to 121.

2308120009	23	MRC-MW95B	SW846 8260B	4-Methyl-2-Pentanone(MIBK)

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The RPD was reported as 28.4 and the upper control limit is 16.

2308120009	24	MRC-MW95B	SW846 8260B	trans-1,3-Dichloropropene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte trans-1,3-Dichloropropene. The RPD was reported as 19.8 and the upper control limit is 18.

2308120009	25	MRC-MW95B	SW846 8260B	1,1,2-Trichloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1,2-Trichloroethane. The RPD was reported as 19.6 and the upper control limit is 15.

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

2308120009	26	MRC-MW95B	SW846 8260B	Toluene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Toluene. The % Recovery was reported as 132 and the control limits were 80 to 125.

2308120009	27	MRC-MW95B	SW846 8260B	2-Hexanone

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 62.7 and the control limits were 65 to 154.

2308120009	28	MRC-MW95B	SW846 8260B	2-Hexanone

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The RPD was reported as 18 and the upper control limit is 17.

2308120009	29	MRC-MW95B	SW846 8260B	1,3-Dichloropropene, Total

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,3-Dichloropropene, Total. The % Recovery was reported as 76.6 and the control limits were 80 to 123.

2308120009	30	MRC-MW95B	SW846 8260B	1,3-Dichloropropene, Total

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,3-Dichloropropene, Total. The RPD was reported as 17.1 and the upper control limit is 16.

2308120009	31	MRC-MW95B	SW846 8260B	Isopropylbenzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Isopropylbenzene. The % Recovery was reported as 130 and the control limits were 73 to 129.

2308120009	32	MRC-MW95B	SW846 8260B	Bromobenzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromobenzene. The % Recovery was reported as 124 and the control limits were 81 to 119.

2308120009	33	MRC-MW95B	SW846 8260B	o-Chlorotoluene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte o-Chlorotoluene. The % Recovery was reported as 127 and the control limits were 78 to 126.

2308120009	34	MRC-MW95B	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 147 and the control limits were 70 to 130.

2308120009	35	MRC-MW95B	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The RPD was reported as 26 and the upper control limit is 18.

2308120010	1	MRC-MW25A	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.

2308120010	2	MRC-MW25A	S2320B-97	Alkalinity, Total

The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.

2308120010	3	MRC-MW25A	EPA 300.0	Nitrite-N

The sample was originally run within hold time, but required further analysis that exceeded hold time.

2308120010	4	MRC-MW25A	EPA 300.0	Nitrite-N

Due to sample matrix interferences, this analyte was analyzed at a dilution and the detection levels adjusted accordingly.

2308120015	1	MRC-MW12B	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.

2308120015	2	MRC-MW12B	S2320B-97	Alkalinity, Total

The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

2308120017	1	MRC-MW114A	SW846 8260B	Toluene-d8

The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 73 and the control limits were 76 to 127. This result was reported at a dilution of 1.

2308120021	1	MRC-MW12A	SW846 8260B	1,1-Dichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 138 and the control limits were 63 to 128.

2308120021	2	MRC-MW12A	SW846 8260B	1,1-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 131 and the control limits were 63 to 128.

2308120021	3	MRC-MW12A	SW846 8260B	Freon 113

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 139 and the control limits were 50 to 130.

2308120021	4	MRC-MW12A	SW846 8260B	Freon 113

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 139 and the control limits were 50 to 130.

2308120021	5	MRC-MW12A	SW846 8260B	Carbon Disulfide

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 136 and the control limits were 57 to 131.

2308120021	6	MRC-MW12A	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 132 and the control limits were 71 to 122.

2308120021	7	MRC-MW12A	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 129 and the control limits were 71 to 122.

2308120021	8	MRC-MW12A	SW846 8260B	1,1-Dichloroethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 126 and the control limits were 78 to 124.

2308120021	9	MRC-MW12A	SW846 8260B	1,1-Dichloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 126 and the control limits were 78 to 124.

2308120021	10	MRC-MW12A	SW846 8260B	Bromochloromethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 120 and the control limits were 73 to 117.

2308120021	11	MRC-MW12A	SW846 8260B	Bromochloromethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 118 and the control limits were 73 to 117.

2308120021	12	MRC-MW12A	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 136 and the control limits were 66 to 130.

2308120021	13	MRC-MW12A	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 141 and the control limits were 66 to 130.

2308120021	14	MRC-MW12A	SW846 8260B	Carbon Tetrachloride

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Tetrachloride. The % Recovery was reported as 135 and the control limits were 62 to 132.

ANALYTICAL RESULTS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

2308120021	15	MRC-MW12A	SW846 8260B	2-Chloroethylvinyl ether
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .31 and the control limits were 1 to 150.				
2308120021	16	MRC-MW12A	SW846 8260B	2-Chloroethylvinyl ether
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .43 and the control limits were 1 to 150.				
2308120021	17	MRC-MW12A	SW846 8260B	cis-1,3-Dichloropropene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 80.9 and the control limits were 81 to 121.				
2308120021	18	MRC-MW12A	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 127 and the control limits were 78 to 125.				
2308120021	19	MRC-MW12A	8270 SIM	2-Methylnapthalene-d10
The surrogate 2-Methylnapthalene-d10 for method 8270 SIM was outside of control limits. The % Recovery was reported as 0 and the control limits were 29 to 112. This result was reported at a dilution of 100.				
2308120021	20	MRC-MW12A	8270 SIM	Fluoranthene-d10
The surrogate Fluoranthene-d10 for method 8270 SIM was outside of control limits. The % Recovery was reported as 221 and the control limits were 45 to 130. This result was reported at a dilution of 100.				
2308120021	21	MRC-MW12A	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2308120028	1	MRC-MW27C	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 55.2 and the control limits were 56 to 134.				
2308120032	1	MRC-MW10A	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 55.2 and the control limits were 56 to 134.				
2308120033	1	MRC-MW12C	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 55.2 and the control limits were 56 to 134.				

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51738 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308120001, 2308120002, 2308120003

METHOD BLANK: 2722393

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	72.3	%	29 - 112
Fluoranthene-d10 (S)	77.9	%	45 - 130

LABORATORY CONTROL SAMPLE: 2722394

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	30.8	ug/L	1	0.31	22 - 75
2-Methylnapthalene-d10 (S)	72.5	%			29 - 112
Fluoranthene-d10 (S)	75.7	%			45 - 130

MATRIX SPIKE SAMPLE: 2722395 ORIGINAL: 2307611010

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.45921	ug/L	1	.7217	26.2	22 - 75
2-Methylnapthalene-d10 (S)	52.9	%				29 - 112
Fluoranthene-d10 (S)	76.2	%				45 - 130

SAMPLE DUPLICATE: 2722396 ORIGINAL: 2307611008

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	19.2711	ug/L	18.955	1.65	

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51758 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308120006, 2308120007, 2308120008, 2308120010, 2308120015, 2308120016, 2308120017, 2308120019, 2308120020, 2308120021, 2308120023, 2308120025, 2308120026, 2308120031, 2308120032

METHOD BLANK: 2723330

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	74.1	%	29 - 112
Fluoranthene-d10 (S)	103	%	45 - 130

LABORATORY CONTROL SAMPLE: 2723331

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	44.8	ug/L	1	0.45	22 - 75
2-Methylnapthalene-d10 (S)	77	%			29 - 112
Fluoranthene-d10 (S)	99.7	%			45 - 130

MATRIX SPIKE SAMPLE: 2723332 ORIGINAL: 2308120017

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.49888	ug/L	.94	.7617	27.9	22 - 75
2-Methylnapthalene-d10 (S)	61.2	%				29 - 112
Fluoranthene-d10 (S)	104	%				45 - 130

SAMPLE DUPLICATE: 2723333 ORIGINAL: 2308120026

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	0	ug/L	0	NC	

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51783 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308120033

METHOD BLANK: 2724694

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	79.3	%	29 - 112
Fluoranthene-d10 (S)	98.5	%	45 - 130

LABORATORY CONTROL SAMPLE: 2724695

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	47.3	ug/L	1	0.47	22 - 75
2-Methylnapthalene-d10 (S)	78.1	%			29 - 112
Fluoranthene-d10 (S)	92.4	%			45 - 130

MATRIX SPIKE: 2724696 DUPLICATE: 2724697 ORIGINAL: 2308629005

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	88.4541	ug/L	.99	45.9115	45.17	NC	NC	22 - 75	1.63	
2-Methylnapthalene-d10 (S)	61.3	%				61.3	55.7	29 - 112		
Fluoranthene-d10 (S)	90.7	%				90.7	95.2	45 - 130		

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71163 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2308120001, 2308120003, 2308120015, 2308120021, 2308120023, 2308120026, 2308120031, 2308120033

METHOD BLANK: 2721832

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	ND	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2721833

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	91.1	mg/L	.22	0.20	80 - 120
Arsenic, Total	88.4	mg/L	.22	0.20	80 - 120
Beryllium, Total	83.4	mg/L	.22	0.19	80 - 120
Cadmium, Total	90.2	mg/L	.22	0.20	80 - 120
Chromium, Total	92.5	mg/L	.22	0.21	80 - 120
Cobalt, Total	90.4	mg/L	.22	0.20	80 - 120
Copper, Total	89	mg/L	.22	0.20	80 - 120
Lead, Total	95.7	mg/L	.22	0.21	80 - 120
Nickel, Total	88.6	mg/L	.22	0.20	80 - 120
Selenium, Total	86.2	mg/L	.22	0.19	80 - 120
Silver, Total	89.7	mg/L	.11	0.10	80 - 120
Thallium, Total	95.3	mg/L	.22	0.21	80 - 120
Zinc, Total	84.4	mg/L	.22	0.19	80 - 120

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE: 2721834 DUPLICATE: 2721835 ORIGINAL: 2307919002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Antimony, Total	.00007	mg/L	.22	.20954	.21419	94.3	96.4	75 - 125	2.2	20
Arsenic, Total	.00122	mg/L	.22	.2092	.2044	93.6	91.4	75 - 125	2.32	20
Beryllium, Total	.00002	mg/L	.22	.1907	.19429	85.8	87.4	75 - 125	1.87	20
Cadmium, Total	.00027	mg/L	.22	.20735	.20948	93.2	94.1	75 - 125	1.02	20
Chromium, Total	.00683	mg/L	.22	.21577	.2173	94	94.7	75 - 125	.71	20
Cobalt, Total	.00526	mg/L	.22	.20775	.21465	91.1	94.2	75 - 125	3.27	20
Copper, Total	.00223	mg/L	.22	.20032	.20201	89.1	89.9	75 - 125	.84	20
Lead, Total	.00014	mg/L	.22	.2157	.2203	97	99.1	75 - 125	2.11	20
Nickel, Total	.00861	mg/L	.22	.20519	.2113	88.5	91.2	75 - 125	2.93	20
Selenium, Total	.00333	mg/L	.22	.20499	.20099	90.7	88.9	75 - 125	1.97	20
Silver, Total	0	mg/L	.11	.10051	.10399	90.5	93.6	75 - 125	3.4	20
Thallium, Total	.00002	mg/L	.22	.21323	.22109	95.9	99.5	75 - 125	3.62	20
Zinc, Total	.01398	mg/L	.22	.1975	.20069	82.6	84	75 - 125	1.6	20

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71188 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2308120001, 2308120015, 2308120021

METHOD BLANK: 2722983

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	ND	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2722984

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	101	mg/L	1.1	1.1	80 - 120
Iron, Total	101	mg/L	1.1	1.1	80 - 120
Magnesium, Total	101	mg/L	1.1	1.1	80 - 120
Manganese, Total	101	mg/L	.11	0.11	80 - 120
Potassium, Total	100	mg/L	22.2	22.3	80 - 120
Sodium, Total	103	mg/L	22.2	22.9	80 - 120

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71289 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2308120010

METHOD BLANK: 2726173

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	ND	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2726174

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	103	mg/L	1.1	1.1	80 - 120
Iron, Total	102	mg/L	1.1	1.1	80 - 120
Magnesium, Total	104	mg/L	1.1	1.2	80 - 120
Manganese, Total	102	mg/L	.11	0.11	80 - 120
Potassium, Total	101	mg/L	22.2	22.4	80 - 120
Sodium, Total	103	mg/L	22.2	22.8	80 - 120

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71296 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2308120001

METHOD BLANK: 2726564

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2726565

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	101	mg/L	.002	0.0020	85 - 115

MATRIX SPIKE: 2726568 DUPLICATE: 2726569 ORIGINAL: 2307919003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	.00001	mg/L	.005	.0053	.00542	106	108	70 - 130	2.24	20

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71320 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2308120003, 2308120015, 2308120021, 2308120023, 2308120026, 2308120031, 2308120033

METHOD BLANK: 2727392

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2727393

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	96	mg/L	.002	0.0019	85 - 115

MATRIX SPIKE: 2727394 DUPLICATE: 2727395 ORIGINAL: 2308120015

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00481	.00492	96.2	98.4	70 - 130	2.26	20

MATRIX SPIKE: 2727396 DUPLICATE: 2727397 ORIGINAL: 2308177009

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.0049	.00499	98	99.8	70 - 130	1.82	20

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: SVGC/48888 **Analysis Method:** RSK 175

QC Batch Method: RSK 175

Associated Lab Samples: 2308120001, 2308120010, 2308120015, 2308120021

METHOD BLANK: 2725620

Parameter	Blank Result	Units	Reporting Limit
n-Butane	ND	ug/L	4.3
Ethane	ND	ug/L	3.3
Ethene	ND	ug/L	2.4
Isobutane	ND	ug/L	4.6
Methane	ND	ug/L	1.5
Propane	ND	ug/L	3.2

SAMPLE DUPLICATE: 2725621 ORIGINAL: 2308276001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	0	ug/L	0	NC	20
Propane	0	ug/L	0	NC	30

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46507 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308120001, 2308120002, 2308120003, 2308120004, 2308120005, 2308120006, 2308120007, 2308120008, 2308120009, 2308120010, 2308120011, 2308120012, 2308120013, 2308120014, 2308120015, 2308120016, 2308120017, 2308120018, 2308120019

METHOD BLANK: 2721961

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	107	%	62 - 133
4-Bromofluorobenzene (S)	100	%	79 - 114
Dibromofluoromethane (S)	105	%	78 - 116
Toluene-d8 (S)	87.4	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2721962

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	113	ug/L	20	22.6	78 - 121
1,1,1-Trichloroethane	125	ug/L	20	25.0	66 - 130
1,1,2,2-Tetrachloroethane	98.2	ug/L	20	19.6	74 - 135
1,1,2-Trichloroethane	105	ug/L	20	21.0	82 - 126
1,1-Dichloroethane	114	ug/L	20	22.8	78 - 124
1,1-Dichloroethene	129*	ug/L	20	25.8	63 - 128
1,2,3-Trichlorobenzene	91.4	ug/L	20	18.3	61 - 126
1,2,3-Trichloropropane	100	ug/L	20	20.0	75 - 132
1,2,4-Trichlorobenzene	78.7	ug/L	20	15.7	67 - 123
1,2,4-Trimethylbenzene	99.4	ug/L	20	19.9	76 - 125
1,2-Dibromo-3-chloropropane	71.4	ug/L	20	14.3	59 - 133
1,2-Dibromoethane	106	ug/L	20	21.2	80 - 124
1,2-Dichlorobenzene	103	ug/L	20	20.5	82 - 118
1,2-Dichloroethane	113	ug/L	20	22.6	70 - 133
1,2-Dichloroethene, Total	115	ug/L	40	46.1	78 - 125
1,2-Dichloropropane	116	ug/L	20	23.3	81 - 127
1,3-Dichlorobenzene	106	ug/L	20	21.3	81 - 118
1,3-Dichloropropane	104	ug/L	20	20.8	82 - 126
1,3-Dichloropropene, Total	91	ug/L	40	36.4	80 - 123
1,4-Dichlorobenzene	105	ug/L	20	21.0	81 - 116
2,2-Dichloropropane	123	ug/L	20	24.6	64 - 129
2-Butanone	102	ug/L	100	102	50 - 152
2-Chloroethylvinyl ether	62.8	ug/L	20	12.6	1 - 150
2-Hexanone	76.8	ug/L	100	76.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	82.7	ug/L	100	82.7	71 - 146
Acetone	103	ug/L	100	103	40 - 151
Benzene	113	ug/L	20	22.6	80 - 124
Bromobenzene	112	ug/L	20	22.4	81 - 119
Bromochloromethane	116	ug/L	20	23.1	73 - 117
Bromodichloromethane	115	ug/L	20	23.0	79 - 126
Bromoform	86.9	ug/L	20	17.4	70 - 123
Bromomethane	114	ug/L	20	22.8	45 - 148
Carbon Disulfide	119	ug/L	20	23.8	57 - 131
Carbon Tetrachloride	131	ug/L	20	26.3	62 - 132
Chlorobenzene	108	ug/L	20	21.6	85 - 117
Chlorodibromomethane	96	ug/L	20	19.2	77 - 122
Chloroethane	112	ug/L	20	22.5	51 - 142
Chloroform	117	ug/L	20	23.5	78 - 122
Chloromethane	97.1	ug/L	20	19.4	38 - 156
Cyclohexane	135*	ug/L	20	27.1	66 - 130
Dibromomethane	109	ug/L	20	21.9	81 - 125

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	83	ug/L	20	16.6	17 - 166
Diisopropyl ether	94.4	ug/L	20	18.9	74 - 131
Ethyl tert-butyl ether	86.3	ug/L	20	17.3	75 - 123
Ethylbenzene	114	ug/L	20	22.8	80 - 124
Freon 113	142*	ug/L	20	28.4	50 - 130
Hexachlorobutadiene	114	ug/L	20	22.8	55 - 128
Isopropylbenzene	113	ug/L	20	22.7	73 - 129
Methyl acetate	94.9	ug/L	20	19.0	70 - 130
Methyl cyclohexane	122	ug/L	20	24.4	70 - 130
Methyl t-Butyl Ether	101	ug/L	20	20.1	69 - 115
Methylene Chloride	120	ug/L	20	23.9	76 - 121
Naphthalene	97.5	ug/L	20	19.5	56 - 134
Styrene	96.3	ug/L	20	19.3	79 - 123
Tetrachloroethene	115	ug/L	20	22.9	72 - 124
Toluene	117	ug/L	20	23.4	80 - 125
Total Xylenes	107	ug/L	60	64.1	79 - 125
Trichloroethene	110	ug/L	20	22.0	77 - 124
Trichlorofluoromethane	109	ug/L	20	21.9	38 - 123
Vinyl Acetate	90	ug/L	20	18.0	58 - 136
Vinyl Chloride	98	ug/L	20	19.6	27 - 138
cis-1,2-Dichloroethene	111	ug/L	20	22.3	78 - 125
cis-1,3-Dichloropropene	87.1	ug/L	20	17.4	81 - 121
mp-Xylene	114	ug/L	40	45.8	79 - 125
n-Butylbenzene	92.5	ug/L	20	18.5	71 - 130
n-Propylbenzene	103	ug/L	20	20.7	74 - 122
o-Chlorotoluene	111	ug/L	20	22.3	78 - 126
o-Xylene	91.8	ug/L	20	18.4	79 - 124
p-Chlorotoluene	111	ug/L	20	22.1	78 - 125
p-Isopropyltoluene	97.6	ug/L	20	19.5	72 - 123
sec-Butylbenzene	99.9	ug/L	20	20.0	72 - 127
tert-Amyl methyl ether	85.1	ug/L	20	17.0	75 - 121
tert-Butyl Alcohol	53.7	ug/L	100	53.7	17 - 168
tert-Butylbenzene	103	ug/L	20	20.5	72 - 124
trans-1,2-Dichloroethene	119	ug/L	20	23.8	71 - 122
trans-1,3-Dichloropropene	95	ug/L	20	19.0	78 - 126
1,2-Dichloroethane-d4 (S)	102	%			62 - 133
4-Bromofluorobenzene (S)	95.7	%			79 - 114
Dibromofluoromethane (S)	106	%			78 - 116
Toluene-d8 (S)	84	%			76 - 127

MATRIX SPIKE: 2722135 DUPLICATE: 2722136 ORIGINAL: 2308120009

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	22.6364	23.261	113	116	78 - 121	2.72	16
1,1,1-Trichloroethane	0	ug/L	20	28.2335	28.2356	141*	141*	66 - 130	.007	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	22.4542	22.1326	112	111	74 - 135	1.44	16
1,1,2-Trichloroethane	0	ug/L	20	19.0796	23.2299	95.4	116	82 - 126	19.6	15
1,1-Dichloroethane	0	ug/L	20	26.4281	23.3086	132*	117	78 - 124	12.5	15
1,1-Dichloroethene	0	ug/L	20	26.712	26.3175	134*	132*	63 - 128	1.49	21
1,2,3-Trichlorobenzene	0	ug/L	20	17.3419	20.2848	86.7	101	61 - 126	15.6	36
1,2,3-Trichloropropane	0	ug/L	20	22.0793	21.3843	110	107	75 - 132	3.2	19
1,2,4-Trichlorobenzene	0	ug/L	20	14.9756	16.4271	74.9	82.1	67 - 123	9.24	22
1,2,4-Trimethylbenzene	0	ug/L	20	21.6545	21.7699	108	109	76 - 125	.53	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	14.2795	14.0763	71.4	70.4	59 - 133	1.43	26
1,2-Dibromoethane	0	ug/L	20	19.2389	21.4932	96.2	107	80 - 124	11.1	19
1,2-Dichlorobenzene	0	ug/L	20	20.8802	20.5644	104	103	82 - 118	1.52	15
1,2-Dichloroethane	0	ug/L	20	23.391	23.2616	117	116	70 - 133	.55	19
1,2-Dichloroethene, Total	0	ug/L	40	49.0158	47.7743	123	119	78 - 125	2.57	40
1,2-Dichloropropane	0	ug/L	20	24.3005	26.1847	122	131*	81 - 127	7.46	15
1,3-Dichlorobenzene	0	ug/L	20	22.2781	21.8654	111	109	81 - 118	1.87	16
1,3-Dichloropropane	0	ug/L	20	18.5314	20.8613	92.7	104	82 - 126	11.8	15
1,3-Dichloropropene, Total	0	ug/L	40	30.6401	36.3595	76.6*	90.9	80 - 123	17.1	16
1,4-Dichlorobenzene	0	ug/L	20	21.5887	21.2877	108	106	81 - 116	1.4	15
2,2-Dichloropropane	0	ug/L	20	22.6831	24.4928	113	122	64 - 129	7.67	18
2-Butanone	0	ug/L	100	116.379	107.9	116	108	50 - 152	7.56	16
2-Chloroethylvinyl ether	0	ug/L	20	.09172	.13652	.46*	.68*	1 - 150	39.3	40
2-Hexanone	0	ug/L	100	62.6706	75.0564	62.7*	75.1	65 - 154	18	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	71.7248	95.4555	71.7	95.5	71 - 146	28.4	16
Acetone	6.39561	ug/L	100	90.8919	92.8806	84.5	86.5	40 - 151	2.16	40
Benzene	0	ug/L	20	25.827	24.2379	129*	121	80 - 124	6.35	26
Bromobenzene	0	ug/L	20	24.7802	23.3521	124*	117	81 - 119	5.93	17
Bromochloromethane	0	ug/L	20	25.1421	25.2165	126*	126*	73 - 117	.3	19
Bromodichloromethane	0	ug/L	20	23.9196	24.8105	120	124	79 - 126	3.66	16
Bromoform	0	ug/L	20	16.923	15.3525	84.6	76.8	70 - 123	9.73	16
Bromomethane	0	ug/L	20	22.4969	22.2781	112	111	45 - 148	.98	26
Carbon Disulfide	0	ug/L	20	23.6175	22.2212	118	111	57 - 131	6.09	28
Carbon Tetrachloride	0	ug/L	20	30.4583	29.3371	152*	147*	62 - 132	3.75	17
Chlorobenzene	0	ug/L	20	21.5751	21.8804	108	109	85 - 117	1.41	15
Chlorodibromomethane	0	ug/L	20	16.8903	19.4704	84.5	97.4	77 - 122	14.2	15
Chloroethane	0	ug/L	20	24.4314	23.1682	122	116	51 - 142	5.31	24
Chloroform	0	ug/L	20	25.6533	25.524	128*	128*	78 - 122	.51	16
Chloromethane	0	ug/L	20	20.2822	20.1831	101	101	38 - 156	.49	27
Cyclohexane	0	ug/L	20	31.275	32.2399	156*	161*	66 - 130	3.04	20
Dibromomethane	0	ug/L	20	22.6569	24.0902	113	120	81 - 125	6.13	16
Dichlorodifluoromethane	0	ug/L	20	17.3982	17.3418	87	86.7	17 - 166	.32	24
Diisopropyl ether	0	ug/L	20	18.7526	18.9925	93.8	95	74 - 131	1.27	15
Ethyl tert-butyl ether	0	ug/L	20	17.8698	18.2865	89.3	91.4	75 - 123	2.3	16
Ethylbenzene	0	ug/L	20	23.0179	23.3535	115	117	80 - 124	1.45	19
Freon 113	0	ug/L	20	28.9771	29.0243	145*	145*	50 - 130	.16	26

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Hexachlorobutadiene	0	ug/L	20	21.7773	20.2423	109	101	55 - 128	7.31	35
Isopropylbenzene	0	ug/L	20	25.9584	25.8528	130*	129	73 - 129	.41	18
Methyl acetate	0	ug/L	20	16.806	17.8228	84	89.1	70 - 130	5.87	18
Methyl cyclohexane	0	ug/L	20	22.5842	29.3389	113	147*	70 - 130	26	18
Methyl t-Butyl Ether	0	ug/L	20	19.4555	19.928	97.3	99.6	69 - 115	2.4	20
Methylene Chloride	0	ug/L	20	21.726	21.12	109	106	76 - 121	2.83	17
Naphthalene	0	ug/L	20	18.797	21.4011	94	107	56 - 134	13	40
Styrene	0	ug/L	20	22.0826	19.5813	110	97.9	79 - 123	12	16
Tetrachloroethene	0	ug/L	20	21.0811	24.7616	105	124	72 - 124	16.1	38
Toluene	0	ug/L	20	21.6938	26.4966	108	132*	80 - 125	19.9	20
Total Xylenes	0	ug/L	60	65.4368	67.5449	109	113	79 - 125	3.17	35
Trichloroethene	1.65989	ug/L	20	24.9343	26.7757	116	126*	77 - 124	7.12	18
Trichlorofluoromethane	0	ug/L	20	24.2689	23.4523	121	117	38 - 123	3.42	23
Vinyl Acetate	0	ug/L	20	15.2152	15.6357	76.1	78.2	58 - 136	2.73	17
Vinyl Chloride	0	ug/L	20	20.9165	20.8082	105	104	27 - 138	.52	40
cis-1,2-Dichloroethene	.41275	ug/L	20	24.3129	23.318	120	115	78 - 125	4.18	21
cis-1,3-Dichloropropene	0	ug/L	20	14.2365	16.3587	71.2*	81.8	81 - 121	13.9	16
mp-Xylene	0	ug/L	40	46.8744	47.9652	117	120	79 - 125	2.3	21
n-Butylbenzene	0	ug/L	20	18.6333	19.1424	93.2	95.7	71 - 130	2.7	20
n-Propylbenzene	0	ug/L	20	23.3227	23.7361	117	119	74 - 122	1.76	20
o-Chlorotoluene	0	ug/L	20	25.4799	25.2069	127*	126	78 - 126	1.08	17
o-Xylene	0	ug/L	20	18.5623	19.5797	92.8	97.9	79 - 124	5.33	19
p-Chlorotoluene	0	ug/L	20	24.9949	24.7055	125	124	78 - 125	1.16	16
p-Isopropyltoluene	0	ug/L	20	20.1202	21.8061	101	109	72 - 123	8.04	17
sec-Butylbenzene	0	ug/L	20	21.1241	23.1542	106	116	72 - 127	9.17	17
tert-Amyl methyl ether	0	ug/L	20	18.6783	17.2716	93.4	86.4	75 - 121	7.83	40
tert-Butyl Alcohol	0	ug/L	100	54.0264	60.571	54	60.6	17 - 168	11.4	40
tert-Butylbenzene	0	ug/L	20	22.2955	22.9433	111	115	72 - 124	2.86	17
trans-1,2-Dichloroethene	0	ug/L	20	24.7029	24.4563	124*	122	71 - 122	1	22
trans-1,3-Dichloropropene	0	ug/L	20	16.4037	20.0008	82	100	78 - 126	19.8	18
1,2-Dichloroethane-d4 (S)	111	%				111	219*	62 - 133		
4-Bromofluorobenzene (S)	104	%				104	219*	79 - 114		
Dibromofluoromethane (S)	118	%				118*	231*	78 - 116		
Toluene-d8 (S)	76.3	%				76.3	199*	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46524 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308120006, 2308120007, 2308120008, 2308120017, 2308120019, 2308120021, 2308120022, 2308120023, 2308120024, 2308120025, 2308120026, 2308120027, 2308120028, 2308120029, 2308120030, 2308120031, 2308120032, 2308120033, 2308120034

METHOD BLANK: 2722614

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	1.1J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	100	%	62 - 133
4-Bromofluorobenzene (S)	98.4	%	79 - 114
Dibromofluoromethane (S)	114	%	78 - 116
Toluene-d8 (S)	88.7	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2722615

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	113	ug/L	20	22.6	78 - 121
1,1,1-Trichloroethane	117	ug/L	20	23.4	66 - 130
1,1,2,2-Tetrachloroethane	90.4	ug/L	20	18.1	74 - 135
1,1,2-Trichloroethane	115	ug/L	20	22.9	82 - 126
1,1-Dichloroethane	103	ug/L	20	20.7	78 - 124
1,1-Dichloroethene	119	ug/L	20	23.7	63 - 128
1,2,3-Trichlorobenzene	108	ug/L	20	21.5	61 - 126
1,2,3-Trichloropropane	94.7	ug/L	20	18.9	75 - 132
1,2,4-Trichlorobenzene	85.2	ug/L	20	17.0	67 - 123
1,2,4-Trimethylbenzene	99.9	ug/L	20	20.0	76 - 125
1,2-Dibromo-3-chloropropane	78.9	ug/L	20	15.8	59 - 133
1,2-Dibromoethane	114	ug/L	20	22.7	80 - 124
1,2-Dichlorobenzene	103	ug/L	20	20.6	82 - 118
1,2-Dichloroethane	104	ug/L	20	20.7	70 - 133
1,2-Dichloroethene, Total	103	ug/L	40	41.4	78 - 125
1,2-Dichloropropane	107	ug/L	20	21.5	81 - 127
1,3-Dichlorobenzene	104	ug/L	20	20.8	81 - 118
1,3-Dichloropropane	108	ug/L	20	21.6	82 - 126
1,3-Dichloropropene, Total	89.1	ug/L	40	35.6	80 - 123
1,4-Dichlorobenzene	101	ug/L	20	20.2	81 - 116
2,2-Dichloropropane	90.4	ug/L	20	18.1	64 - 129
2-Butanone	105	ug/L	100	105	50 - 152
2-Chloroethylvinyl ether	65	ug/L	20	13.0	1 - 150
2-Hexanone	78.4	ug/L	100	78.4	65 - 154
4-Methyl-2-Pentanone(MIBK)	85.7	ug/L	100	85.7	71 - 146
Acetone	83.8	ug/L	100	83.8	40 - 151
Benzene	104	ug/L	20	20.8	80 - 124
Bromobenzene	102	ug/L	20	20.3	81 - 119
Bromochloromethane	110	ug/L	20	22.1	73 - 117
Bromodichloromethane	104	ug/L	20	20.8	79 - 126
Bromoform	87.2	ug/L	20	17.4	70 - 123
Bromomethane	85.5	ug/L	20	17.1	45 - 148
Carbon Disulfide	104	ug/L	20	20.7	57 - 131
Carbon Tetrachloride	119	ug/L	20	23.8	62 - 132
Chlorobenzene	107	ug/L	20	21.4	85 - 117
Chlorodibromomethane	108	ug/L	20	21.5	77 - 122
Chloroethane	88.5	ug/L	20	17.7	51 - 142
Chloroform	104	ug/L	20	20.8	78 - 122
Chloromethane	80.1	ug/L	20	16.0	38 - 156
Cyclohexane	125	ug/L	20	25.1	66 - 130
Dibromomethane	104	ug/L	20	20.8	81 - 125

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	63.3	ug/L	20	12.7	17 - 166
Diisopropyl ether	88.8	ug/L	20	17.8	74 - 131
Ethyl tert-butyl ether	87.1	ug/L	20	17.4	75 - 123
Ethylbenzene	114	ug/L	20	22.7	80 - 124
Freon 113	127	ug/L	20	25.3	50 - 130
Hexachlorobutadiene	99.4	ug/L	20	19.9	55 - 128
Isopropylbenzene	108	ug/L	20	21.6	73 - 129
Methyl acetate	91.4	ug/L	20	18.3	70 - 130
Methyl cyclohexane	127	ug/L	20	25.3	70 - 130
Methyl t-Butyl Ether	100	ug/L	20	20.0	69 - 115
Methylene Chloride	108	ug/L	20	21.6	76 - 121
Naphthalene	125	ug/L	20	25.0	56 - 134
Styrene	90	ug/L	20	18.0	79 - 123
Tetrachloroethene	114	ug/L	20	22.8	72 - 124
Toluene	123	ug/L	20	24.6	80 - 125
Total Xylenes	109	ug/L	60	65.6	79 - 125
Trichloroethene	100	ug/L	20	20.1	77 - 124
Trichlorofluoromethane	82.2	ug/L	20	16.4	38 - 123
Vinyl Acetate	84.9	ug/L	20	17.0	58 - 136
Vinyl Chloride	79.9	ug/L	20	16.0	27 - 138
cis-1,2-Dichloroethene	102	ug/L	20	20.4	78 - 125
cis-1,3-Dichloropropene	85.4	ug/L	20	17.1	81 - 121
mp-Xylene	116	ug/L	40	46.3	79 - 125
n-Butylbenzene	92.4	ug/L	20	18.5	71 - 130
n-Propylbenzene	97.9	ug/L	20	19.6	74 - 122
o-Chlorotoluene	104	ug/L	20	20.7	78 - 126
o-Xylene	96.4	ug/L	20	19.3	79 - 124
p-Chlorotoluene	109	ug/L	20	21.9	78 - 125
p-Isopropyltoluene	103	ug/L	20	20.7	72 - 123
sec-Butylbenzene	104	ug/L	20	20.9	72 - 127
tert-Amyl methyl ether	88.2	ug/L	20	17.6	75 - 121
tert-Butyl Alcohol	52.6	ug/L	100	52.6	17 - 168
tert-Butylbenzene	107	ug/L	20	21.4	72 - 124
trans-1,2-Dichloroethene	105	ug/L	20	21.0	71 - 122
trans-1,3-Dichloropropene	92.8	ug/L	20	18.6	78 - 126
1,2-Dichloroethane-d4 (S)	85.6	%			62 - 133
4-Bromofluorobenzene (S)	94.2	%			79 - 114
Dibromofluoromethane (S)	104	%			78 - 116
Toluene-d8 (S)	93.3	%			76 - 127

MATRIX SPIKE: 2722664 DUPLICATE: 2722665 ORIGINAL: 2308120021

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	22.5828	22.6954	113	113	78 - 121	.5	16
1,1,1-Trichloroethane	0	ug/L	20	25.6524	25.5554	128	128	66 - 130	.38	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.2063	20.3698	101	102	74 - 135	.81	16
1,1,2-Trichloroethane	0	ug/L	20	21.9015	20.946	110	105	82 - 126	4.46	15
1,1-Dichloroethane	3.35387	ug/L	20	28.5148	28.4575	126*	126*	78 - 124	.2	15
1,1-Dichloroethene	6.83787	ug/L	20	34.4995	33.1119	138*	131*	63 - 128	4.1	21
1,2,3-Trichlorobenzene	0	ug/L	20	17.4293	21.6524	87.1	108	61 - 126	21.6	36
1,2,3-Trichloropropane	0	ug/L	20	19.997	20.2116	100	101	75 - 132	1.07	19
1,2,4-Trichlorobenzene	0	ug/L	20	15.0422	16.8384	75.2	84.2	67 - 123	11.3	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.4316	20.3315	97.2	102	76 - 125	4.53	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	14.6849	16.07	73.4	80.4	59 - 133	9.01	26
1,2-Dibromoethane	0	ug/L	20	21.5537	21.7971	108	109	80 - 124	1.12	19
1,2-Dichlorobenzene	0	ug/L	20	20.0738	20.4761	100	102	82 - 118	1.98	15
1,2-Dichloroethane	2.13869	ug/L	20	24.865	24.6811	114	113	70 - 133	.74	19
1,2-Dichloroethene, Total	9.46176	ug/L	40	60.3962	59.1874	127*	124	78 - 125	2.02	40
1,2-Dichloropropane	0	ug/L	20	24.8385	24.4276	124	122	81 - 127	1.67	15
1,3-Dichlorobenzene	0	ug/L	20	20.7595	21.2414	104	106	81 - 118	2.29	16
1,3-Dichloropropane	0	ug/L	20	21.2884	20.851	106	104	82 - 126	2.08	15
1,3-Dichloropropene, Total	0	ug/L	40	35.4359	33.7023	88.6	84.3	80 - 123	5.01	16
1,4-Dichlorobenzene	0	ug/L	20	19.9713	20.3407	99.9	102	81 - 116	1.83	15
2,2-Dichloropropane	0	ug/L	20	22.1732	21.7653	111	109	64 - 129	1.86	18
2-Butanone	0	ug/L	100	110.673	111.716	111	112	50 - 152	.94	16
2-Chloroethylvinyl ether	0	ug/L	20	.06183	.08696	.31*	.43*	1 - 150	33.8	40
2-Hexanone	0	ug/L	100	73.851	78.462	73.9	78.5	65 - 154	6.05	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	83.4195	85.5421	83.4	85.5	71 - 146	2.51	16
Acetone	4.4254	ug/L	100	97.5598	96.0155	93.1	91.6	40 - 151	1.6	40
Benzene	5.46213	ug/L	20	30.2103	29.5817	124	121	80 - 124	2.1	26
Bromobenzene	0	ug/L	20	22.0378	21.7482	110	109	81 - 119	1.32	17
Bromochloromethane	0	ug/L	20	24.039	23.5297	120*	118*	73 - 117	2.14	19
Bromodichloromethane	0	ug/L	20	23.9437	23.1192	120	116	79 - 126	3.5	16
Bromoform	0	ug/L	20	17.3762	14.9289	86.9	74.6	70 - 123	15.2	16
Bromomethane	0	ug/L	20	19.3153	18.3555	96.6	91.8	45 - 148	5.1	26
Carbon Disulfide	0	ug/L	20	27.1878	25.0906	136*	125	57 - 131	8.02	28
Carbon Tetrachloride	0	ug/L	20	26.9757	26.3037	135*	132	62 - 132	2.52	17
Chlorobenzene	0	ug/L	20	21.3558	20.9303	107	105	85 - 117	2.01	15
Chlorodibromomethane	0	ug/L	20	19.6846	18.4222	98.4	92.1	77 - 122	6.63	15
Chloroethane	15.0515	ug/L	20	33.5131	31.7015	92.3	83.3	51 - 142	5.56	24
Chloroform	0	ug/L	20	23.0457	23.3447	115	117	78 - 122	1.29	16
Chloromethane	0	ug/L	20	23.8615	23.1058	119	116	38 - 156	3.22	27
Cyclohexane	0	ug/L	20	27.2426	28.1616	136*	141*	66 - 130	3.32	20
Dibromomethane	0	ug/L	20	22.7029	22.9363	114	115	81 - 125	1.02	16
Dichlorodifluoromethane	0	ug/L	20	19.3422	18.4258	96.7	92.1	17 - 166	4.85	24
Diisopropyl ether	0	ug/L	20	21.6358	21.3016	108	107	74 - 131	1.56	15
Ethyl tert-butyl ether	0	ug/L	20	19.2973	19.5254	96.5	97.6	75 - 123	1.18	16
Ethylbenzene	0	ug/L	20	22.2844	22.165	111	111	80 - 124	.54	19
Freon 113	0	ug/L	20	27.8152	27.7804	139*	139*	50 - 130	.13	26

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Hexachlorobutadiene	0	ug/L	20	21.0761	20.429	105	102	55 - 128	3.12	35
Isopropylbenzene	0	ug/L	20	22.9552	23.8007	115	119	73 - 129	3.62	18
Methyl acetate	0	ug/L	20	18.4225	18.4908	92.1	92.5	70 - 130	.37	18
Methyl cyclohexane	0	ug/L	20	24.1936	25.5528	121	128	70 - 130	5.46	18
Methyl t-Butyl Ether	0	ug/L	20	21.3332	22.0045	107	110	69 - 115	3.1	20
Methylene Chloride	0	ug/L	20	23.4612	23.3203	117	117	76 - 121	.6	17
Naphthalene	0	ug/L	20	22.1716	24.3044	111	122	56 - 134	9.18	40
Styrene	0	ug/L	20	19.887	19.5369	99.4	97.7	79 - 123	1.78	16
Tetrachloroethene	0	ug/L	20	21.6335	21.6799	108	108	72 - 124	.21	38
Toluene	.31301	ug/L	20	23.8965	23.8275	118	118	80 - 125	.29	20
Total Xylenes	0	ug/L	60	64.5922	64.7036	108	108	79 - 125	.17	35
Trichloroethene	28.7332	ug/L	20	49.5828	48.4286	104	98.5	77 - 124	2.36	18
Trichlorofluoromethane	0	ug/L	20	18.369	18.8281	91.8	94.1	38 - 123	2.47	23
Vinyl Acetate	0	ug/L	20	16.381	15.7257	81.9	78.6	58 - 136	4.08	17
Vinyl Chloride	5.10403	ug/L	20	25.0267	24.4302	99.6	96.6	27 - 138	2.41	40
cis-1,2-Dichloroethene	8.80111	ug/L	20	33.4114	32.6283	123	119	78 - 125	2.37	21
cis-1,3-Dichloropropene	0	ug/L	20	17.0586	16.1753	85.3	80.9*	81 - 121	5.32	16
mp-Xylene	0	ug/L	40	45.4843	45.6227	114	114	79 - 125	.3	21
n-Butylbenzene	0	ug/L	20	17.5867	18.9186	87.9	94.6	71 - 130	7.3	20
n-Propylbenzene	0	ug/L	20	20.1788	21.2352	101	106	74 - 122	5.1	20
o-Chlorotoluene	0	ug/L	20	22.5242	22.8187	113	114	78 - 126	1.3	17
o-Xylene	0	ug/L	20	19.1079	19.0809	95.5	95.4	79 - 124	.14	19
p-Chlorotoluene	0	ug/L	20	22.1205	22.4182	111	112	78 - 125	1.34	16
p-Isopropyltoluene	0	ug/L	20	19.1355	20.4963	95.7	102	72 - 123	6.87	17
sec-Butylbenzene	0	ug/L	20	19.747	21.1148	98.7	106	72 - 127	6.69	17
tert-Amyl methyl ether	0	ug/L	20	18.7901	19.1575	94	95.8	75 - 121	1.94	40
tert-Butyl Alcohol	0	ug/L	100	50.4013	54.6902	50.4	54.7	17 - 168	8.16	40
tert-Butylbenzene	0	ug/L	20	20.1461	21.433	101	107	72 - 124	6.19	17
trans-1,2-Dichloroethene	.66065	ug/L	20	26.9848	26.5591	132*	129*	71 - 122	1.59	22
trans-1,3-Dichloropropene	0	ug/L	20	18.3773	17.527	91.9	87.6	78 - 126	4.74	18
1,2-Dichloroethane-d4 (S)	102	%				102	93.3	62 - 133		
4-Bromofluorobenzene (S)	99.1	%				99.1	98.1	79 - 114		
Dibromofluoromethane (S)	108	%				108	106	78 - 116		
Toluene-d8 (S)	84.9	%				84.9	84.5	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46545 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308120026, 2308120027, 2308120028, 2308120031, 2308120032, 2308120033

METHOD BLANK: 2723836

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Chloroform	0.66J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	99.2	%	62 - 133
4-Bromofluorobenzene (S)	94.7	%	79 - 114
Dibromofluoromethane (S)	96.3	%	78 - 116
Toluene-d8 (S)	91.6	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2723837

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	109	ug/L	20	21.8	78 - 121
1,1,1-Trichloroethane	108	ug/L	20	21.6	66 - 130
1,1,2,2-Tetrachloroethane	88.1	ug/L	20	17.6	74 - 135
1,1,2-Trichloroethane	94.2	ug/L	20	18.8	82 - 126
1,1-Dichloroethane	112	ug/L	20	22.3	78 - 124
1,1-Dichloroethene	112	ug/L	20	22.4	63 - 128
1,2,3-Trichlorobenzene	69.9	ug/L	20	14.0	61 - 126
1,2,3-Trichloropropane	87.2	ug/L	20	17.4	75 - 132
1,2,4-Trichlorobenzene	90.7	ug/L	20	18.1	67 - 123
1,2,4-Trimethylbenzene	101	ug/L	20	20.3	76 - 125
1,2-Dibromo-3-chloropropane	72.8	ug/L	20	14.6	59 - 133
1,2-Dibromoethane	96.8	ug/L	20	19.4	80 - 124
1,2-Dichlorobenzene	100	ug/L	20	20.0	82 - 118
1,2-Dichloroethane	96	ug/L	20	19.2	70 - 133
1,2-Dichloroethene, Total	109	ug/L	40	43.8	78 - 125
1,2-Dichloropropane	108	ug/L	20	21.7	81 - 127
1,3-Dichlorobenzene	103	ug/L	20	20.7	81 - 118
1,3-Dichloropropane	101	ug/L	20	20.1	82 - 126
1,3-Dichloropropene, Total	104	ug/L	40	41.5	80 - 123
1,4-Dichlorobenzene	102	ug/L	20	20.3	81 - 116
2,2-Dichloropropane	109	ug/L	20	21.9	64 - 129
2-Butanone	85.7	ug/L	100	85.7	50 - 152
2-Chloroethylvinyl ether	71.2	ug/L	20	14.2	1 - 150
2-Hexanone	73.5	ug/L	100	73.5	65 - 154
4-Methyl-2-Pentanone(MIBK)	74.6	ug/L	100	74.6	71 - 146
Acetone	95.6	ug/L	100	95.6	40 - 151
Benzene	108	ug/L	20	21.6	80 - 124
Bromobenzene	108	ug/L	20	21.7	81 - 119
Bromochloromethane	107	ug/L	20	21.4	73 - 117
Bromodichloromethane	103	ug/L	20	20.6	79 - 126
Bromoform	88.7	ug/L	20	17.7	70 - 123
Bromomethane	58.1	ug/L	20	11.6	45 - 148
Carbon Disulfide	124	ug/L	20	24.8	57 - 131
Carbon Tetrachloride	109	ug/L	20	21.8	62 - 132
Chlorobenzene	101	ug/L	20	20.1	85 - 117
Chlorodibromomethane	97.7	ug/L	20	19.5	77 - 122
Chloroethane	76.4	ug/L	20	15.3	51 - 142
Chloroform	106	ug/L	20	21.2	78 - 122
Chloromethane	107	ug/L	20	21.5	38 - 156
Cyclohexane	126	ug/L	20	25.3	66 - 130
Dibromomethane	96.1	ug/L	20	19.2	81 - 125

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	108	ug/L	20	21.6	17 - 166
Diisopropyl ether	112	ug/L	20	22.4	74 - 131
Ethyl tert-butyl ether	95.8	ug/L	20	19.2	75 - 123
Ethylbenzene	108	ug/L	20	21.7	80 - 124
Freon 113	124	ug/L	20	24.8	50 - 130
Hexachlorobutadiene	110	ug/L	20	22.0	55 - 128
Isopropylbenzene	104	ug/L	20	20.7	73 - 129
Methyl acetate	83	ug/L	20	16.6	70 - 130
Methyl cyclohexane	143*	ug/L	20	28.6	70 - 130
Methyl t-Butyl Ether	102	ug/L	20	20.5	69 - 115
Methylene Chloride	115	ug/L	20	23.0	76 - 121
Naphthalene	55.2*	ug/L	20	11.0	56 - 134
Styrene	99.9	ug/L	20	20.0	79 - 123
Tetrachloroethene	101	ug/L	20	20.1	72 - 124
Toluene	109	ug/L	20	21.8	80 - 125
Total Xylenes	112	ug/L	60	66.9	79 - 125
Trichloroethene	103	ug/L	20	20.5	77 - 124
Trichlorofluoromethane	86.3	ug/L	20	17.3	38 - 123
Vinyl Acetate	86.2	ug/L	20	17.2	58 - 136
Vinyl Chloride	83.9	ug/L	20	16.8	27 - 138
cis-1,2-Dichloroethene	108	ug/L	20	21.5	78 - 125
cis-1,3-Dichloropropene	105	ug/L	20	21.0	81 - 121
mp-Xylene	112	ug/L	40	45.0	79 - 125
n-Butylbenzene	94.7	ug/L	20	18.9	71 - 130
n-Propylbenzene	102	ug/L	20	20.3	74 - 122
o-Chlorotoluene	101	ug/L	20	20.2	78 - 126
o-Xylene	110	ug/L	20	21.9	79 - 124
p-Chlorotoluene	114	ug/L	20	22.7	78 - 125
p-Isopropyltoluene	97.7	ug/L	20	19.5	72 - 123
sec-Butylbenzene	106	ug/L	20	21.1	72 - 127
tert-Amyl methyl ether	87.2	ug/L	20	17.4	75 - 121
tert-Butyl Alcohol	116	ug/L	100	116	17 - 168
tert-Butylbenzene	97.6	ug/L	20	19.5	72 - 124
trans-1,2-Dichloroethene	111	ug/L	20	22.3	71 - 122
trans-1,3-Dichloropropene	103	ug/L	20	20.5	78 - 126
1,2-Dichloroethane-d4 (S)	96.9	%			62 - 133
4-Bromofluorobenzene (S)	97	%			79 - 114
Dibromofluoromethane (S)	92.3	%			78 - 116
Toluene-d8 (S)	91	%			76 - 127

MATRIX SPIKE: 2724206 DUPLICATE: 2724207 ORIGINAL: 2308503009

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

1,2,4-Trimethylbenzene	0	ug/L	20	20.4325	19.5072	102	97.5	76 - 125	4.63	24
Benzene	0	ug/L	20	23.4077	21.9925	117	110	80 - 124	6.23	26
Ethylbenzene	0	ug/L	20	22.121	21.2713	111	106	80 - 124	3.92	19
Isopropylbenzene	0	ug/L	20	21.2757	20.0511	106	100	73 - 129	5.93	18
Methyl t-Butyl Ether	0	ug/L	20	21.4969	21.1572	107	106	69 - 115	1.59	20
Naphthalene	0	ug/L	20	10.7003	10.6974	53.5*	53.5*	56 - 134	.03	40
Toluene	0	ug/L	20	22.6819	21.6882	113	108	80 - 125	4.48	20
Total Xylenes	0	ug/L	60	67.9549	65.0011	113	108	79 - 125	4.44	35
1,2-Dichloroethane-d4 (S)	98.5	%				98.5	91.5	62 - 133		
4-Bromofluorobenzene (S)	97.4	%				97.4	95.3	79 - 114		
Dibromofluoromethane (S)	95.2	%				95.2	94.8	78 - 116		
Toluene-d8 (S)	91.1	%				91.1	91.5	76 - 127		

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WCPR/43307 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples: 2308120001, 2308120010, 2308120015, 2308120021

SAMPLE DUPLICATE: 2725811 ORIGINAL: 2308041001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	7.7	mg/L	10.735	32.9*	10

MATRIX SPIKE SAMPLE: 2725812 ORIGINAL: 2308041001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	7.7	mg/L	2.5	9.295	63.8*	90 - 110

SAMPLE DUPLICATE: 2725813 ORIGINAL: 2308138002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.631	mg/L	.694	9.51	10

MATRIX SPIKE SAMPLE: 2725814 ORIGINAL: 2308138002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.631	mg/L	2.5	3.217	103	90 - 110

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202791 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2308120001, 2308120010, 2308120015, 2308120021

METHOD BLANK: 2720603

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.13J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2720605

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	99.7	mg/L	20	19.9	90 - 110
Nitrate-N	98.8	mg/L	2.5	2.5	90 - 110
Nitrite-N	110	mg/L	.5	0.55	90 - 110
Sulfate	100	mg/L	20	20.1	90 - 110

MATRIX SPIKE: 2721440 DUPLICATE: 2721441 ORIGINAL: 2307587005

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Chloride	360.1	mg/L	100	447.65	451.55	87.6	91.5	80 - 120	.87	20

METHOD BLANK: 2721443

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.15J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE SAMPLE: 2721444 ORIGINAL: 2307631001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Nitrate-N	2.74	mg/L	5	7.8	101	80 - 120
Nitrite-N	0	mg/L	1	1.18	118	80 - 120

LABORATORY CONTROL SAMPLE: 2721446

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	99.4	mg/L	20	19.9	90 - 110
Nitrate-N	98	mg/L	2.5	2.5	90 - 110
Nitrite-N	110	mg/L	.5	0.55	90 - 110
Sulfate	99.5	mg/L	20	19.9	90 - 110

METHOD BLANK: 2721447

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.15J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

MATRIX SPIKE: 2721448 DUPLICATE: 2721449 ORIGINAL: 2307675002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrate-N	0	mg/L	5	5.36	5.44	107	109	80 - 120	1.48	20
Nitrite-N	0	mg/L	1	1.1	1.16	110	116	80 - 120	5.31	20

METHOD BLANK: 2721451

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.18J	mg/L	1.0

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

METHOD BLANK: 2721454

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.19J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202898 **Analysis Method:** S2320B-97

QC Batch Method: S2320B-97

Associated Lab Samples: 2308120001, 2308120010, 2308120015, 2308120021

METHOD BLANK: 2721997

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	5J	mg/L	5

SAMPLE DUPLICATE: 2722002 ORIGINAL: 2308177001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	5.34652	mg/L	5.7216	6.78	20

METHOD BLANK: 2722005

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2722006 ORIGINAL: 2308177002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	49.97243	mg/L	51.20739	2.44	20

METHOD BLANK: 2722009

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2722010 ORIGINAL: 2308177003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Alkalinity, Total	81.59942	mg/L	79.7591	2.28	20

METHOD BLANK: 2722013

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2722014 ORIGINAL: 2308177009

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	.74917	mg/L	.73946	1.3	20

METHOD BLANK: 2722017

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2722018 ORIGINAL: 2308202004

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	398.37857	mg/L	394.89267	.88	20

METHOD BLANK: 2722021

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2722022 ORIGINAL: 2308222008

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	7.39973	mg/L	7.2593	1.92	20

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2722025

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2722026 ORIGINAL: 2308223010

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	34.16056	mg/L	35.42498	3.63	20

METHOD BLANK: 2722029

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2722030 ORIGINAL: 2308246001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	240.22989	mg/L	235.00806	2.2	20

METHOD BLANK: 2722372

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	1J	mg/L	5

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202917 **Analysis Method:** S4500PE-99

QC Batch Method: S4500PE-99

Associated Lab Samples: 2308120001, 2308120010, 2308120015, 2308120021

METHOD BLANK: 2722239

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

MATRIX SPIKE: 2722241 DUPLICATE: 2722242 ORIGINAL: 2308120010

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	0	mg/L	.5	.4489	.4578	89.8*	91.6	90 - 110	1.96	10

METHOD BLANK: 2722243

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202939 **Analysis Method:** S5310B-00

QC Batch Method: 415.1/9060/5310B

Associated Lab Samples: 2308120001, 2308120010, 2308120015, 2308120021

METHOD BLANK: 2722430

Parameter	Blank Result	Units	Reporting Limit
Total Organic Carbon (TOC)	ND	mg/L	0.50

LABORATORY CONTROL SAMPLE: 2722431

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Organic Carbon (TOC)	96.2	mg/L	1	0.96	85 - 115

MATRIX SPIKE: 2722432 DUPLICATE: 2722433 ORIGINAL: 2308229002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	.583	mg/L	6	6.663	6.701	101	102	85 - 115	.57	20

MATRIX SPIKE: 2722434 DUPLICATE: 2722435 ORIGINAL: 2308222008

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	.782	mg/L	6	6.821	6.988	101	103	85 - 115	2.42	20

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202953 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2722628

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2722629

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2722630

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	102	mg/L	500	512	90 - 110

SAMPLE DUPLICATE: 2722633 ORIGINAL: 2307983001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	779	mg/L	782	.38	5

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202955 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2308120010

METHOD BLANK: 2722674

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2722676

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	97.5	mg/L	20	19.5	90 - 110
Nitrite-N	108	mg/L	.5	0.54	90 - 110
Nitrate-N	95.2	mg/L	2.5	2.4	90 - 110
Sulfate	97.6	mg/L	20	19.5	90 - 110

MATRIX SPIKE: 2724020 DUPLICATE: 2724021 ORIGINAL: 2308822003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrate-N	4.92	mg/L	5	9.82	9.8	98	97.6	80 - 120	.2	20

METHOD BLANK: 2724023

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE SAMPLE: 2724024 ORIGINAL: 2308723002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Nitrite-N	.2	mg/L	1	1.24	104	80 - 120
Nitrate-N	5.82	mg/L	5	10.74	98.4	80 - 120

LABORATORY CONTROL SAMPLE: 2724026

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	97	mg/L	20	19.4	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110
Nitrate-N	94.8	mg/L	2.5	2.4	90 - 110
Sulfate	97.3	mg/L	20	19.5	90 - 110

METHOD BLANK: 2724027

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

METHOD BLANK: 2724031

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE SAMPLE: 2724032 ORIGINAL: 2307008010

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Chloride	2.56	mg/L	40	43.92	103	80 - 120

LABORATORY CONTROL SAMPLE: 2724034

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	96.7	mg/L	20	19.3	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110
Nitrate-N	94.8	mg/L	2.5	2.4	90 - 110
Sulfate	97.6	mg/L	20	19.5	90 - 110

METHOD BLANK: 2724035

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

MATRIX SPIKE: 2724036 DUPLICATE: 2724037 ORIGINAL: 2308267001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrite-N	0	mg/L	1	1.16	1.14	116	114	80 - 120	1.74	20
Nitrate-N	1.24	mg/L	5	6.42	6.26	104	100	80 - 120	2.52	20

METHOD BLANK: 2724039

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrite-N	ND	mg/L	0.10

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203013 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2723401

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2723402

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2723403

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	98.2	mg/L	500	491	90 - 110

SAMPLE DUPLICATE: 2723404 ORIGINAL: 2307954002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	82	mg/L	78	5	5

SAMPLE DUPLICATE: 2723405 ORIGINAL: 2308023002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	36	mg/L	39	8*	5

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203014 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2723408

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2723409

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2723410

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	95.2	mg/L	500	476	90 - 110

SAMPLE DUPLICATE: 2723411 ORIGINAL: 2308120015

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	121	mg/L	125	3.25	5

SAMPLE DUPLICATE: 2723412 ORIGINAL: 2308177007

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	778	mg/L	774	.52	5

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203104 **Analysis Method:** D6919-09

QC Batch Method: D6919-09

Associated Lab Samples: 2308120001, 2308120010, 2308120015, 2308120021

LABORATORY CONTROL SAMPLE: 2724624

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Ammonia-N	93.4	mg/L	2.5	2.34	90 - 110

METHOD BLANK: 2724625

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	ND	mg/L	0.010

MATRIX SPIKE: 2724626 DUPLICATE: 2724627 ORIGINAL: 2308228001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Ammonia-N	.151	mg/L	10	9.434	9.367	92.8	92.2	75 - 125	.71	25

METHOD BLANK: 2724629

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	ND	mg/L	0.010

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QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203126 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2308120002, 2308120003, 2308120016, 2308120023, 2308120026, 2308120031

LABORATORY CONTROL SAMPLE: 2724897

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	105	ug/L	10	10.5	90 - 110

METHOD BLANK: 2724901

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

MATRIX SPIKE: 2724902 DUPLICATE: 2724903 ORIGINAL: 2309268001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	15.102	ug/L	5	20.243	19.91	103	96.2	90 - 110	1.66	20

METHOD BLANK: 2724905

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

QUALITY CONTROL DATA

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203647 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples:

METHOD BLANK: 2730848

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730850

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730852

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730854

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730856

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2721962	1	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 142 and the control limits were 50 to 130.				
2721962	2	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.				
2721962	3	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 135 and the control limits were 66 to 130.				
2723837	4	Lab Control Standard	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 55.2 and the control limits were 56 to 134.				
2723837	5	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 143 and the control limits were 70 to 130.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308120001	EB-040618-ZN			EPA 300.0	WETC/202791
2308120010	MRC-MW25A			EPA 300.0	WETC/202791
2308120015	MRC-MW12B			EPA 300.0	WETC/202791
2308120021	MRC-MW12A			EPA 300.0	WETC/202791
2308120001	EB-040618-ZN	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120003	EB-040618-TK	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120015	MRC-MW12B	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120021	MRC-MW12A	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120023	MRC-MW127B	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120026	MRC-MW127A	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120031	MRC-MW128A	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120033	MRC-MW12C	SW846 3015	MDIG/71163	SW846 6020A	META/61614
2308120021	MRC-MW12A	SW846 3015	MDIG/71163	SW846 6020A	META/61630
2308120001	EB-040618-ZN			SW846 8260B	VOMS/46507
2308120002	EB-040618-AZ			SW846 8260B	VOMS/46507
2308120003	EB-040618-TK			SW846 8260B	VOMS/46507
2308120004	EB-040618-AD			SW846 8260B	VOMS/46507
2308120005	TB-041018-1			SW846 8260B	VOMS/46507
2308120006	MRC-MW79B			SW846 8260B	VOMS/46507
2308120009	MRC-MW95B			SW846 8260B	VOMS/46507
2308120010	MRC-MW25A			SW846 8260B	VOMS/46507
2308120011	MRC-MW115A			SW846 8260B	VOMS/46507
2308120012	MRC-MW64A			SW846 8260B	VOMS/46507
2308120013	MRC-MW87A			SW846 8260B	VOMS/46507
2308120014	TB-041018-2			SW846 8260B	VOMS/46507
2308120015	MRC-MW12B			SW846 8260B	VOMS/46507
2308120016	MRC-MW117B			SW846 8260B	VOMS/46507
2308120017	MRC-MW114A			SW846 8260B	VOMS/46507
2308120018	TB-041018-3			SW846 8260B	VOMS/46507

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308120001	EB-040618-ZN			S2320B-97	WETC/202898
2308120010	MRC-MW25A			S2320B-97	WETC/202898
2308120015	MRC-MW12B			S2320B-97	WETC/202898
2308120021	MRC-MW12A			S2320B-97	WETC/202898
2308120001	EB-040618-ZN			S4500PE-99	WETC/202917
2308120010	MRC-MW25A			S4500PE-99	WETC/202917
2308120015	MRC-MW12B			S4500PE-99	WETC/202917
2308120021	MRC-MW12A			S4500PE-99	WETC/202917
2308120001	EB-040618-ZN	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2308120002	EB-040618-AZ	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2308120003	EB-040618-TK	SW846 3510C	EXTR/51738	8270 SIM	SVMS/30456
2308120001	EB-040618-ZN			S5310B-00	WETC/202939
2308120010	MRC-MW25A			S5310B-00	WETC/202939
2308120015	MRC-MW12B			S5310B-00	WETC/202939
2308120021	MRC-MW12A			S5310B-00	WETC/202939
2308120006	MRC-MW79B			SW846 8260B	VOMS/46524
2308120007	MRC-MW101B			SW846 8260B	VOMS/46524
2308120008	MRC-MW101A			SW846 8260B	VOMS/46524
2308120017	MRC-MW114A			SW846 8260B	VOMS/46524
2308120019	MRC-MW22B			SW846 8260B	VOMS/46524
2308120021	MRC-MW12A			SW846 8260B	VOMS/46524
2308120022	MRC-MW102A			SW846 8260B	VOMS/46524
2308120023	MRC-MW127B			SW846 8260B	VOMS/46524
2308120024	TB-041018-4			SW846 8260B	VOMS/46524
2308120025	MRC-MW17A			SW846 8260B	VOMS/46524
2308120026	MRC-MW127A			SW846 8260B	VOMS/46524
2308120027	MRC-MW109B			SW846 8260B	VOMS/46524
2308120029	MRC-MW50A			SW846 8260B	VOMS/46524

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308120030	TB-041018-5			SW846 8260B	VOMS/46524
2308120031	MRC-MW128A			SW846 8260B	VOMS/46524
2308120034	TB-041018-6			SW846 8260B	VOMS/46524
2308120001	EB-040618-ZN			S2540C-11	WETC/202953
2308120010	MRC-MW25A			EPA 300.0	WETC/202955
2308120001	EB-040618-ZN	SW846 3015	MDIG/71188	SW846 6010C	META/61665
2308120015	MRC-MW12B	SW846 3015	MDIG/71188	SW846 6010C	META/61665
2308120021	MRC-MW12A	SW846 3015	MDIG/71188	SW846 6010C	META/61665
2308120001	EB-040618-ZN	SW846 3015	MDIG/71188	SW846 6010C	META/61685
2308120015	MRC-MW12B	SW846 3015	MDIG/71188	SW846 6010C	META/61685
2308120021	MRC-MW12A	SW846 3015	MDIG/71188	SW846 6010C	META/61685
2308120006	MRC-MW79B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120007	MRC-MW101B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120008	MRC-MW101A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120010	MRC-MW25A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120015	MRC-MW12B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120016	MRC-MW117B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120017	MRC-MW114A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120019	MRC-MW22B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120020	MRC-MW15A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30471
2308120006	MRC-MW79B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30492
2308120015	MRC-MW12B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30492
2308120019	MRC-MW22B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30492
2308120020	MRC-MW15A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30492
2308120021	MRC-MW12A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30492
2308120023	MRC-MW127B	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30492
2308120025	MRC-MW17A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30493
2308120026	MRC-MW127A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30493

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308120031	MRC-MW128A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30493
2308120032	MRC-MW10A	SW846 3510C	EXTR/51758	8270 SIM	SVMS/30493
2308120010	MRC-MW25A			S2540C-11	WETC/203013
2308120015	MRC-MW12B			S2540C-11	WETC/203014
2308120021	MRC-MW12A			S2540C-11	WETC/203014
2308120026	MRC-MW127A			SW846 8260B	VOMS/46545
2308120027	MRC-MW109B			SW846 8260B	VOMS/46545
2308120028	MRC-MW27C			SW846 8260B	VOMS/46545
2308120031	MRC-MW128A			SW846 8260B	VOMS/46545
2308120032	MRC-MW10A			SW846 8260B	VOMS/46545
2308120033	MRC-MW12C			SW846 8260B	VOMS/46545
2308120001	EB-040618-ZN			D6919-09	WETC/203104
2308120010	MRC-MW25A			D6919-09	WETC/203104
2308120015	MRC-MW12B			D6919-09	WETC/203104
2308120021	MRC-MW12A			D6919-09	WETC/203104
2308120033	MRC-MW12C	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308120002	EB-040618-AZ			EPA 218.6	WETC/203126
2308120003	EB-040618-TK			EPA 218.6	WETC/203126
2308120016	MRC-MW117B			EPA 218.6	WETC/203126
2308120023	MRC-MW127B			EPA 218.6	WETC/203126
2308120026	MRC-MW127A			EPA 218.6	WETC/203126
2308120031	MRC-MW128A			EPA 218.6	WETC/203126
2308120001	EB-040618-ZN			RSK 175	SVGC/48888
2308120010	MRC-MW25A			RSK 175	SVGC/48888

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308120 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308120015	MRC-MW12B			RSK 175	SVGC/48888
2308120021	MRC-MW12A			RSK 175	SVGC/48888
2308120001	EB-040618-ZN	EPA 365.1	WCPR/43307	EPA 365.1	WETC/203647
2308120010	MRC-MW25A	EPA 365.1	WCPR/43307	EPA 365.1	WETC/203647
2308120015	MRC-MW12B	EPA 365.1	WCPR/43307	EPA 365.1	WETC/203647
2308120021	MRC-MW12A	EPA 365.1	WCPR/43307	EPA 365.1	WETC/203647
2308120010	MRC-MW25A	SW846 3015	MDIG/71289	SW846 6010C	META/61733
2308120010	MRC-MW25A	SW846 3015	MDIG/71289	SW846 6010C	META/61750
2308120001	EB-040618-ZN	SW846 7470A	MDIG/71296	SW846 7470A	META/61725
2308120003	EB-040618-TK	SW846 7470A	MDIG/71320	SW846 7470A	META/61741
2308120015	MRC-MW12B	SW846 7470A	MDIG/71320	SW846 7470A	META/61741
2308120021	MRC-MW12A	SW846 7470A	MDIG/71320	SW846 7470A	META/61741
2308120023	MRC-MW127B	SW846 7470A	MDIG/71320	SW846 7470A	META/61741
2308120026	MRC-MW127A	SW846 7470A	MDIG/71320	SW846 7470A	META/61741
2308120031	MRC-MW128A	SW846 7470A	MDIG/71320	SW846 7470A	META/61741
2308120033	MRC-MW12C	SW846 7470A	MDIG/71320	SW846 7470A	META/61741

Monday, April 30, 2018 5:30:02 PM
Page 171 of 200
ALS

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

23081120

Co. Name: AECOM

Contact (Report to): Ravi Danera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Danera PO#95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] Y ravi.danera@aecom.com
Fax? [ ] Y No:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A)	Hex chromium (3856)	RCRA Hazdays (6010C/7470A)	MEE (RSK 175)	MNA (SO4, NO3, TDS, Alkalinity)	Alkalinity	Ammonia-N (Calc.)	TOC (SM5310B)
						Enter Number of Containers Per Analysis									
1 EB-040618-2N	equip. blank	4-6-18	1500	G	WQ	2	2	1			2	1	1	1	2
2 EB-040618-A2	equip. blank	4-6-18	1400	G	WQ	2	2		1						
3 EB-040618-TK	equip. blank	4-6-18	1300	G	WQ	2	2	1	1	2					
4 EB-040618-AD	equip. blank	4-6-18	1200	G	WQ	2									
5 TB-041018-1	trip blank	NA	NA	G	WQ	2									
6 MRC-MW79B		4-9-18	1700	G	GW	2	2								
7 MRC-MW101B		4-9-18	1540	G	GW	2	2								
8 MRC-MW101A	rain day	4-9-18	1345	G	GW	2	1								

	Container Type	CG	AG	P	P	AG	CG	P	P	P	AG
	Container Size	40mL	1L	250	250	1L	40mL	500mL	250	250	40mL
	Preservative	HCl	—	H_2SO_4	CH_3COOH	—	HCl	—	—	H_2SO_4	HCl

Correct containers? Y N
Correct sample volume? Y N
Correct preservation? Y N
Headspace/Volatiles? Y N
Circle appropriate Y or N.
Custody seals Present? Y N
(if present) Seals intact? Y N
Received on ice? Y N
COC/Labels complete/accurate? Y N
Container in good condition? Y N

Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers: 2 of 5
Notes: Bottle types written by DS/ALS

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email data to naum.tauntzis@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AECOM	4-10-18	1545	2	4/10/18	1545
3	4/10	1754	4		1754
5		2200	6	4/10	2200
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
EDDs Required? [X] If yes, format type: EQuIS & CSV-Enter PWSID No.
DOD Criteria Required?
SDWA Forms? yes yes yes
State Samples Collected In? MD NJ NY PA
Other

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
** Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
*** Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 5

Courier:

Tracking #:

8 COC#20

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? [ ] -Y No:

***Container Type	CG	AG	P	P	AG	CG	P	P	P	AG					
***Container Size	40mL	1L	250	250	1L	40mL	500mL	250	250	40mL					
*** Preservative	HCl	—	HNO_3	CrG Sulfate	—	HCl	—	—	H_2SO_4	HCl					

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A/7470)	Hex. Chromium (208.6)	PCB Homologs (680/8260C)	MEE (Csk 175)	MNA (Cl, NO_2, NO_3, SO_4, TDS, ortho-phos)	Alkalinity	Ammonia-N (NH_3-N)	TOC (SS310B)
1	MRC-MW95A		4-9-18	1722	G	GW	2									
2	MRC-MW25A		4-9-18	1356	G	GW	2	2				2	1	1	1	2
3	MRC-MW115A		4-10-18	0949	G	GW	2									
4	MRC-MW64A		4-9-18	1630	G	GW	2									
5	MRC-MW87A		4-9-18	0941	G	GW	2									
6	TB-041018-2	trip blank	NA	NA	G	WQ	2									
7	MRC-MW12B		4-9-18	1205	G	GW	2	2	1			2	1	1	1	2
8	MRC-MW117B		4-9-18	1450	G	GW	2	2		1						

Receipt Information (completed by Sample Receiving)

Performed by: [signature]

Cooler Temp: 2°C

Therm. ID: 318

No. of Coolers: 2 of 5

Notes: Bottle Types written in by JASHALS 4/11/18

Sample	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	N	N	N	N	
3	Y	Y	Y	Y	
4	Y	Y	Y	Y	
5	Y	Y	Y	Y	
6	Y	Y	Y	Y	
7	Y	Y	Y	Y	
8	Y	Y	Y	Y	

Custody seals Present? (if present) Seals intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): Hollis Brown

Project Comments: Please email data to holly.brown@aecom.com & naoum.tavantzis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] AECOM	4-10-18	1545	2	[signature]	4/10/18	1545
3	[signature]	4/10/18	1754	4	[signature]		1800
5	[signature]		2200	6	[signature]	4/10	2200
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ___ SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ] State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQUIS & CSV Other

Enter PWS ID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

COC#20

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

Co. Name: AECOM
Contact (Report to): Raci Damera & Holly Brown Phone: 301-674-3999
Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Raci Damera PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] Y raci.damera@aecom.com
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A/7470A)	RCB Hardness (Calculation)	MEE (RSK 175)	ONNA (300.0, 353.2, 9056A)	Alkalinity (310.2)	Ammonia-N (350.1)	TOC (5310B)	Hex Chromium (218.6)
1 MRC-MW14A		4-9-18	0850	G	GW	2	2		2						
2 TB-041018-3	trip blank	NA	NA	G	WQ	2									
3 MRC-MW22B		4-9-18	1120	G	GW	2	2								
4 MRC-MW15A		4-9-18	1505	G	GW		2								
5 MRC-MW2A		4-9-18	0940	G	GW	2	2	1		2	1	1	1	2	
6 MRC-MW102A		4-9-18	1020	G	GW	2									
7 MRC-MW27B		4-10-18	0940	G	GW	2	2	1	2						1
8 TB-041018-4		NA	NA	G	WQ	2									

Enter Number of Containers Per Analysis

	Container Type	Container Size	Preservative
1	CG	40mL	HCl
2	AG	1L	-
3	P	250mL	HNO3
4	AG	1L	-
5	CG	40mL	HCl
6	P	500mL	-
7	P	250mL	-
8	P	250mL	H2SO4
9	AG	40mL	HCl
10	P	250	NaOH/ZnAc

Receipt Information (completed by Sample Receiving)
Received by: JAS
Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers: 2 of 5
Notes: BOTTLE TYPES written by JAS/ALS 4/11/18

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	N	N	N	N	
3	Y	Y	Y	Y	
4	N	N	N	N	
5	Y	Y	Y	Y	
6	N	N	N	N	
7	Y	Y	Y	Y	
8	N	N	N	N	

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1			Y	Y	
2	N	N	N	N	N
3			Y	Y	
4	N	N	N	N	N
5			Y	Y	
6	N	N	N	N	N
7			Y	Y	
8	N	N	N	N	N

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email holly.brown@aecom.com & maun.tavares@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AECOM	4-10-18	1545	2	4/10/18	1545
3	4/10/18	1754	4		1754
5		2200	6	4/10	2200
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full
SDWA Forms?: yes [ ] yes [ ] yes [ ]
State Samples Collected In?: MD [ ] NJ [ ] NY [ ] PA [ ]
EDDs Required? [X] If yes, format type: EQuIS & CSV for PWSID No
Other
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oi=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2015

Monday, April 30, 2018 5:30:02 PM
Page 173 of 200
ALS

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
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F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

8 CC/C# 20

Co. Name: AECOM
Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199
Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

***Container Type	CG	AG	P	AG						P					
***Container Size	40mL	1L	250	1L						250mL					
*** Preservative	HCl	—	HNO3	—						Cr6 Buffer					

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A/7470)	PCB Homologs (680/8260C)	MEF (RSK175)	MNA (Cl, NO3, NO2, SO4, TDS, orthophos)	Alkalinity	Ammonia-N (NH3-N)	TOC (5531OB)	Hexavalent Chromium (218.6)
1	MRC-MW17A		4-10-18	1110	G	GW	2	2								
2	MRC-MW127A	(MRC-MW127A)	4-10-18	1000	G	GW	2	2	1	2						1
3	MRC-MW109B		4-10-18	1300	G	GW	2									
4	MRC-MW27C		4-10-18	1228	G	GW	2									
5	MRC-MW50A		4-10-18	0900	G	GW	2									
6	TB-041018-5	trip blank	NA	NA	G	GW	2									
7	MRC-MW128A		4-10-18	1205	G	GW	2	2	1	2						1
8	MRC-MW10A		4-10-18	0940	G	GW	2	2								

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: [signature]
Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers: 2 of 5
Notes: BOTTLE TYPES WRITTEN BY JAS/ALS 4/11/18

Sample Description/Location	Sample Date	Military Time	*G or C	**Matrix	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1 MRC-MW17A	4-10-18	1110	G	GW	Y	Y	Y	Y	
2 MRC-MW127A	4-10-18	1000	G	GW	Y	Y	Y	Y	
3 MRC-MW109B	4-10-18	1300	G	GW	Y	Y	Y	Y	
4 MRC-MW27C	4-10-18	1228	G	GW	Y	Y	Y	Y	
5 MRC-MW50A	4-10-18	0900	G	GW	Y	Y	Y	Y	
6 TB-041018-5	NA	NA	G	GW	Y	Y	Y	Y	
7 MRC-MW128A	4-10-18	1205	G	GW	Y	Y	Y	Y	
8 MRC-MW10A	4-10-18	0940	G	GW	Y	Y	Y	Y	

Custody seals Present? (If present) Seals-intact? Received on Ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): Holly Brown

Project Comments: Also email naoum.tavantzis@aecom.com & holly.brown@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] / AECOM	4-10-18	1545	2	[signature]	4/10/18	1545
3	[signature]	4/10	1754	4	[signature]		1800
5	[signature]		2200	6	[signature]	4/10	2200
7				8			
9				10			

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: Other
EQuIS & CSV Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

820176

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] Y ravi.damera@aecom.com

Fax? [ ] Y No.:

***Container Type	CG	AG	P							
***Container Size	40mL	1L	250							
***Preservative	HCl	-	HNO_3							

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A) 7470								Enter Number of Containers Per Analysis
1 MRC-MW12C		4-10-18	1305	G	GW	2	2	1								
2 TB-041018-6	trip blank	NA	NA	G	WP	2										
3																
4																
5																
6																
7																
8																

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 2°C

Therm. ID: 318

No. of Cooliers: 1 of 1

Notes: BOTTLE TYPES WRITTEN BY JAS/ALS 4/10/18

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	Y N	Y N	Y N	Y N	
1	Y	Y	Y	Y	Y
2	Y	Y	N	N	N
3					
4					
5					
6					
7					
8					

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
	Y N	Y N	Y N	Y N	Y N
	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Holly Brown

Project Comments: Please email data to holly.brown@aecom.com & noam.tavitzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] / AECOM	4-10-18	1545	2 [illegible]	4/10/18	1545
3 [illegible]	4/10	1754	4 [illegible]		[illegible]
5		2200	6 [illegible]	4/10	2200
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS & CSV

Other

Other PWSID No

EDD Criteria Required?

ALS FIELD SERVICES

[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO_3, NaOH, etc.

Rev 01-2013

April 27, 2018 Service Request No:R1803358

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2308120

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 17, 2018
For your reference, these analyses have been assigned our service request number **R1803358.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2308120
Sample Matrix: Water

Service Request: R1803358
Date Received: 04/17/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Five water samples were received for analysis at ALS Environmental on 04/17/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/24/2018, 04/26/18: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Method 680, One or more samples were received past the recommended holding time. The customer was notified when the discrepancy was found and instructed the laboratory to proceed with processing. The analysis was performed as soon as possible after receipt by the laboratory. The data is flagged to indicate the holding time violation.

Approved by _____ Date 04/27/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2308120 017			Lab ID: R1803358-002			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0070		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.019		0.00059	0.0050	ug/L	680
Total PCBs as Sum of Homologs	0.026			0.025	ug/L	680

CLIENT ID: 2308120 023			Lab ID: R1803358-003			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0050		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.0035	J	0.00059	0.0050	ug/L	680

CLIENT ID: 2308120 026			Lab ID: R1803358-004			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.016		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.017		0.00059	0.0050	ug/L	680
Pentachlorobiphenyls, Total	0.012		0.0043	0.010	ug/L	680
Total PCBs as Sum of Homologs	0.044			0.025	ug/L	680

CLIENT ID: 2308120 031			Lab ID: R1803358-005			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.031		0.0016	0.0050	ug/L	680
Hexachlorobiphenyls, Total	0.012		0.0047	0.010	ug/L	680
Monochlorobiphenyls, Total	0.033		0.00059	0.0050	ug/L	680
Pentachlorobiphenyls, Total	0.16		0.0043	0.010	ug/L	680
Tetrachlorobiphenyls, Total	0.014		0.0023	0.010	ug/L	680
Trichlorobiphenyls, Total	0.019		0.0022	0.0050	ug/L	680
Total PCBs as Sum of Homologs	0.27			0.025	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803358-001	2308120 003	4/6/2018	1300
R1803358-002	2308120 017	4/9/2018	0830
R1803358-003	2308120 023	4/10/2018	0900
R1803358-004	2308120 026	4/10/2018	1000
R1803358-005	2308120 031	4/10/2018	1205

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2308120

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/24/2018 Approved By:

Email? [ ] -Y

Fax? [ ] -Y No.:

Container Type	AN
Container Size	1 L
Preservative	None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.	Sample/COC Comments
			Enter Number of Containers Per Sample or Field Results Below.				
1 2308120 003	4/6/18	1300	G	WT	2	*	
2 2308120 017	4/9/18	0830	G	WT	2	*	Sub to ALS Rochester
3 2308120 023	4/10/18	0900	G	WT	2	*	
4 2308120 026	4/10/18	1000	G	WT	2	*	
5 2308120 031	4/10/18	1205	G	WT	2	*	
6							
7							
8							
9							
10							

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ALS Field Services: [ ] Pickup [ ] Labor
[ ] Composite_Sampling [ ] Rental_Equipment
[ ] Other:

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] ALS	4/10/18	1710	2 [illegible]	4/11/18	0920
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ]

PWSID #

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- EQUIS EDD

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wa

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

R1803358 5

ALS Environmental
UR115: 2308120

Cooler Receipt and Preservation Check Form

R1803358 5
ALS Environmental
UR116: 2308120

Project/Client ALS - MDT Folder Number

Cooler received on 4/17/18 by: @ COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate? ALS/ROC	(CLIENT)
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/17/18 Time: 0927 ID: (IR#7) IR#9 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	1.8	2.0	1.9	1.7			
Correction Factor (°C)	—	—	—	—			
Corrected Temp (°C)	1.8	2.0	1.9	1.7			
Temp from:Type of bottle	—	—	—	—			
Within 0-6°C?	(Y) N	(Y) N	(Y) N	(Y) N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: Rack by @ on 4/17/18 at 0930
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 4/17/18 Time: 1251 by: @

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: MDT
Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
(HTR)	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: @
PC Secondary Review: LMS 4/18/18 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

\# Spike was diluted out

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client: ALS Environmental - US
Project: UR115: 2308120

Service Request: R1803358

Sample Name: 2308120-003
Lab Code: R1803358-001
Sample Matrix: Water

Date Collected: 04/6/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308120-017
Lab Code: R1803358-002
Sample Matrix: Water

Date Collected: 04/9/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308120-023
Lab Code: R1803358-003
Sample Matrix: Water

Date Collected: 04/10/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308120-026
Lab Code: R1803358-004
Sample Matrix: Water

Date Collected: 04/10/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308120-031
Lab Code: R1803358-005
Sample Matrix: Water

Date Collected: 04/10/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-C
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
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Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	ALS Environmental - US	**Service Request:**	R1803358
Project:	UR115: 2308120	**Date Collected:**	04/06/18 13:00
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308120 003	**Units:**	ug/L
Lab Code:	R1803358-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/24/18 15:59	4/17/18	*
Dichlorobiphenyls, Total	ND U	0.0047	0.0016	1	04/24/18 15:59	4/17/18	*
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/24/18 15:59	4/17/18	*
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/24/18 15:59	4/17/18	*
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/24/18 15:59	4/17/18	*
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/24/18 15:59	4/17/18	*
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/24/18 15:59	4/17/18	*
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/24/18 15:59	4/17/18	*
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/24/18 15:59	4/17/18	*
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/24/18 15:59	4/17/18	*
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/24/18 15:59	4/17/18	*

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	85	58 - 125	04/24/18 15:59	
4,4'-DDT	100	37 - 166	04/24/18 15:59	

Client:	ALS Environmental - US	**Service Request:**	R1803358
Project:	UR115: 2308120	**Date Collected:**	04/09/18 08:30
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308120 017	**Units:**	ug/L
Lab Code:	R1803358-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method:	680
Prep Method:	EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/26/18 16:52	4/17/18	*
Dichlorobiphenyls, Total	**0.0070**	0.0050	0.0016	1	04/26/18 16:52	4/17/18	*
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/26/18 16:52	4/17/18	*
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/26/18 16:52	4/17/18	*
Monochlorobiphenyls, Total	**0.019**	0.0050	0.00059	1	04/26/18 16:52	4/17/18	*
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/26/18 16:52	4/17/18	*
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/26/18 16:52	4/17/18	*
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/26/18 16:52	4/17/18	*
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/26/18 16:52	4/17/18	*
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/26/18 16:52	4/17/18	*
Total PCBs as Sum of Homologs	**0.026**	0.025	-	1	04/26/18 16:52	4/17/18	*

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	82	58 - 125	04/26/18 16:52	
4,4'-DDT	93	37 - 166	04/26/18 16:52	

Client:	ALS Environmental - US	**Service Request:**	R1803358
Project:	UR115: 2308120	**Date Collected:**	04/10/18 09:00
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308120 023	**Units:**	ug/L
Lab Code:	R1803358-003	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 16:57	4/17/18	
Dichlorobiphenyls, Total	**0.0050**	0.0050	0.0016	1	04/24/18 16:57	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 16:57	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 16:57	4/17/18	
Monochlorobiphenyls, Total	**0.0035 J**	0.0050	0.00059	1	04/24/18 16:57	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 16:57	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 16:57	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 16:57	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 16:57	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 16:57	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 16:57	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	86	58 - 125	04/24/18 16:57	
4,4'-DDT	117	37 - 166	04/24/18 16:57	

Client:	ALS Environmental - US	**Service Request:**	R1803358
Project:	UR115: 2308120	**Date Collected:**	04/10/18 10:00
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308120 026	**Units:**	ug/L
Lab Code:	R1803358-004	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 17:26	4/17/18	
Dichlorobiphenyls, Total	**0.016**	0.0050	0.0016	1	04/24/18 17:26	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 17:26	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 17:26	4/17/18	
Monochlorobiphenyls, Total	**0.017**	0.0050	0.00059	1	04/24/18 17:26	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 17:26	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 17:26	4/17/18	
Pentachlorobiphenyls, Total	**0.012**	0.010	0.0048	1	04/24/18 17:26	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 17:26	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 17:26	4/17/18	
Total PCBs as Sum of Homologs	**0.044**	0.025	-	1	04/24/18 17:26	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	87	58 - 125	04/24/18 17:26	
4,4'-DDT	104	37 - 166	04/24/18 17:26	

Client:	ALS Environmental - US	**Service Request:**	R1803358
Project:	UR115: 2308120	**Date Collected:**	04/10/18 12:05
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308120 031	**Units:**	ug/L
Lab Code:	R1803358-005	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 17:55	4/17/18	
Dichlorobiphenyls, Total	**0.031**	0.0050	0.0016	1	04/24/18 17:55	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 17:55	4/17/18	
Hexachlorobiphenyls, Total	**0.012**	0.010	0.0047	1	04/24/18 17:55	4/17/18	
Monochlorobiphenyls, Total	**0.033**	0.0050	0.00059	1	04/24/18 17:55	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 17:55	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 17:55	4/17/18	
Pentachlorobiphenyls, Total	**0.16**	0.010	0.0048	1	04/24/18 17:55	4/17/18	
Tetrachlorobiphenyls, Total	**0.014**	0.010	0.0023	1	04/24/18 17:55	4/17/18	
Trichlorobiphenyls, Total	**0.019**	0.0050	0.0022	1	04/24/18 17:55	4/17/18	
Total PCBs as Sum of Homologs	**0.27**	0.025	-	1	04/24/18 17:55	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	88	58 - 125	04/24/18 17:55	
4,4'-DDT	121	37 - 166	04/24/18 17:55	

QC Summary Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Client: ALS Environmental - US **Service Request:** R1803358

Project: UR115: 2308120

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680

Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2308120 003	R1803358-001	100	85
2308120 017	R1803358-002	93	82
2308120 023	R1803358-003	117	86
2308120 026	R1803358-004	104	87
2308120 031	R1803358-005	121	88
Method Blank	RQ1803502-01	111	86
Lab Control Sample	RQ1803502-02	106	86
Duplicate Lab Control Sample	RQ1803502-03	106	88

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803358
Project:	UR115: 2308120	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803502-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 15:28	4/17/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 15:28	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 15:28	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 15:28	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/24/18 15:28	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 15:28	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 15:28	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 15:28	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 15:28	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 15:28	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 15:28	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	86	58 - 125	04/24/18 15:28	
4,4'-DDT	111	37 - 166	04/24/18 15:28	

Client: ALS Environmental - US
Project: UR115: 2308120
Sample Matrix: Water

Service Request: R1803358
Date Analyzed: 04/24/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803502-02			Duplicate Lab Control Sample RQ1803502-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.468	1.25	37	0.509	1.25	41	29-162	8	30
Dichlorobiphenyls, Total	680	0.186	0.250	74	0.190	0.250	76	37-139	2	30
Heptachlorobiphenyls, Total	680	0.484	0.750	65	0.492	0.750	66	53-120	2	30
Hexachlorobiphenyls, Total	680	0.373	0.500	75	0.368	0.500	74	11-160	1	30
Monochlorobiphenyls, Total	680	0.159	0.250	63	0.172	0.250	69	34-137	8	30
Octachlorobiphenyls, Total	680	0.439	0.750	59	0.445	0.750	59	57-125	1	30
Pentachlorobiphenyls, Total	680	0.418	0.500	84	0.414	0.500	83	10-180	<1	30
Tetrachlorobiphenyls, Total	680	0.360	0.500	72	0.384	0.500	77	14-153	6	30
Trichlorobiphenyls, Total	680	0.180	0.250	72	0.187	0.250	75	10-173	4	30

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 30, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2308280**
Purchase Order:	**95840ACM**	Workorder ID:	**2018-MIDDLE RIVER COMPLEX**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, April 11, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

SAMPLE SUMMARY

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2308280001	MRC-MW128B	Water	4/11/2018 14:15	4/11/2018 23:30	Ms. Holly Brown
2308280002	FB-041018-ZN	Water	4/10/2018 17:00	4/11/2018 23:30	Ms. Holly Brown
2308280003	TB-041118-1	Water	4/11/2018 23:30	4/11/2018 23:30	Ms. Holly Brown
2308280004	MRC-MW118A	Water	4/10/2018 15:00	4/11/2018 23:30	Ms. Holly Brown
2308280005	MRC-MW118B	Water	4/10/2018 17:00	4/11/2018 23:30	Ms. Holly Brown
2308280006	MRC-MW27B	Water	4/10/2018 16:15	4/11/2018 23:30	Ms. Holly Brown
2308280007	TB-041118-2	Water	4/11/2018 23:30	4/11/2018 23:30	Ms. Holly Brown
2308280008	MRC-MW32A	Water	4/10/2018 17:35	4/11/2018 23:30	Ms. Holly Brown
2308280009	MRC-MW33A	Water	4/10/2018 16:30	4/11/2018 23:30	Ms. Holly Brown
2308280010	MRC-MW109A	Water	4/10/2018 17:40	4/11/2018 23:30	Ms. Holly Brown
2308280011	MRC-MW27A	Water	4/10/2018 14:25	4/11/2018 23:30	Ms. Holly Brown
2308280012	MRC-MW13A	Water	4/10/2018 15:15	4/11/2018 23:30	Ms. Holly Brown
2308280013	MRC-MW122A	Water	4/10/2018 17:20	4/11/2018 23:30	Ms. Holly Brown
2308280014	MRC-SWMW-5I	Water	4/11/2018 09:25	4/11/2018 23:30	Ms. Holly Brown
2308280015	MRC-SWMW-5I-D	Water	4/11/2018 09:30	4/11/2018 23:30	Ms. Holly Brown
2308280016	TB-041118-3	Water	4/11/2018 23:30	4/11/2018 23:30	Ms. Holly Brown
2308280017	MRC-MW131B	Water	4/11/2018 09:45	4/11/2018 23:30	Ms. Holly Brown
2308280018	MRC-MW131B-D	Water	4/11/2018 09:55	4/11/2018 23:30	Ms. Holly Brown
2308280019	MRC-MW129A	Water	4/11/2018 10:00	4/11/2018 23:30	Ms. Holly Brown
2308280020	TB-041118-4	Water	4/11/2018 23:30	4/11/2018 23:30	Ms. Holly Brown
2308280021	MRC-MW129B	Water	4/11/2018 12:10	4/11/2018 23:30	Ms. Holly Brown
2308280022	MRC-MW100A	Water	4/11/2018 09:13	4/11/2018 23:30	Ms. Holly Brown
2308280023	MRC-MW100B	Water	4/11/2018 11:09	4/11/2018 23:30	Ms. Holly Brown
2308280024	MRC-MW34B	Water	4/11/2018 12:15	4/11/2018 23:30	Ms. Holly Brown
2308280025	TB-041118-5	Water	4/11/2018 23:30	4/11/2018 23:30	Ms. Holly Brown

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Workorder Comments

Please see attached subcontracting report from ALS Rochester. VNB 4/30/18

Sample Comments

Lab ID: 2308280022 **Sample ID:** MRC-MW100A **Sample Type:** SAMPLE

A positive residual chlorine result was detected in the preservation check for the volatile organics analysis of this sample. This may be due to the presence of residual chlorine or another oxidizing agent.

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280001** Date Collected: 4/11/2018 14:15 Matrix: Water

Sample ID: **MRC-MW128B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 02:52	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 02:52	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 02:52	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
1,1-Dichloroethane	0.72J	J	ug/L	1.0	0.28	SW846 8260B		4/19/18 02:52	CJG	B
1,1-Dichloroethene	0.36J	J	ug/L	1.0	0.29	SW846 8260B		4/17/18 16:34	DD	A
1,2,3-Trichlorobenzene	13.6		ug/L	2.0	0.93	SW846 8260B		4/19/18 02:52	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 02:52	CJG	B
1,2,4-Trichlorobenzene	53.8		ug/L	2.0	0.82	SW846 8260B		4/19/18 02:52	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:52	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/19/18 02:52	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/19/18 02:52	CJG	B
1,2-Dichlorobenzene	2.2		ug/L	1.0	0.38	SW846 8260B		4/19/18 02:52	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:52	CJG	B
1,2-Dichloroethene, Total	33.1		ug/L	2.0	0.45	SW846 8260B		4/19/18 02:52	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:52	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:52	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:52	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/19/18 02:52	CJG	B
1,4-Dichlorobenzene	2.9		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:52	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:52	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/19/18 02:52	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/19/18 02:52	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/19/18 02:52	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/19/18 02:52	CJG	B
Acetone	70.6		ug/L	10.0	3.1	SW846 8260B		4/19/18 02:52	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 02:52	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:52	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:52	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:52	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/19/18 02:52	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/19/18 02:52	CJG	B
Carbon Disulfide	0.34J	J,3	ug/L	1.0	0.23	SW846 8260B		4/19/18 02:52	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:52	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 02:52	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 02:52	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280001** Date Collected: 4/11/2018 14:15 Matrix: Water

Sample ID: **MRC-MW128B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/19/18 02:52	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:52	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/19/18 02:52	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:52	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:52	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 02:52	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 02:52	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 02:52	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/19/18 02:52	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 02:52	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/19/18 02:52	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/19/18 02:52	CJG	B
Methyl t-Butyl Ether	16.0		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 02:52	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/19/18 02:52	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:52	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 02:52	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 02:52	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/19/18 02:52	CJG	B
Trichloroethene	7.0		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:52	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/19/18 02:52	CJG	B
Vinyl Chloride	1.9		ug/L	1.0	0.30	SW846 8260B		4/19/18 02:52	CJG	B
cis-1,2-Dichloroethene	31.1		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:52	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:52	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/19/18 02:52	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 02:52	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 02:52	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:52	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:52	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:52	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/19/18 02:52	CJG	B
tert-Butyl Alcohol	18.3		ug/L	10.0	2.2	SW846 8260B		4/19/18 02:52	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/19/18 02:52	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280001** Date Collected: 4/11/2018 14:15 Matrix: Water

Sample ID: **MRC-MW128B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	2.0		ug/L	1.0	0.26	SW846 8260B			4/19/18 02:52	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/19/18 02:52	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.6		%	62 - 133		SW846 8260B			4/17/18 16:34	DD	A
1,2-Dichloroethane-d4 (S)	113		%	62 - 133		SW846 8260B			4/19/18 02:52	CJG	B
4-Bromofluorobenzene (S)	106		%	79 - 114		SW846 8260B			4/17/18 16:34	DD	A
4-Bromofluorobenzene (S)	97.5		%	79 - 114		SW846 8260B			4/19/18 02:52	CJG	B
Dibromofluoromethane (S)	91.6		%	78 - 116		SW846 8260B			4/17/18 16:34	DD	A
Dibromofluoromethane (S)	104		%	78 - 116		SW846 8260B			4/19/18 02:52	CJG	B
Toluene-d8 (S)	87.3		%	76 - 127		SW846 8260B			4/17/18 16:34	DD	A
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/19/18 02:52	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	0.12		ug/L	0.099	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	56.6		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
Fluoranthene-d10 (S)	90.9		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 05:02	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 07:46	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Beryllium, Total	0.00057J	J	mg/L	0.0011	0.00037	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Chromium, Total	0.0073		mg/L	0.0022	0.00074	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Cobalt, Total	0.0049J	J	mg/L	0.0056	0.0019	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Copper, Total	0.0026J	J	mg/L	0.0056	0.0019	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Lead, Total	0.00078J	J	mg/L	0.0022	0.00074	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 10:35	AXC	4/23/18 13:53	AXC	E2
Nickel, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 09:49	MO	E3
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280001** Date Collected: 4/11/2018 14:15 Matrix: Water

Sample ID: **MRC-MW128B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	*Cntr*
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/14/18 17:55	AHI	4/17/18 08:38	MO	E
Zinc, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 09:49	MO	E3
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/24/18 11:08	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280002** Date Collected: 4/10/2018 17:00 Matrix: Water

Sample ID: **FB-041018-ZN** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 02:06	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 02:06	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 02:06	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/19/18 02:06	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/19/18 02:06	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/19/18 02:06	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 02:06	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/19/18 02:06	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:06	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/19/18 02:06	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/19/18 02:06	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/19/18 02:06	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:06	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/19/18 02:06	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:06	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:06	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:06	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/19/18 02:06	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:06	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:06	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/19/18 02:06	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/19/18 02:06	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/19/18 02:06	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/19/18 02:06	CJG	B
Acetone	3.3J	J	ug/L	10.0	3.1	SW846 8260B		4/19/18 02:06	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 02:06	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:06	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:06	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:06	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/19/18 02:06	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/19/18 02:06	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 02:06	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:06	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 02:06	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 02:06	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280002** Date Collected: 4/10/2018 17:00 Matrix: Water

Sample ID: **FB-041018-ZN** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/19/18 02:06	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:06	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/19/18 02:06	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:06	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:06	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 02:06	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 02:06	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 02:06	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/19/18 02:06	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 02:06	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/19/18 02:06	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/19/18 02:06	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 02:06	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/19/18 02:06	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:06	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 02:06	CJG	B
Toluene	0.25J	J	ug/L	1.0	0.23	SW846 8260B		4/19/18 02:06	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/19/18 02:06	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:06	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/19/18 02:06	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/19/18 02:06	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:06	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:06	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/19/18 02:06	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 02:06	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 02:06	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:06	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:06	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:06	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/19/18 02:06	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/19/18 02:06	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/19/18 02:06	CJG	B

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280002** Date Collected: 4/10/2018 17:00 Matrix: Water

Sample ID: **FB-041018-ZN** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/19/18 02:06	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/19/18 02:06	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/19/18 02:06	CJG	B
4-Bromofluorobenzene (S)	99		%	79 - 114		SW846 8260B			4/19/18 02:06	CJG	B
Dibromofluoromethane (S)	104		%	78 - 116		SW846 8260B			4/19/18 02:06	CJG	B
Toluene-d8 (S)	97.8		%	76 - 127		SW846 8260B			4/19/18 02:06	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.098	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	69.8		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
Fluoranthene-d10 (S)	98.5		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 01:57	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/24/18 03:04	EGO	I
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/24/18 03:04	EGO	I
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/24/18 03:04	EGO	I
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/24/18 03:04	EGO	I
Methane	ND		ug/L	1.5	0.34	RSK 175			4/24/18 03:04	EGO	I
Propane	ND		ug/L	3.2	0.22	RSK 175			4/24/18 03:04	EGO	I
WET CHEMISTRY											
Alkalinity, Total	2J	J,1	mg/L	5	0.8	S2320B-97			4/14/18 08:10	MSA	K
Ammonia-N	0.424		mg/L	0.100	0.03	D6919-09			4/20/18 11:22	CMM	L
Chloride	0.18J	J	mg/L	1.0	0.12	EPA 300.0			4/12/18 05:17	CHW	O
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/24/18 05:03	MBW	F
Nitrate-N	ND		mg/L	0.10	0.028	EPA 300.0			4/12/18 05:17	CHW	O
Nitrite-N	ND		mg/L	0.10	0.020	EPA 300.0			4/12/18 05:17	CHW	O
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/12/18 01:30	MSA	O
Phosphorus, Total	0.051J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 13:00	BMK	4/27/18 18:20	JAM	L
Sulfate	ND		mg/L	1.0	0.20	EPA 300.0			4/12/18 05:17	CHW	O
Total Dissolved Solids	ND		mg/L	5	5	S2540C-11			4/16/18 16:00	BMK	O
Total Organic Carbon (TOC)	0.25J	J	mg/L	0.50	0.18	S5310B-00			4/16/18 11:34	PAG	M

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280002** Date Collected: 4/10/2018 17:00 Matrix: Water

Sample ID: **FB-041018-ZN** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
METALS											
Silica	ND		mg/L	0.24	0.080	SW846 6010C	4/14/18 17:10	AHI	4/18/18 07:35	SRT	E
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Calcium, Total	0.10J	J	mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/19/18 11:44	SRT	E
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Cobalt, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Iron, Total	0.030J	J	mg/L	0.067	0.022	SW846 6010C	4/14/18 17:10	AHI	4/19/18 11:44	SRT	E
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Magnesium, Total	ND		mg/L	0.11	0.036	SW846 6010C	4/14/18 17:10	AHI	4/19/18 11:44	SRT	E
Manganese, Total	ND		mg/L	0.0056	0.0020	SW846 6010C	4/14/18 17:10	AHI	4/19/18 11:44	SRT	E
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 10:35	AXC	4/23/18 13:54	AXC	E2
Nickel, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Potassium, Total	ND		mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/19/18 11:44	SRT	E
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Sodium, Total	0.62		mg/L	0.56	0.18	SW846 6010C	4/14/18 17:10	AHI	4/19/18 11:44	SRT	E
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
Zinc, Total	0.010		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:34	MO	E1
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/10/18 17:00	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280003** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-1** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:18	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:18	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:18	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:18	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 17:18	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 17:18	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:18	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 17:18	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:18	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 17:18	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:18	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 17:18	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:18	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 17:18	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:18	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:18	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:18	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 17:18	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:18	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:18	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 17:18	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 17:18	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 17:18	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 17:18	DD	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/17/18 17:18	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:18	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:18	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:18	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:18	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 17:18	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 17:18	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:18	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:18	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:18	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:18	DD	A

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280003** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-1** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 17:18	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:18	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 17:18	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:18	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:18	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:18	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:18	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:18	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 17:18	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:18	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 17:18	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:18	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:18	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 17:18	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:18	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:18	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:18	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 17:18	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:18	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 17:18	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:18	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:18	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:18	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 17:18	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:18	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:18	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:18	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:18	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:18	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 17:18	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 17:18	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 17:18	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280003** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-1** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 17:18	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 17:18	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.8		%	62 - 133		SW846 8260B			4/17/18 17:18	DD	A
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260B			4/17/18 17:18	DD	A
Dibromofluoromethane (S)	91		%	78 - 116		SW846 8260B			4/17/18 17:18	DD	A
Toluene-d8 (S)	88.8		%	76 - 127		SW846 8260B			4/17/18 17:18	DD	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280004** Date Collected: 4/10/2018 15:00 Matrix: Water

Sample ID: **MRC-MW118A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:40	DD	A
1,1,1-Trichloroethane	1.6		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:40	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:40	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:40	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 17:40	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 17:40	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:40	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 17:40	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:40	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 17:40	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:40	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 17:40	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:40	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 17:40	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:40	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:40	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:40	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 17:40	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:40	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:40	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 17:40	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 17:40	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 17:40	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 17:40	DD	A
Acetone	11.1		ug/L	10.0	3.1	SW846 8260B		4/17/18 17:40	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:40	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:40	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:40	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:40	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 17:40	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 17:40	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:40	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:40	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:40	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:40	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280004** Date Collected: 4/10/2018 15:00 Matrix: Water

Sample ID: **MRC-MW118A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
Chloroform	1.2		ug/L	1.0	0.21	SW846 8260B		4/17/18 17:40	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:40	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 17:40	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:40	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:40	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:40	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:40	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:40	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 17:40	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:40	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 17:40	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:40	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:40	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 17:40	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:40	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:40	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:40	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 17:40	DD	A
Trichloroethene	4.8		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
Trichlorofluoromethane	2.5		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:40	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 17:40	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:40	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:40	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:40	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 17:40	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:40	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:40	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:40	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:40	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:40	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 17:40	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 17:40	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 17:40	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280004** Date Collected: 4/10/2018 15:00 Matrix: Water

Sample ID: **MRC-MW118A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 17:40	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 17:40	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84.2		%	62 - 133		SW846 8260B			4/17/18 17:40	DD	A
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/17/18 17:40	DD	A
Dibromofluoromethane (S)	92.7		%	78 - 116		SW846 8260B			4/17/18 17:40	DD	A
Toluene-d8 (S)	90.9		%	76 - 127		SW846 8260B			4/17/18 17:40	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.11		ug/L	0.10	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	53.4		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
Fluoranthene-d10 (S)	88.7		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 00:38	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	54.9		ug/L	1.3	0.23	EPA 218.6			4/24/18 05:12	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280005** Date Collected: 4/10/2018 17:00 Matrix: Water

Sample ID: **MRC-MW118B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:02	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:02	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:02	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:02	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:02	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 18:02	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:02	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 18:02	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:02	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 18:02	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:02	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 18:02	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:02	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 18:02	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:02	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:02	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:02	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 18:02	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:02	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:02	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 18:02	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 18:02	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 18:02	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 18:02	DD	A
Acetone	7.9J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 18:02	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:02	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:02	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:02	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:02	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 18:02	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 18:02	DD	A
Carbon Disulfide	0.25J	J	ug/L	1.0	0.23	SW846 8260B		4/17/18 18:02	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:02	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:02	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:02	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280005** Date Collected: 4/10/2018 17:00 Matrix: Water

Sample ID: **MRC-MW118B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 18:02	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:02	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:02	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:02	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:02	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:02	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:02	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:02	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 18:02	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:02	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 18:02	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:02	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:02	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 18:02	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:02	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:02	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:02	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 18:02	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:02	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 18:02	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:02	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:02	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:02	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 18:02	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:02	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:02	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:02	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:02	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:02	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 18:02	DD	A
tert-Butyl Alcohol	4.5J	J	ug/L	10.0	2.2	SW846 8260B		4/17/18 18:02	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 18:02	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280005** Date Collected: 4/10/2018 17:00 Matrix: Water

Sample ID: **MRC-MW118B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 18:02	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 18:02	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	86		%	62 - 133		SW846 8260B			4/17/18 18:02	DD	A
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260B			4/17/18 18:02	DD	A
Dibromofluoromethane (S)	95		%	78 - 116		SW846 8260B			4/17/18 18:02	DD	A
Toluene-d8 (S)	90		%	76 - 127		SW846 8260B			4/17/18 18:02	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.097	0.018	8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	73.3		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
Fluoranthene-d10 (S)	101		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 02:23	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 08:42	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280006** Date Collected: 4/10/2018 16:15 Matrix: Water

Sample ID: **MRC-MW27B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:24	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:24	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:24	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:24	DD	A
1,1-Dichloroethane	5.2		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:24	DD	A
1,1-Dichloroethene	8.9		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:24	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 18:24	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:24	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 18:24	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:24	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 18:24	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:24	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 18:24	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:24	DD	A
1,2-Dichloroethene, Total	265		ug/L	20.0	4.5	SW846 8260B		4/19/18 03:15	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:24	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:24	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:24	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 18:24	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:24	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:24	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 18:24	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 18:24	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 18:24	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 18:24	DD	A
Acetone	4.5J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 18:24	DD	A
Benzene	0.51J	J	ug/L	1.0	0.23	SW846 8260B		4/17/18 18:24	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:24	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:24	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:24	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 18:24	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 18:24	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:24	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:24	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:24	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:24	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280006** Date Collected: 4/10/2018 16:15 Matrix: Water

Sample ID: **MRC-MW27B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:24	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 18:24	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:24	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:24	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:24	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:24	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:24	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:24	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:24	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:24	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 18:24	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:24	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 18:24	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:24	DD	A
Methyl t-Butyl Ether	2.9		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:24	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:24	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 18:24	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:24	DD	A
Tetrachloroethene	0.54J	J	ug/L	1.0	0.35	SW846 8260B		4/17/18 18:24	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:24	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 18:24	DD	A
Trichloroethene	590		ug/L	10.0	3.3	SW846 8260B		4/19/18 03:15	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:24	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 18:24	DD	A
Vinyl Chloride	6.2		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:24	DD	A
cis-1,2-Dichloroethene	257		ug/L	10.0	3.2	SW846 8260B		4/19/18 03:15	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:24	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 18:24	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:24	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:24	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:24	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:24	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:24	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:24	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:24	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 18:24	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 18:24	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 18:24	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280006** Date Collected: 4/10/2018 16:15 Matrix: Water

Sample ID: **MRC-MW27B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	3.3		ug/L	1.0	0.26	SW846 8260B			4/17/18 18:24	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 18:24	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.6		%	62 - 133		SW846 8260B			4/17/18 18:24	DD	A
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/19/18 03:15	CJG	B
4-Bromofluorobenzene (S)	108		%	79 - 114		SW846 8260B			4/17/18 18:24	DD	A
4-Bromofluorobenzene (S)	97.8		%	79 - 114		SW846 8260B			4/19/18 03:15	CJG	B
Dibromofluoromethane (S)	90		%	78 - 116		SW846 8260B			4/17/18 18:24	DD	A
Dibromofluoromethane (S)	103		%	78 - 116		SW846 8260B			4/19/18 03:15	CJG	B
Toluene-d8 (S)	97.6		%	76 - 127		SW846 8260B			4/19/18 03:15	CJG	B
Toluene-d8 (S)	92.4		%	76 - 127		SW846 8260B			4/17/18 18:24	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	1.4		ug/L	0.099	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	62.7		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
Fluoranthene-d10 (S)	97.8		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 01:31	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/24/18 03:20	EGO	E
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/24/18 03:20	EGO	E
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/24/18 03:20	EGO	E
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/24/18 03:20	EGO	E
Methane	3.2		ug/L	1.5	0.34	RSK 175			4/24/18 03:20	EGO	E
Propane	ND		ug/L	3.2	0.22	RSK 175			4/24/18 03:20	EGO	E
WET CHEMISTRY											
Alkalinity, Total	11	1	mg/L	5	0.8	S2320B-97			4/14/18 08:19	MSA	G
Ammonia-N	ND		mg/L	0.100	0.03	D6919-09			4/20/18 12:03	CMM	H
Chloride	106		mg/L	2.0	0.24	EPA 300.0			4/12/18 05:30	CHW	K
Nitrate-N	ND		mg/L	0.20	0.057	EPA 300.0			4/12/18 05:30	CHW	K
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/12/18 05:30	CHW	K
Orthophosphate	0.0030J	J	mg/L	0.020	0.0029	S4500PE-99			4/12/18 01:30	MSA	K
Phosphorus, Total	0.033J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 13:00	BMK	4/27/18 18:20	JAM	H

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280006** Date Collected: 4/10/2018 16:15 Matrix: Water

Sample ID: **MRC-MW27B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	8.8		mg/L	2.0	0.40	EPA 300.0			4/12/18 05:30	CHW	K
Total Dissolved Solids	171		mg/L	5	5	S2540C-11			4/16/18 16:00	BMK	K
Total Organic Carbon (TOC)	1.7		mg/L	0.50	0.18	S5310B-00			4/16/18 11:34	PAG	I
METALS											
Silica	8.6		mg/L	0.24	0.080	SW846 6010C	4/19/18 14:50	DXC	4/24/18 07:49	SRT	C3
Calcium, Total	8.8		mg/L	0.11	0.036	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:15	SRT	C3
Iron, Total	1.9		mg/L	0.067	0.022	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:15	SRT	C3
Magnesium, Total	3.7		mg/L	0.11	0.036	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:15	SRT	C3
Manganese, Total	0.13		mg/L	0.0056	0.0020	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:15	SRT	C3
Potassium, Total	5.0		mg/L	0.56	0.18	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:15	SRT	C3
Sodium, Total	48.9		mg/L	0.56	0.18	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:15	SRT	C3

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280007** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-2** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 02:29	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 02:29	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 02:29	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/19/18 02:29	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/19/18 02:29	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/19/18 02:29	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 02:29	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/19/18 02:29	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:29	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/19/18 02:29	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/19/18 02:29	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/19/18 02:29	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:29	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/19/18 02:29	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:29	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:29	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:29	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/19/18 02:29	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:29	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:29	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/19/18 02:29	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/19/18 02:29	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/19/18 02:29	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/19/18 02:29	CJG	B
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/19/18 02:29	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 02:29	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:29	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:29	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 02:29	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/19/18 02:29	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/19/18 02:29	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 02:29	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:29	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 02:29	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 02:29	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280007** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-2** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/19/18 02:29	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:29	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/19/18 02:29	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:29	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 02:29	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 02:29	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 02:29	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 02:29	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/19/18 02:29	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 02:29	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/19/18 02:29	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/19/18 02:29	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 02:29	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/19/18 02:29	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:29	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 02:29	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 02:29	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/19/18 02:29	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 02:29	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/19/18 02:29	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/19/18 02:29	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:29	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:29	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/19/18 02:29	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 02:29	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 02:29	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 02:29	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 02:29	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 02:29	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/19/18 02:29	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/19/18 02:29	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/19/18 02:29	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280007** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-2** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/19/18 02:29	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/19/18 02:29	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/19/18 02:29	CJG	B
4-Bromofluorobenzene (S)	98.3		%	79 - 114		SW846 8260B			4/19/18 02:29	CJG	B
Dibromofluoromethane (S)	104		%	78 - 116		SW846 8260B			4/19/18 02:29	CJG	B
Toluene-d8 (S)	103		%	76 - 127		SW846 8260B			4/19/18 02:29	CJG	B

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280008** Date Collected: 4/10/2018 17:35 Matrix: Water

Sample ID: **MRC-MW32A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 19:07	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 19:07	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 19:07	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 19:07	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 19:07	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 19:07	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 19:07	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 19:07	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:07	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 19:07	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 19:07	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 19:07	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:07	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 19:07	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:07	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:07	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:07	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 19:07	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:07	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:07	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 19:07	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 19:07	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 19:07	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 19:07	DD	A
Acetone	4.2J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 19:07	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:07	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:07	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:07	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:07	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 19:07	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 19:07	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:07	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:07	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 19:07	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 19:07	DD	A

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280008** Date Collected: 4/10/2018 17:35 Matrix: Water

Sample ID: **MRC-MW32A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 19:07	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:07	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 19:07	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:07	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:07	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 19:07	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 19:07	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 19:07	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 19:07	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 19:07	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 19:07	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 19:07	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 19:07	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 19:07	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:07	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 19:07	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:07	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 19:07	DD	A
Trichloroethene	0.74J	J	ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:07	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 19:07	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 19:07	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:07	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:07	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 19:07	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 19:07	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 19:07	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:07	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:07	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:07	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 19:07	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 19:07	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 19:07	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280008** Date Collected: 4/10/2018 17:35 Matrix: Water

Sample ID: **MRC-MW32A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 19:07	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 19:07	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.6		%	62 - 133		SW846 8260B			4/17/18 19:07	DD	A
4-Bromofluorobenzene (S)	111		%	79 - 114		SW846 8260B			4/17/18 19:07	DD	A
Dibromofluoromethane (S)	91.5		%	78 - 116		SW846 8260B			4/17/18 19:07	DD	A
Toluene-d8 (S)	90.4		%	76 - 127		SW846 8260B			4/17/18 19:07	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280009** Date Collected: 4/10/2018 16:30 Matrix: Water

Sample ID: **MRC-MW33A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 19:29	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 19:29	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 19:29	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 19:29	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 19:29	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 19:29	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 19:29	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 19:29	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:29	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 19:29	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 19:29	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 19:29	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:29	DD	A
1,2-Dichloroethene, Total	1.3J	J	ug/L	2.0	0.45	SW846 8260B		4/17/18 19:29	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:29	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:29	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:29	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 19:29	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:29	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:29	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 19:29	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 19:29	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 19:29	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 19:29	DD	A
Acetone	4.9J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 19:29	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:29	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:29	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:29	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:29	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 19:29	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 19:29	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:29	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:29	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 19:29	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 19:29	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280009** Date Collected: 4/10/2018 16:30 Matrix: Water

Sample ID: **MRC-MW33A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 19:29	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:29	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 19:29	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:29	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:29	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 19:29	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 19:29	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 19:29	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 19:29	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 19:29	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 19:29	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 19:29	DD	A
Methyl t-Butyl Ether	1.9		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 19:29	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 19:29	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:29	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 19:29	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:29	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 19:29	DD	A
Trichloroethene	1.2		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:29	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 19:29	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 19:29	DD	A
cis-1,2-Dichloroethene	1.3		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:29	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:29	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 19:29	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 19:29	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 19:29	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:29	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:29	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:29	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 19:29	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 19:29	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 19:29	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280009** Date Collected: 4/10/2018 16:30 Matrix: Water

Sample ID: **MRC-MW33A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 19:29	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 19:29	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.2		%	62 - 133		SW846 8260B			4/17/18 19:29	DD	A
4-Bromofluorobenzene (S)	108		%	79 - 114		SW846 8260B			4/17/18 19:29	DD	A
Dibromofluoromethane (S)	90.5		%	78 - 116		SW846 8260B			4/17/18 19:29	DD	A
Toluene-d8 (S)	88.2		%	76 - 127		SW846 8260B			4/17/18 19:29	DD	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280010** Date Collected: 4/10/2018 17:40 Matrix: Water

Sample ID: **MRC-MW109A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 19:51	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 19:51	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 19:51	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 19:51	DD	A
1,1-Dichloroethene	0.44J	J	ug/L	1.0	0.29	SW846 8260B		4/17/18 19:51	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 19:51	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 19:51	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 19:51	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:51	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 19:51	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 19:51	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 19:51	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:51	DD	A
1,2-Dichloroethene, Total	37.1		ug/L	2.0	0.45	SW846 8260B		4/17/18 19:51	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:51	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:51	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:51	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 19:51	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:51	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:51	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 19:51	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 19:51	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 19:51	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 19:51	DD	A
Acetone	9.2J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 19:51	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:51	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:51	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:51	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 19:51	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 19:51	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 19:51	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:51	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:51	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 19:51	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 19:51	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280010** Date Collected: 4/10/2018 17:40 Matrix: Water

Sample ID: **MRC-MW109A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 19:51	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:51	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 19:51	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:51	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 19:51	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 19:51	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 19:51	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 19:51	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 19:51	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 19:51	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 19:51	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 19:51	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 19:51	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 19:51	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:51	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 19:51	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 19:51	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 19:51	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 19:51	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 19:51	DD	A
Vinyl Chloride	24.0		ug/L	1.0	0.30	SW846 8260B		4/17/18 19:51	DD	A
cis-1,2-Dichloroethene	36.0		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:51	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:51	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 19:51	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 19:51	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 19:51	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 19:51	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 19:51	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 19:51	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 19:51	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 19:51	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 19:51	DD	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280010** Date Collected: 4/10/2018 17:40 Matrix: Water

Sample ID: **MRC-MW109A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.2		ug/L	1.0	0.26	SW846 8260B			4/17/18 19:51	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 19:51	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.8		%	62 - 133		SW846 8260B			4/17/18 19:51	DD	A
4-Bromofluorobenzene (S)	108		%	79 - 114		SW846 8260B			4/17/18 19:51	DD	A
Dibromofluoromethane (S)	88.2		%	78 - 116		SW846 8260B			4/17/18 19:51	DD	A
Toluene-d8 (S)	89.8		%	76 - 127		SW846 8260B			4/17/18 19:51	DD	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280011** Date Collected: 4/10/2018 14:25 Matrix: Water

Sample ID: **MRC-MW27A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:28	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:28	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:28	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
1,1-Dichloroethane	2.1		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:28	TMP	A
1,1-Dichloroethene	2.2		ug/L	1.0	0.29	SW846 8260B		4/17/18 17:28	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 17:28	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:28	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 17:28	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:28	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 17:28	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:28	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 17:28	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:28	TMP	A
1,2-Dichloroethene, Total	51.5		ug/L	2.0	0.45	SW846 8260B		4/17/18 17:28	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:28	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:28	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:28	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 17:28	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:28	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:28	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 17:28	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 17:28	TMP	A
2-Hexanone	ND	2	ug/L	5.0	1.3	SW846 8260B		4/17/18 17:28	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	1	ug/L	5.0	1.5	SW846 8260B		4/17/18 17:28	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/17/18 17:28	TMP	A
Benzene	1.3		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:28	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:28	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:28	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:28	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 17:28	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 17:28	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:28	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:28	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:28	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:28	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280011** Date Collected: 4/10/2018 14:25 Matrix: Water

Sample ID: **MRC-MW27A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 17:28	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:28	TMP	A
Cyclohexane	0.97J	J	ug/L	1.0	0.29	SW846 8260B		4/17/18 17:28	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:28	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
Diisopropyl ether	0.29J	J	ug/L	1.0	0.25	SW846 8260B		4/17/18 17:28	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:28	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:28	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:28	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 17:28	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:28	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 17:28	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:28	TMP	A
Methyl t-Butyl Ether	19.4		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:28	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 17:28	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:28	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:28	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:28	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 17:28	TMP	A
Trichloroethene	141		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:28	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 17:28	TMP	A
Vinyl Chloride	15.3		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:28	TMP	A
cis-1,2-Dichloroethene	48.2		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:28	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:28	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 17:28	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:28	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:28	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:28	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:28	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:28	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 17:28	TMP	A
tert-Butyl Alcohol	27.7		ug/L	10.0	2.2	SW846 8260B		4/17/18 17:28	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 17:28	TMP	A

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280011** Date Collected: 4/10/2018 14:25 Matrix: Water

Sample ID: **MRC-MW27A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	3.3		ug/L	1.0	0.26	SW846 8260B			4/17/18 17:28	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 17:28	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/17/18 17:28	TMP	A
4-Bromofluorobenzene (S)	99.3		%	79 - 114		SW846 8260B			4/17/18 17:28	TMP	A
Dibromofluoromethane (S)	99.5		%	78 - 116		SW846 8260B			4/17/18 17:28	TMP	A
Toluene-d8 (S)	91.7		%	76 - 127		SW846 8260B			4/17/18 17:28	TMP	A
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/24/18 03:36	EGO	C
Ethane	9.8		ug/L	3.3	0.23	RSK 175			4/24/18 03:36	EGO	C
Ethene	1.6J	J	ug/L	2.4	0.40	RSK 175			4/24/18 03:36	EGO	C
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/24/18 03:36	EGO	C
Methane	953		ug/L	1.5	0.34	RSK 175			4/24/18 03:36	EGO	C
Propane	ND		ug/L	3.2	0.22	RSK 175			4/24/18 03:36	EGO	C
WET CHEMISTRY											
Alkalinity, Total	45	3	mg/L	5	0.8	S2320B-97			4/14/18 08:27	MSA	E
Ammonia-N	2.25		mg/L	0.100	0.03	D6919-09			4/20/18 12:17	CMM	F
Chloride	905		mg/L	25.0	2.9	EPA 300.0			4/17/18 11:44	CHW	I
Nitrate-N	ND		mg/L	0.20	0.057	EPA 300.0			4/12/18 05:44	CHW	I
Nitrite-N	ND	4,5	mg/L	2.5	0.50	EPA 300.0			4/17/18 11:44	CHW	I
Orthophosphate	0.0059J	J	mg/L	0.020	0.0029	S4500PE-99			4/12/18 01:30	MSA	I
Phosphorus, Total	0.021J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 13:00	BMK	4/27/18 18:20	JAM	F
Sulfate	2.1		mg/L	2.0	0.40	EPA 300.0			4/12/18 05:44	CHW	I
Total Dissolved Solids	1440		mg/L	5	5	S2540C-11			4/16/18 16:00	BMK	I
Total Organic Carbon (TOC)	3.3		mg/L	0.50	0.18	S5310B-00			4/16/18 11:34	PAG	G
METALS											
Silica	11.1		mg/L	0.24	0.080	SW846 6010C	4/19/18 14:50	DXC	4/24/18 07:52	SRT	E3
Calcium, Total	19.4		mg/L	0.11	0.036	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:18	SRT	E3
Iron, Total	116		mg/L	0.067	0.022	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:18	SRT	E3
Magnesium, Total	36.6		mg/L	0.11	0.036	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:18	SRT	E3
Manganese, Total	41.1		mg/L	0.0056	0.0020	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:18	SRT	E3
Potassium, Total	3.2		mg/L	0.56	0.18	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:18	SRT	E3
Sodium, Total	347		mg/L	0.56	0.18	SW846 6010C	4/19/18 14:50	DXC	4/23/18 11:18	SRT	E3

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280011** Date Collected: 4/10/2018 14:25 Matrix: Water

Sample ID: **MRC-MW27A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280012** Date Collected: 4/10/2018 15:15 Matrix: Water

Sample ID: **MRC-MW13A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
1,1-Dichloroethane	1.2		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:50	TMP	A
1,1-Dichloroethene	0.49J	J	ug/L	1.0	0.29	SW846 8260B		4/17/18 17:50	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 17:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 17:50	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 17:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 17:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 17:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:50	TMP	A
1,2-Dichloroethene, Total	3.1		ug/L	2.0	0.45	SW846 8260B		4/17/18 17:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:50	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:50	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 17:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:50	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:50	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 17:50	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 17:50	TMP	A
2-Hexanone	ND	2	ug/L	5.0	1.3	SW846 8260B		4/17/18 17:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	1	ug/L	5.0	1.5	SW846 8260B		4/17/18 17:50	TMP	A
Acetone	7.0J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 17:50	TMP	A
Benzene	0.27J	J	ug/L	1.0	0.23	SW846 8260B		4/17/18 17:50	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 17:50	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 17:50	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 17:50	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:50	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280012** Date Collected: 4/10/2018 15:15 Matrix: Water

Sample ID: **MRC-MW13A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 17:50	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:50	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 17:50	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 17:50	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 17:50	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 17:50	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:50	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 17:50	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 17:50	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 17:50	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:50	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 17:50	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 17:50	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 17:50	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 17:50	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 17:50	TMP	A
Trichloroethene	2.2		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 17:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 17:50	TMP	A
Vinyl Chloride	1.5		ug/L	1.0	0.30	SW846 8260B		4/17/18 17:50	TMP	A
cis-1,2-Dichloroethene	2.5		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:50	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 17:50	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 17:50	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 17:50	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 17:50	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 17:50	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 17:50	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 17:50	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 17:50	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 17:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280012** Date Collected: 4/10/2018 15:15 Matrix: Water

Sample ID: **MRC-MW13A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.58J	J	ug/L	1.0	0.26	SW846 8260B			4/17/18 17:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 17:50	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/17/18 17:50	TMP	A
4-Bromofluorobenzene (S)	96		%	79 - 114		SW846 8260B			4/17/18 17:50	TMP	A
Dibromofluoromethane (S)	99.6		%	78 - 116		SW846 8260B			4/17/18 17:50	TMP	A
Toluene-d8 (S)	93.2		%	76 - 127		SW846 8260B			4/17/18 17:50	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	1.7		ug/L	0.094	0.018	8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	45.8		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C
Fluoranthene-d10 (S)	87.6		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 01:04	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280013** Date Collected: 4/10/2018 17:20 Matrix: Water

Sample ID: **MRC-MW122A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:13	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:13	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:13	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:13	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:13	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 18:13	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:13	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 18:13	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:13	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 18:13	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:13	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 18:13	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:13	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 18:13	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:13	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:13	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:13	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 18:13	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:13	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:13	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 18:13	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 18:13	TMP	A
2-Hexanone	ND	2	ug/L	5.0	1.3	SW846 8260B		4/17/18 18:13	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	1	ug/L	5.0	1.5	SW846 8260B		4/17/18 18:13	TMP	A
Acetone	6.2J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 18:13	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:13	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:13	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:13	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:13	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 18:13	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 18:13	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:13	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:13	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:13	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:13	TMP	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280013** Date Collected: 4/10/2018 17:20 Matrix: Water

Sample ID: **MRC-MW122A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
Chloroform	0.47J	J	ug/L	1.0	0.21	SW846 8260B		4/17/18 18:13	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:13	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:13	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:13	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:13	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:13	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:13	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:13	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 18:13	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:13	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 18:13	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:13	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:13	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 18:13	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:13	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:13	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:13	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 18:13	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:13	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 18:13	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:13	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:13	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:13	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 18:13	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:13	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:13	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:13	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:13	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:13	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 18:13	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 18:13	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 18:13	TMP	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280013** Date Collected: 4/10/2018 17:20 Matrix: Water

Sample ID: **MRC-MW122A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 18:13	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 18:13	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/17/18 18:13	TMP	A
4-Bromofluorobenzene (S)	98.6		%	79 - 114		SW846 8260B			4/17/18 18:13	TMP	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/17/18 18:13	TMP	A
Toluene-d8 (S)	93.7		%	76 - 127		SW846 8260B			4/17/18 18:13	TMP	A
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 08:50	MBW	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280014** Date Collected: 4/11/2018 09:25 Matrix: Water

Sample ID: **MRC-SWMW-5I** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:36	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:36	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:36	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
1,1-Dichloroethane	3.0		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:36	TMP	A
1,1-Dichloroethene	ND	2	ug/L	1.0	0.29	SW846 8260B		4/17/18 18:36	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 18:36	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:36	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 18:36	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:36	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 18:36	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:36	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 18:36	TMP	A
1,2-Dichloroethane	0.84J	J	ug/L	1.0	0.32	SW846 8260B		4/17/18 18:36	TMP	A
1,2-Dichloroethene, Total	1.2J	J	ug/L	2.0	0.45	SW846 8260B		4/17/18 18:36	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:36	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:36	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:36	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 18:36	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:36	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:36	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 18:36	TMP	A
2-Chloroethylvinyl ether	ND	14,15,16	ug/L	2.0	0.38	SW846 8260B		4/17/18 18:36	TMP	A
2-Hexanone	ND	19	ug/L	5.0	1.3	SW846 8260B		4/17/18 18:36	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	17	ug/L	5.0	1.5	SW846 8260B		4/17/18 18:36	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/17/18 18:36	TMP	A
Benzene	4.0		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:36	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:36	TMP	A
Bromochloromethane	ND	11	ug/L	1.0	0.32	SW846 8260B		4/17/18 18:36	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:36	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 18:36	TMP	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260B		4/17/18 18:36	TMP	A
Carbon Disulfide	ND	7,8	ug/L	1.0	0.23	SW846 8260B		4/17/18 18:36	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:36	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:36	TMP	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280014** Date Collected: 4/11/2018 09:25 Matrix: Water

Sample ID: **MRC-SWMW-5I** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:36	TMP	A
Chloroethane	4.1		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 18:36	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:36	TMP	A
Cyclohexane	ND	12,13	ug/L	1.0	0.29	SW846 8260B		4/17/18 18:36	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:36	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:36	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:36	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:36	TMP	A
Freon 113	ND	5,6	ug/L	1.0	0.26	SW846 8260B		4/17/18 18:36	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 18:36	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:36	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 18:36	TMP	A
Methyl cyclohexane	ND	20,21	ug/L	1.0	0.30	SW846 8260B		4/17/18 18:36	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
Methylene Chloride	ND	3,4	ug/L	1.0	0.45	SW846 8260B		4/17/18 18:36	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 18:36	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:36	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:36	TMP	A
Toluene	ND	18	ug/L	1.0	0.23	SW846 8260B		4/17/18 18:36	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 18:36	TMP	A
Trichloroethene	1.0		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:36	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 18:36	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:36	TMP	A
cis-1,2-Dichloroethene	0.71J	J	ug/L	1.0	0.32	SW846 8260B		4/17/18 18:36	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:36	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 18:36	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:36	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:36	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:36	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:36	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:36	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 18:36	TMP	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280014** Date Collected: 4/11/2018 09:25 Matrix: Water

Sample ID: **MRC-SWMW-5I** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B			4/17/18 18:36	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/17/18 18:36	TMP	A
trans-1,2-Dichloroethene	0.44J	J,10,9	ug/L	1.0	0.26	SW846 8260B			4/17/18 18:36	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 18:36	TMP	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B			4/17/18 18:36	TMP	A
4-Bromofluorobenzene (S)	99.8		%	79 - 114	SW846 8260B			4/17/18 18:36	TMP	A
Dibromofluoromethane (S)	100		%	78 - 116	SW846 8260B			4/17/18 18:36	TMP	A
Toluene-d8 (S)	94		%	76 - 127	SW846 8260B			4/17/18 18:36	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280015** Date Collected: 4/11/2018 09:30 Matrix: Water

Sample ID: **MRC-SWMW-5I-D** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:59	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:59	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:59	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
1,1-Dichloroethane	3.1		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:59	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:59	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 18:59	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:59	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 18:59	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:59	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 18:59	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 18:59	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 18:59	TMP	A
1,2-Dichloroethane	0.85J	J	ug/L	1.0	0.32	SW846 8260B		4/17/18 18:59	TMP	A
1,2-Dichloroethene, Total	1.2J	J	ug/L	2.0	0.45	SW846 8260B		4/17/18 18:59	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:59	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:59	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:59	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 18:59	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:59	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:59	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 18:59	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 18:59	TMP	A
2-Hexanone	ND	2	ug/L	5.0	1.3	SW846 8260B		4/17/18 18:59	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	1	ug/L	5.0	1.5	SW846 8260B		4/17/18 18:59	TMP	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/17/18 18:59	TMP	A
Benzene	4.1		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:59	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:59	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:59	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 18:59	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 18:59	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 18:59	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:59	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:59	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:59	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:59	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280015** Date Collected: 4/11/2018 09:30 Matrix: Water

Sample ID: **MRC-SWMW-5I-D** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	4.4		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 18:59	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:59	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 18:59	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:59	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 18:59	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 18:59	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 18:59	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:59	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 18:59	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 18:59	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 18:59	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:59	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 18:59	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 18:59	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:59	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 18:59	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 18:59	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 18:59	TMP	A
Trichloroethene	1.1		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 18:59	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 18:59	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 18:59	TMP	A
cis-1,2-Dichloroethene	0.69J	J	ug/L	1.0	0.32	SW846 8260B		4/17/18 18:59	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:59	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 18:59	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 18:59	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 18:59	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 18:59	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 18:59	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 18:59	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 18:59	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 18:59	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 18:59	TMP	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280015** Date Collected: 4/11/2018 09:30 Matrix: Water

Sample ID: **MRC-SWMW-5I-D** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.55J	J	ug/L	1.0	0.26	SW846 8260B			4/17/18 18:59	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 18:59	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			4/17/18 18:59	TMP	A
4-Bromofluorobenzene (S)	97.1		%	79 - 114		SW846 8260B			4/17/18 18:59	TMP	A
Dibromofluoromethane (S)	100		%	78 - 116		SW846 8260B			4/17/18 18:59	TMP	A
Toluene-d8 (S)	94.8		%	76 - 127		SW846 8260B			4/17/18 18:59	TMP	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280016** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-3** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 23:26	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 23:26	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 23:26	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 23:26	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 23:26	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 23:26	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 23:26	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 23:26	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 23:26	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 23:26	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 23:26	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 23:26	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:26	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 23:26	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 23:26	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 23:26	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 23:26	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 23:26	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 23:26	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:26	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 23:26	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 23:26	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 23:26	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 23:26	CJG	A
Acetone	6.4J	J	ug/L	10.0	3.1	SW846 8260B		4/17/18 23:26	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 23:26	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:26	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:26	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 23:26	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 23:26	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 23:26	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 23:26	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:26	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 23:26	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 23:26	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280016** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-3** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 23:26	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:26	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 23:26	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:26	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 23:26	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 23:26	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 23:26	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 23:26	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 23:26	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 23:26	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 23:26	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 23:26	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 23:26	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 23:26	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 23:26	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 23:26	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 23:26	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 23:26	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 23:26	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 23:26	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 23:26	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:26	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:26	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 23:26	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 23:26	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 23:26	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:26	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:26	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:26	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 23:26	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 23:26	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 23:26	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280016** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-3** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 23:26	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 23:26	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99		%	62 - 133		SW846 8260B			4/17/18 23:26	CJG	A
4-Bromofluorobenzene (S)	97.5		%	79 - 114		SW846 8260B			4/17/18 23:26	CJG	A
Dibromofluoromethane (S)	99.3		%	78 - 116		SW846 8260B			4/17/18 23:26	CJG	A
Toluene-d8 (S)	92.6		%	76 - 127		SW846 8260B			4/17/18 23:26	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280017** Date Collected: 4/11/2018 09:45 Matrix: Water

Sample ID: **MRC-MW131B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 01:43	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 01:43	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 01:43	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 01:43	CJG	A
1,1-Dichloroethene	6.4		ug/L	5.0	1.5	SW846 8260B		4/19/18 18:25	DD	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/18/18 01:43	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 01:43	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/18/18 01:43	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 01:43	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/18/18 01:43	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 01:43	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/18/18 01:43	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 01:43	CJG	A
1,2-Dichloroethene, Total	317		ug/L	10.0	2.3	SW846 8260B		4/19/18 18:25	DD	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 01:43	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 01:43	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 01:43	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/18/18 01:43	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 01:43	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 01:43	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/18/18 01:43	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/18/18 01:43	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/18/18 01:43	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/18/18 01:43	CJG	A
Acetone	4.9J	J	ug/L	10.0	3.1	SW846 8260B		4/18/18 01:43	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 01:43	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 01:43	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 01:43	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 01:43	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/18/18 01:43	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/18/18 01:43	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 01:43	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 01:43	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 01:43	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 01:43	CJG	A

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280017** Date Collected: 4/11/2018 09:45 Matrix: Water

Sample ID: **MRC-MW131B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/18/18 01:43	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 01:43	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 01:43	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 01:43	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 01:43	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 01:43	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 01:43	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 01:43	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/18/18 01:43	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 01:43	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/18/18 01:43	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 01:43	CJG	A
Methyl t-Butyl Ether	0.47J	J	ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 01:43	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/18/18 01:43	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 01:43	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 01:43	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 01:43	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/18/18 01:43	CJG	A
Trichloroethene	59.1		ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 01:43	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/18/18 01:43	CJG	A
Vinyl Chloride	9.0		ug/L	1.0	0.30	SW846 8260B		4/18/18 01:43	CJG	A
cis-1,2-Dichloroethene	304		ug/L	5.0	1.6	SW846 8260B		4/19/18 18:25	DD	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 01:43	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/18/18 01:43	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 01:43	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 01:43	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 01:43	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 01:43	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 01:43	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/18/18 01:43	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/18/18 01:43	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/18/18 01:43	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280017** Date Collected: 4/11/2018 09:45 Matrix: Water
Sample ID: **MRC-MW131B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	14.3		ug/L	1.0	0.26	SW846 8260B			4/18/18 01:43	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/18/18 01:43	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/18/18 01:43	CJG	A
1,2-Dichloroethane-d4 (S)	79.8		%	62 - 133		SW846 8260B			4/19/18 18:25	DD	B
4-Bromofluorobenzene (S)	102		%	79 - 114		SW846 8260B			4/18/18 01:43	CJG	A
4-Bromofluorobenzene (S)	113		%	79 - 114		SW846 8260B			4/19/18 18:25	DD	B
Dibromofluoromethane (S)	97.8		%	78 - 116		SW846 8260B			4/18/18 01:43	CJG	A
Dibromofluoromethane (S)	89.9		%	78 - 116		SW846 8260B			4/19/18 18:25	DD	B
Toluene-d8 (S)	95.9		%	76 - 127		SW846 8260B			4/18/18 01:43	CJG	A
Toluene-d8 (S)	87.5		%	76 - 127		SW846 8260B			4/19/18 18:25	DD	B
SEMIVOLATILE SIM											
1,4-Dioxane	6.7		ug/L	0.97	0.18	8270 SIM	4/17/18 14:30	TXC	4/21/18 03:29	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:50	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:50	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:50	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:50	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 02:50	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	49.9		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 02:50	GEC	C
2-Methylnapthalene-d10 (S)	35.8		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/21/18 03:29	GEC	C
Fluoranthene-d10 (S)	88.6		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/21/18 03:29	GEC	C
Fluoranthene-d10 (S)	87.3		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 02:50	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 08:58	MBW	E

Vanessa N. Badman
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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280018** Date Collected: 4/11/2018 09:55 Matrix: Water

Sample ID: **MRC-MW131B-D** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 02:06	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 02:06	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 02:06	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 02:06	CJG	A
1,1-Dichloroethene	5.8		ug/L	5.0	1.5	SW846 8260B		4/19/18 18:47	DD	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/18/18 02:06	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 02:06	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/18/18 02:06	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:06	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/18/18 02:06	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 02:06	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/18/18 02:06	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:06	CJG	A
1,2-Dichloroethene, Total	276		ug/L	10.0	2.3	SW846 8260B		4/19/18 18:47	DD	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:06	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:06	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:06	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/18/18 02:06	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:06	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:06	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/18/18 02:06	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/18/18 02:06	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/18/18 02:06	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/18/18 02:06	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/18/18 02:06	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:06	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:06	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:06	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:06	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/18/18 02:06	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/18/18 02:06	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:06	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:06	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 02:06	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 02:06	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280018** Date Collected: 4/11/2018 09:55 Matrix: Water

Sample ID: **MRC-MW131B-D** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/18/18 02:06	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:06	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 02:06	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:06	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:06	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 02:06	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 02:06	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 02:06	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/18/18 02:06	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 02:06	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/18/18 02:06	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 02:06	CJG	A
Methyl t-Butyl Ether	0.46J	J	ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 02:06	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/18/18 02:06	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:06	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 02:06	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:06	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/18/18 02:06	CJG	A
Trichloroethene	52.1		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:06	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/18/18 02:06	CJG	A
Vinyl Chloride	8.2		ug/L	1.0	0.30	SW846 8260B		4/18/18 02:06	CJG	A
cis-1,2-Dichloroethene	264		ug/L	5.0	1.6	SW846 8260B		4/19/18 18:47	DD	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:06	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/18/18 02:06	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 02:06	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 02:06	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:06	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:06	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:06	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/18/18 02:06	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/18/18 02:06	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/18/18 02:06	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280018** Date Collected: 4/11/2018 09:55 Matrix: Water

Sample ID: **MRC-MW131B-D** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	13.7		ug/L	1.0	0.26	SW846 8260B			4/18/18 02:06	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/18/18 02:06	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	78.5		%	62 - 133		SW846 8260B			4/19/18 18:47	DD	B
1,2-Dichloroethane-d4 (S)	99.8		%	62 - 133		SW846 8260B			4/18/18 02:06	CJG	A
4-Bromofluorobenzene (S)	96.4		%	79 - 114		SW846 8260B			4/18/18 02:06	CJG	A
4-Bromofluorobenzene (S)	111		%	79 - 114		SW846 8260B			4/19/18 18:47	DD	B
Dibromofluoromethane (S)	87.6		%	78 - 116		SW846 8260B			4/19/18 18:47	DD	B
Dibromofluoromethane (S)	96.6		%	78 - 116		SW846 8260B			4/18/18 02:06	CJG	A
Toluene-d8 (S)	90.6		%	76 - 127		SW846 8260B			4/18/18 02:06	CJG	A
Toluene-d8 (S)	87.3		%	76 - 127		SW846 8260B			4/19/18 18:47	DD	B
SEMIVOLATILE SIM											
1,4-Dioxane	6.7		ug/L	0.98	0.19	8270 SIM	4/17/18 14:30	TXC	4/21/18 03:57	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:17	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:17	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:17	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:17	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:17	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	53.2		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 03:17	GEC	C
2-Methylnapthalene-d10 (S)	35.4		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/21/18 03:57	GEC	C
Fluoranthene-d10 (S)	97.8		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 03:17	GEC	C
Fluoranthene-d10 (S)	82.6		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/21/18 03:57	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 09:06	MBW	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280019** Date Collected: 4/11/2018 10:00 Matrix: Water

Sample ID: **MRC-MW129A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 02:29	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 02:29	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 02:29	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 02:29	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 02:29	CJG	A
1,2,3-Trichlorobenzene	3.4		ug/L	2.0	0.93	SW846 8260B		4/18/18 02:29	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 02:29	CJG	A
1,2,4-Trichlorobenzene	36.8		ug/L	2.0	0.82	SW846 8260B		4/18/18 02:29	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:29	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/18/18 02:29	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 02:29	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/18/18 02:29	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:29	CJG	A
1,2-Dichloroethene, Total	4.0		ug/L	2.0	0.45	SW846 8260B		4/18/18 02:29	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:29	CJG	A
1,3-Dichlorobenzene	18.7		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:29	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:29	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/18/18 02:29	CJG	A
1,4-Dichlorobenzene	1.9		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:29	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:29	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/18/18 02:29	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/18/18 02:29	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/18/18 02:29	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/18/18 02:29	CJG	A
Acetone	7.4J	J	ug/L	10.0	3.1	SW846 8260B		4/18/18 02:29	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:29	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:29	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:29	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:29	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/18/18 02:29	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/18/18 02:29	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:29	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:29	CJG	A
Chlorobenzene	0.23J	J	ug/L	1.0	0.19	SW846 8260B		4/18/18 02:29	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 02:29	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280019** Date Collected: 4/11/2018 10:00 Matrix: Water

Sample ID: **MRC-MW129A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/18/18 02:29	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:29	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 02:29	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:29	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:29	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 02:29	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 02:29	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 02:29	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/18/18 02:29	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 02:29	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/18/18 02:29	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 02:29	CJG	A
Methyl t-Butyl Ether	2.4		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 02:29	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/18/18 02:29	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:29	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 02:29	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:29	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/18/18 02:29	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:29	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/18/18 02:29	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 02:29	CJG	A
cis-1,2-Dichloroethene	4.0		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:29	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:29	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/18/18 02:29	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 02:29	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 02:29	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:29	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:29	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:29	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/18/18 02:29	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/18/18 02:29	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/18/18 02:29	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280019** Date Collected: 4/11/2018 10:00 Matrix: Water

Sample ID: **MRC-MW129A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/18/18 02:29	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/18/18 02:29	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/18/18 02:29	CJG	A
4-Bromofluorobenzene (S)	93.4		%	79 - 114		SW846 8260B			4/18/18 02:29	CJG	A
Dibromofluoromethane (S)	97.4		%	78 - 116		SW846 8260B			4/18/18 02:29	CJG	A
Toluene-d8 (S)	91.5		%	76 - 127		SW846 8260B			4/18/18 02:29	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.12		ug/L	0.10	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	49		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
Fluoranthene-d10 (S)	83.3		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 03:43	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 09:14	MBW	E
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Chromium, Total	0.0013J	J	mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Cobalt, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 10:35	AXC	4/23/18 13:55	AXC	H2
Nickel, Total	0.0025J	J	mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
Zinc, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:38	MO	H1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280019** Date Collected: 4/11/2018 10:00 Matrix: Water

Sample ID: **MRC-MW129A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 11:37	SUB	F

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280020** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-4** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 23:49	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 23:49	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 23:49	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 23:49	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 23:49	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/17/18 23:49	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 23:49	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/17/18 23:49	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 23:49	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/17/18 23:49	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/17/18 23:49	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/17/18 23:49	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:49	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/17/18 23:49	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 23:49	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 23:49	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 23:49	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/17/18 23:49	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 23:49	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:49	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/17/18 23:49	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/17/18 23:49	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/17/18 23:49	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/17/18 23:49	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/17/18 23:49	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 23:49	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:49	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:49	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/17/18 23:49	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/17/18 23:49	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/17/18 23:49	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 23:49	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:49	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 23:49	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 23:49	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280020** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-4** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/17/18 23:49	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:49	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/17/18 23:49	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:49	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/17/18 23:49	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/17/18 23:49	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/17/18 23:49	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 23:49	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/17/18 23:49	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/17/18 23:49	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/17/18 23:49	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 23:49	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/17/18 23:49	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/17/18 23:49	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 23:49	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/17/18 23:49	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/17/18 23:49	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/17/18 23:49	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/17/18 23:49	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/17/18 23:49	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/17/18 23:49	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:49	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:49	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/17/18 23:49	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/17/18 23:49	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/17/18 23:49	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/17/18 23:49	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/17/18 23:49	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/17/18 23:49	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/17/18 23:49	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/17/18 23:49	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/17/18 23:49	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280020** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-4** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/17/18 23:49	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/17/18 23:49	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/17/18 23:49	CJG	A
4-Bromofluorobenzene (S)	98		%	79 - 114		SW846 8260B			4/17/18 23:49	CJG	A
Dibromofluoromethane (S)	99.5		%	78 - 116		SW846 8260B			4/17/18 23:49	CJG	A
Toluene-d8 (S)	93.7		%	76 - 127		SW846 8260B			4/17/18 23:49	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280021** Date Collected: 4/11/2018 12:10 Matrix: Water

Sample ID: **MRC-MW129B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 02:51	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 02:51	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 02:51	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 02:51	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 02:51	CJG	A
1,2,3-Trichlorobenzene	1.4J	J	ug/L	2.0	0.93	SW846 8260B		4/18/18 02:51	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 02:51	CJG	A
1,2,4-Trichlorobenzene	7.0		ug/L	2.0	0.82	SW846 8260B		4/18/18 02:51	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:51	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/18/18 02:51	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 02:51	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/18/18 02:51	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:51	CJG	A
1,2-Dichloroethene, Total	3.1		ug/L	2.0	0.45	SW846 8260B		4/18/18 02:51	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:51	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:51	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:51	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/18/18 02:51	CJG	A
1,4-Dichlorobenzene	0.78J	J	ug/L	1.0	0.27	SW846 8260B		4/18/18 02:51	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:51	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/18/18 02:51	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/18/18 02:51	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/18/18 02:51	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/18/18 02:51	CJG	A
Acetone	5.3J	J	ug/L	10.0	3.1	SW846 8260B		4/18/18 02:51	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:51	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:51	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:51	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 02:51	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/18/18 02:51	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/18/18 02:51	CJG	A
Carbon Disulfide	0.27J	J,1	ug/L	1.0	0.23	SW846 8260B		4/18/18 02:51	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:51	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 02:51	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 02:51	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280021** Date Collected: 4/11/2018 12:10 Matrix: Water

Sample ID: **MRC-MW129B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
Chloroform	0.30J	J	ug/L	1.0	0.21	SW846 8260B		4/18/18 02:51	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:51	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 02:51	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:51	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 02:51	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 02:51	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 02:51	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 02:51	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/18/18 02:51	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 02:51	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/18/18 02:51	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 02:51	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 02:51	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/18/18 02:51	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:51	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 02:51	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 02:51	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/18/18 02:51	CJG	A
Trichloroethene	2.9		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 02:51	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/18/18 02:51	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 02:51	CJG	A
cis-1,2-Dichloroethene	3.1		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:51	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:51	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/18/18 02:51	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 02:51	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 02:51	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 02:51	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 02:51	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 02:51	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/18/18 02:51	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/18/18 02:51	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/18/18 02:51	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280021** Date Collected: 4/11/2018 12:10 Matrix: Water

Sample ID: **MRC-MW129B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/18/18 02:51	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/18/18 02:51	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133		SW846 8260B			4/18/18 02:51	CJG	A
4-Bromofluorobenzene (S)	99.6		%	79 - 114		SW846 8260B			4/18/18 02:51	CJG	A
Dibromofluoromethane (S)	98.5		%	78 - 116		SW846 8260B			4/18/18 02:51	CJG	A
Toluene-d8 (S)	93		%	76 - 127		SW846 8260B			4/18/18 02:51	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.090J	J	ug/L	0.10	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	66.3		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
Fluoranthene-d10 (S)	107		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 05:28	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 09:22	MBW	E
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Beryllium, Total	0.0016		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Chromium, Total	0.0018J	J	mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Cobalt, Total	0.0067		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/23/18 10:35	AXC	4/23/18 13:56	AXC	H2
Nickel, Total	0.012		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
Zinc, Total	0.021		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 16:42	MO	H1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280021** Date Collected: 4/11/2018 12:10 Matrix: Water

Sample ID: **MRC-MW129B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 12:06	SUB	F

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280022** Date Collected: 4/11/2018 09:13 Matrix: Water

Sample ID: **MRC-MW100A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 19:09	DD	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 19:09	DD	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 19:09	DD	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
1,1-Dichloroethane	1.7		ug/L	1.0	0.28	SW846 8260B		4/19/18 19:09	DD	B
1,1-Dichloroethene	1.5		ug/L	1.0	0.29	SW846 8260B		4/19/18 19:09	DD	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/19/18 19:09	DD	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 19:09	DD	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/19/18 19:09	DD	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 19:09	DD	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/19/18 19:09	DD	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/19/18 19:09	DD	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/19/18 19:09	DD	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 19:09	DD	B
1,2-Dichloroethene, Total	0.98J	J	ug/L	2.0	0.45	SW846 8260B		4/19/18 19:09	DD	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 19:09	DD	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 19:09	DD	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 19:09	DD	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/19/18 19:09	DD	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 19:09	DD	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 19:09	DD	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/19/18 19:09	DD	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/19/18 19:09	DD	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/19/18 19:09	DD	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/19/18 19:09	DD	B
Acetone	5.8J	J	ug/L	10.0	3.1	SW846 8260B		4/19/18 19:09	DD	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 19:09	DD	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 19:09	DD	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 19:09	DD	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/19/18 19:09	DD	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/19/18 19:09	DD	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/19/18 19:09	DD	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 19:09	DD	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 19:09	DD	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 19:09	DD	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 19:09	DD	B

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280022** Date Collected: 4/11/2018 09:13 Matrix: Water

Sample ID: **MRC-MW100A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/19/18 19:09	DD	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 19:09	DD	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/19/18 19:09	DD	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 19:09	DD	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/19/18 19:09	DD	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/19/18 19:09	DD	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/19/18 19:09	DD	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 19:09	DD	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/19/18 19:09	DD	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/19/18 19:09	DD	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/19/18 19:09	DD	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/19/18 19:09	DD	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/19/18 19:09	DD	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/19/18 19:09	DD	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 19:09	DD	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/19/18 19:09	DD	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/19/18 19:09	DD	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/19/18 19:09	DD	B
Trichloroethene	6.0		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/19/18 19:09	DD	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/19/18 19:09	DD	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/19/18 19:09	DD	B
cis-1,2-Dichloroethene	0.98J	J	ug/L	1.0	0.32	SW846 8260B		4/19/18 19:09	DD	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 19:09	DD	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/19/18 19:09	DD	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/19/18 19:09	DD	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/19/18 19:09	DD	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/19/18 19:09	DD	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/19/18 19:09	DD	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/19/18 19:09	DD	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/19/18 19:09	DD	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/19/18 19:09	DD	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/19/18 19:09	DD	B

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280022** Date Collected: 4/11/2018 09:13 Matrix: Water

Sample ID: **MRC-MW100A** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/19/18 19:09	DD	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/19/18 19:09	DD	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	80.3		%	62 - 133		SW846 8260B			4/19/18 19:09	DD	B
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/19/18 19:09	DD	B
Dibromofluoromethane (S)	85.8		%	78 - 116		SW846 8260B			4/19/18 19:09	DD	B
Toluene-d8 (S)	86.2		%	76 - 127		SW846 8260B			4/19/18 19:09	DD	B

Vanessa N. Badman

Mrs. Vanessa N Badman
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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280023** Date Collected: 4/11/2018 11:09 Matrix: Water

Sample ID: **MRC-MW100B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 03:37	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 03:37	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 03:37	CJG	A
1,1,2-Trichloroethane	0.50J	J	ug/L	1.0	0.33	SW846 8260B		4/18/18 03:37	CJG	A
1,1-Dichloroethane	34.0		ug/L	1.0	0.28	SW846 8260B		4/18/18 03:37	CJG	A
1,1-Dichloroethene	89.0		ug/L	5.0	1.5	SW846 8260B		4/19/18 18:03	DD	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/18/18 03:37	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 03:37	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/18/18 03:37	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 03:37	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/18/18 03:37	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 03:37	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/18/18 03:37	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 03:37	CJG	A
1,2-Dichloroethene, Total	46.9		ug/L	2.0	0.45	SW846 8260B		4/18/18 03:37	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 03:37	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 03:37	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 03:37	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/18/18 03:37	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 03:37	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 03:37	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/18/18 03:37	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/18/18 03:37	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/18/18 03:37	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/18/18 03:37	CJG	A
Acetone	6.9J	J	ug/L	10.0	3.1	SW846 8260B		4/18/18 03:37	CJG	A
Benzene	0.27J	J	ug/L	1.0	0.23	SW846 8260B		4/18/18 03:37	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 03:37	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 03:37	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 03:37	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/18/18 03:37	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/18/18 03:37	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 03:37	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 03:37	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 03:37	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 03:37	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280023** Date Collected: 4/11/2018 11:09 Matrix: Water

Sample ID: **MRC-MW100B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 03:37	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/18/18 03:37	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 03:37	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 03:37	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 03:37	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 03:37	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 03:37	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 03:37	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 03:37	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 03:37	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/18/18 03:37	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 03:37	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/18/18 03:37	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 03:37	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 03:37	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 03:37	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/18/18 03:37	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 03:37	CJG	A
Tetrachloroethene	1.0		ug/L	1.0	0.35	SW846 8260B		4/18/18 03:37	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 03:37	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/18/18 03:37	CJG	A
Trichloroethene	203		ug/L	5.0	1.7	SW846 8260B		4/19/18 18:03	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 03:37	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/18/18 03:37	CJG	A
Vinyl Chloride	0.39J	J	ug/L	1.0	0.30	SW846 8260B		4/18/18 03:37	CJG	A
cis-1,2-Dichloroethene	46.9		ug/L	1.0	0.32	SW846 8260B		4/18/18 03:37	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 03:37	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/18/18 03:37	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 03:37	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 03:37	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 03:37	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 03:37	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 03:37	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 03:37	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 03:37	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/18/18 03:37	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/18/18 03:37	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/18/18 03:37	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280023** Date Collected: 4/11/2018 11:09 Matrix: Water

Sample ID: **MRC-MW100B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/18/18 03:37	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/18/18 03:37	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.4		%	62 - 133		SW846 8260B			4/18/18 03:37	CJG	A
1,2-Dichloroethane-d4 (S)	79.6		%	62 - 133		SW846 8260B			4/19/18 18:03	DD	B
4-Bromofluorobenzene (S)	111		%	79 - 114		SW846 8260B			4/19/18 18:03	DD	B
4-Bromofluorobenzene (S)	97.3		%	79 - 114		SW846 8260B			4/18/18 03:37	CJG	A
Dibromofluoromethane (S)	95.9		%	78 - 116		SW846 8260B			4/18/18 03:37	CJG	A
Dibromofluoromethane (S)	88.5		%	78 - 116		SW846 8260B			4/19/18 18:03	DD	B
Toluene-d8 (S)	93.3		%	76 - 127		SW846 8260B			4/18/18 03:37	CJG	A
Toluene-d8 (S)	87.6		%	76 - 127		SW846 8260B			4/19/18 18:03	DD	B
SEMIVOLATILE SIM											
1,4-Dioxane	51.7		ug/L	2.1	0.40	8270 SIM	4/17/18 14:30	TXC	4/21/18 04:26	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:09	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:09	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:09	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:09	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:09	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	73.2		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 04:09	GEC	C
2-Methylnapthalene-d10 (S)	48.4		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/21/18 04:26	GEC	C
Fluoranthene-d10 (S)	84.9		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/21/18 04:26	GEC	C
Fluoranthene-d10 (S)	104		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 04:09	GEC	C

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280024** Date Collected: 4/11/2018 12:15 Matrix: Water

Sample ID: **MRC-MW34B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 04:00	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 04:00	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 04:00	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
1,1-Dichloroethane	0.92J	J,12	ug/L	1.0	0.28	SW846 8260B		4/18/18 04:00	CJG	A
1,1-Dichloroethene	ND	2,3	ug/L	1.0	0.29	SW846 8260B		4/18/18 04:00	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/18/18 04:00	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 04:00	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/18/18 04:00	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 04:00	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/18/18 04:00	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 04:00	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/18/18 04:00	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 04:00	CJG	A
1,2-Dichloroethene, Total	16.6		ug/L	2.0	0.45	SW846 8260B		4/18/18 04:00	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 04:00	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 04:00	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 04:00	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/18/18 04:00	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 04:00	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 04:00	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/18/18 04:00	CJG	A
2-Chloroethylvinyl ether	ND	17,18	ug/L	2.0	0.38	SW846 8260B		4/18/18 04:00	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/18/18 04:00	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/18/18 04:00	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/18/18 04:00	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 04:00	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 04:00	CJG	A
Bromochloromethane	ND	13,14	ug/L	1.0	0.32	SW846 8260B		4/18/18 04:00	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 04:00	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/18/18 04:00	CJG	A
Bromomethane	ND	1	ug/L	1.0	0.39	SW846 8260B		4/18/18 04:00	CJG	A
Carbon Disulfide	ND	8,9	ug/L	1.0	0.23	SW846 8260B		4/18/18 04:00	CJG	A
Carbon Tetrachloride	3.5		ug/L	1.0	0.31	SW846 8260B		4/18/18 04:00	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280024** Date Collected: 4/11/2018 12:15 Matrix: Water

Sample ID: **MRC-MW34B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 04:00	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 04:00	CJG	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
Chloroform	1.3		ug/L	1.0	0.21	SW846 8260B		4/18/18 04:00	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 04:00	CJG	A
Cyclohexane	ND	15,16	ug/L	1.0	0.29	SW846 8260B		4/18/18 04:00	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 04:00	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 04:00	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 04:00	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 04:00	CJG	A
Freon 113	ND	6,7	ug/L	1.0	0.26	SW846 8260B		4/18/18 04:00	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/18/18 04:00	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 04:00	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/18/18 04:00	CJG	A
Methyl cyclohexane	ND	20,21	ug/L	1.0	0.30	SW846 8260B		4/18/18 04:00	CJG	A
Methyl t-Butyl Ether	24.1		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
Methylene Chloride	ND	4,5	ug/L	1.0	0.45	SW846 8260B		4/18/18 04:00	CJG	A
Naphthalene	ND	19	ug/L	2.0	0.34	SW846 8260B		4/18/18 04:00	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 04:00	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 04:00	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 04:00	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/18/18 04:00	CJG	A
Trichloroethene	15.2		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 04:00	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/18/18 04:00	CJG	A
Vinyl Chloride	1.5		ug/L	1.0	0.30	SW846 8260B		4/18/18 04:00	CJG	A
cis-1,2-Dichloroethene	15.6		ug/L	1.0	0.32	SW846 8260B		4/18/18 04:00	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 04:00	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/18/18 04:00	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 04:00	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 04:00	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 04:00	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 04:00	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 04:00	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280024** Date Collected: 4/11/2018 12:15 Matrix: Water

Sample ID: **MRC-MW34B** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B			4/18/18 04:00	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B			4/18/18 04:00	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/18/18 04:00	CJG	A
trans-1,2-Dichloroethene	1.0	10,11	ug/L	1.0	0.26	SW846 8260B			4/18/18 04:00	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/18/18 04:00	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	62 - 133		SW846 8260B			4/18/18 04:00	CJG	A
4-Bromofluorobenzene (S)	99.4		%	79 - 114		SW846 8260B			4/18/18 04:00	CJG	A
Dibromofluoromethane (S)	102		%	78 - 116		SW846 8260B			4/18/18 04:00	CJG	A
Toluene-d8 (S)	84.3		%	76 - 127		SW846 8260B			4/18/18 04:00	CJG	A
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/24/18 03:53	EGO	G
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/24/18 03:53	EGO	G
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/24/18 03:53	EGO	G
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/24/18 03:53	EGO	G
Methane	37.0	22	ug/L	1.5	0.34	RSK 175			4/24/18 03:53	EGO	G
Propane	ND		ug/L	3.2	0.22	RSK 175			4/24/18 03:53	EGO	G
WET CHEMISTRY											
Alkalinity, Total	5	23	mg/L	5	0.8	S2320B-97			4/14/18 08:43	MSA	M
Ammonia-N	0.212		mg/L	0.100	0.03	D6919-09			4/20/18 12:31	CMM	P
Chloride	198		mg/L	5.0	0.59	EPA 300.0			4/17/18 13:03	CHW	Y
Nitrate-N	0.16J	J	mg/L	0.20	0.057	EPA 300.0			4/12/18 05:57	CHW	Y
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/12/18 05:57	CHW	Y
Orthophosphate	0.0059J	J	mg/L	0.020	0.0029	S4500PE-99			4/12/18 01:30	MSA	Y
Phosphorus, Total	ND		mg/L	0.10	0.017	EPA 365.1	4/19/18 13:00	BMK	4/27/18 18:20	JAM	P
Sulfate	23.5		mg/L	2.0	0.40	EPA 300.0			4/12/18 05:57	CHW	Y
Total Dissolved Solids	350		mg/L	5	5	S2540C-11			4/17/18 12:50	LLJ	Y
Total Organic Carbon (TOC)	1.6		mg/L	0.50	0.18	S5310B-00			4/16/18 11:34	PAG	S

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280025** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-5** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 00:12	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 00:12	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 00:12	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 00:12	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 00:12	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/18/18 00:12	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 00:12	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/18/18 00:12	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 00:12	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/18/18 00:12	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/18/18 00:12	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/18/18 00:12	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 00:12	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/18/18 00:12	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 00:12	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 00:12	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 00:12	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/18/18 00:12	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 00:12	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 00:12	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/18/18 00:12	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/18/18 00:12	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/18/18 00:12	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/18/18 00:12	CJG	A
Acetone	5.8J	J	ug/L	10.0	3.1	SW846 8260B		4/18/18 00:12	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 00:12	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 00:12	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 00:12	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/18/18 00:12	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/18/18 00:12	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/18/18 00:12	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 00:12	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 00:12	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 00:12	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 00:12	CJG	A

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280025** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-5** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/18/18 00:12	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 00:12	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/18/18 00:12	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 00:12	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/18/18 00:12	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/18/18 00:12	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/18/18 00:12	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 00:12	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/18/18 00:12	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/18/18 00:12	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/18/18 00:12	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 00:12	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/18/18 00:12	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/18/18 00:12	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 00:12	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/18/18 00:12	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/18/18 00:12	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/18/18 00:12	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/18/18 00:12	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/18/18 00:12	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/18/18 00:12	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 00:12	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 00:12	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/18/18 00:12	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/18/18 00:12	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/18/18 00:12	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/18/18 00:12	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/18/18 00:12	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/18/18 00:12	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/18/18 00:12	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/18/18 00:12	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/18/18 00:12	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID: **2308280025** Date Collected: 4/11/2018 23:30 Matrix: Water

Sample ID: **TB-041118-5** Date Received: 4/11/2018 23:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/18/18 00:12	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/18/18 00:12	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99.4		%	62 - 133		SW846 8260B			4/18/18 00:12	CJG	A
4-Bromofluorobenzene (S)	97.5		%	79 - 114		SW846 8260B			4/18/18 00:12	CJG	A
Dibromofluoromethane (S)	99.1		%	78 - 116		SW846 8260B			4/18/18 00:12	CJG	A
Toluene-d8 (S)	91.6		%	76 - 127		SW846 8260B			4/18/18 00:12	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2308280001	3	MRC-MW128B	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 133 and the control limits were 57 to 131.				
2308280002	1	FB-041018-ZN	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2308280006	1	MRC-MW27B	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2308280011	1	MRC-MW27A	SW846 8260B	4-Methyl-2-Pentanone(MIBK)
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 69.8 and the control limits were 71 to 146.				
2308280011	2	MRC-MW27A	SW846 8260B	2-Hexanone
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 63.7 and the control limits were 65 to 154.				
2308280011	3	MRC-MW27A	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2308280011	4	MRC-MW27A	EPA 300.0	Nitrite-N
The sample was originally run within hold time, but required further analysis that exceeded hold time.				
2308280011	5	MRC-MW27A	EPA 300.0	Nitrite-N
Due to sample matrix interferences, this analyte was analyzed at a dilution and the detection levels adjusted accordingly.				
2308280012	1	MRC-MW13A	SW846 8260B	4-Methyl-2-Pentanone(MIBK)
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 69.8 and the control limits were 71 to 146.				
2308280012	2	MRC-MW13A	SW846 8260B	2-Hexanone
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 63.7 and the control limits were 65 to 154.				
2308280013	1	MRC-MW122A	SW846 8260B	4-Methyl-2-Pentanone(MIBK)
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 69.8 and the control limits were 71 to 146.				
2308280013	2	MRC-MW122A	SW846 8260B	2-Hexanone
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 63.7 and the control limits were 65 to 154.				
2308280014	1	MRC-SWMW-5I	SW846 8260B	Bromomethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromomethane. The RPD was reported as 35 and the upper control limit is 26.				
2308280014	2	MRC-SWMW-5I	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 131 and the control limits were 63 to 128.				
2308280014	3	MRC-SWMW-5I	SW846 8260B	Methylene Chloride
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 134 and the control limits were 76 to 121.				
2308280014	4	MRC-SWMW-5I	SW846 8260B	Methylene Chloride
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 129 and the control limits were 76 to 121.				

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

2308280014	5	MRC-SWMW-5I	SW846 8260B	Freon 113

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 140 and the control limits were 50 to 130.

2308280014	6	MRC-SWMW-5I	SW846 8260B	Freon 113

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 133 and the control limits were 50 to 130.

2308280014	7	MRC-SWMW-5I	SW846 8260B	Carbon Disulfide

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 144 and the control limits were 57 to 131.

2308280014	8	MRC-SWMW-5I	SW846 8260B	Carbon Disulfide

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 137 and the control limits were 57 to 131.

2308280014	9	MRC-SWMW-5I	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 126 and the control limits were 71 to 122.

2308280014	10	MRC-SWMW-5I	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 128 and the control limits were 71 to 122.

2308280014	11	MRC-SWMW-5I	SW846 8260B	Bromochloromethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 124 and the control limits were 73 to 117.

2308280014	12	MRC-SWMW-5I	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 133 and the control limits were 66 to 130.

2308280014	13	MRC-SWMW-5I	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 140 and the control limits were 66 to 130.

2308280014	14	MRC-SWMW-5I	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .81 and the control limits were 1 to 150.

2308280014	15	MRC-SWMW-5I	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The RPD was reported as 44.9 and the upper control limit is 40.

2308280014	16	MRC-SWMW-5I	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .51 and the control limits were 1 to 150.

2308280014	17	MRC-SWMW-5I	SW846 8260B	4-Methyl-2-Pentanone(MIBK)

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 69.8 and the control limits were 71 to 146.

2308280014	18	MRC-SWMW-5I	SW846 8260B	Toluene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Toluene. The % Recovery was reported as 127 and the control limits were 80 to 125.

2308280014	19	MRC-SWMW-5I	SW846 8260B	2-Hexanone

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 63.7 and the control limits were 65 to 154.

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

2308280014	20	MRC-SWMW-5I	SW846 8260B	Methyl cyclohexane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 141 and the control limits were 70 to 130.				
2308280014	21	MRC-SWMW-5I	SW846 8260B	Methyl cyclohexane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 164 and the control limits were 70 to 130.				
2308280015	1	MRC-SWMW-5I-D	SW846 8260B	4-Methyl-2-Pentanone(MIBK)
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 69.8 and the control limits were 71 to 146.				
2308280015	2	MRC-SWMW-5I-D	SW846 8260B	2-Hexanone
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 63.7 and the control limits were 65 to 154.				
2308280021	1	MRC-MW129B	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 148 and the control limits were 57 to 131.				
2308280024	1	MRC-MW34B	SW846 8260B	Bromomethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromomethane. The RPD was reported as 35.6 and the upper control limit is 26.				
2308280024	2	MRC-MW34B	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 130 and the control limits were 63 to 128.				
2308280024	3	MRC-MW34B	SW846 8260B	1,1-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 131 and the control limits were 63 to 128.				
2308280024	4	MRC-MW34B	SW846 8260B	Methylene Chloride
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 128 and the control limits were 76 to 121.				
2308280024	5	MRC-MW34B	SW846 8260B	Methylene Chloride
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 135 and the control limits were 76 to 121.				
2308280024	6	MRC-MW34B	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 144 and the control limits were 50 to 130.				
2308280024	7	MRC-MW34B	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 143 and the control limits were 50 to 130.				
2308280024	8	MRC-MW34B	SW846 8260B	Carbon Disulfide
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 146 and the control limits were 57 to 131.				
2308280024	9	MRC-MW34B	SW846 8260B	Carbon Disulfide
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 146 and the control limits were 57 to 131.				
2308280024	10	MRC-MW34B	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 127 and the control limits were 71 to 122.				

ANALYTICAL RESULTS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

2308280024	11	MRC-MW34B	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 128 and the control limits were 71 to 122.

2308280024	12	MRC-MW34B	SW846 8260B	1,1-Dichloroethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 125 and the control limits were 78 to 124.

2308280024	13	MRC-MW34B	SW846 8260B	Bromochloromethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 121 and the control limits were 73 to 117.

2308280024	14	MRC-MW34B	SW846 8260B	Bromochloromethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 121 and the control limits were 73 to 117.

2308280024	15	MRC-MW34B	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 144 and the control limits were 66 to 130.

2308280024	16	MRC-MW34B	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 143 and the control limits were 66 to 130.

2308280024	17	MRC-MW34B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .5 and the control limits were 1 to 150.

2308280024	18	MRC-MW34B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .58 and the control limits were 1 to 150.

2308280024	19	MRC-MW34B	SW846 8260B	Naphthalene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 55.5 and the control limits were 56 to 134.

2308280024	20	MRC-MW34B	SW846 8260B	Methyl cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 158 and the control limits were 70 to 130.

2308280024	21	MRC-MW34B	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 159 and the control limits were 70 to 130.

2308280024	22	MRC-MW34B	RSK 175	Methane

The QC sample type DUP for method RSK 175 was outside the control limits for the analyte Methane. The RPD was reported as 26.4 and the upper control limit is 20.

2308280024	23	MRC-MW34B	S2320B-97	Alkalinity, Total

The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: EXTR/51783 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308280001, 2308280002, 2308280004, 2308280005, 2308280006, 2308280012, 2308280017, 2308280018, 2308280019, 2308280021, 2308280023

METHOD BLANK: 2724694

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	79.3	%	29 - 112
Fluoranthene-d10 (S)	98.5	%	45 - 130

LABORATORY CONTROL SAMPLE: 2724695

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	47.3	ug/L	1	0.47	22 - 75
2-Methylnapthalene-d10 (S)	78.1	%			29 - 112
Fluoranthene-d10 (S)	92.4	%			45 - 130

MATRIX SPIKE: 2724696 DUPLICATE: 2724697 ORIGINAL: 2308629005

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	88.4541	ug/L	.99	45.9115	45.17	NC	NC	22 - 75	1.63	
2-Methylnapthalene-d10 (S)	61.3	%				61.3	55.7	29 - 112		
Fluoranthene-d10 (S)	90.7	%				90.7	95.2	45 - 130		

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71189 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2308280002

METHOD BLANK: 2722987

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	ND	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2722988

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	98.7	mg/L	1.1	1.1	80 - 120
Iron, Total	99	mg/L	1.1	1.1	80 - 120
Magnesium, Total	99.1	mg/L	1.1	1.1	80 - 120
Manganese, Total	99.6	mg/L	.11	0.11	80 - 120
Potassium, Total	95.8	mg/L	22.2	21.3	80 - 120
Sodium, Total	101	mg/L	22.2	22.4	80 - 120

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71191 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2308280001

METHOD BLANK: 2722995

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011

LABORATORY CONTROL SAMPLE: 2722996

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	97.2	mg/L	.22	0.22	80 - 120
Arsenic, Total	88.6	mg/L	.22	0.20	80 - 120
Beryllium, Total	90.6	mg/L	.22	0.20	80 - 120
Cadmium, Total	94.3	mg/L	.22	0.21	80 - 120
Chromium, Total	97.8	mg/L	.22	0.22	80 - 120
Cobalt, Total	98.8	mg/L	.22	0.22	80 - 120
Copper, Total	97.2	mg/L	.22	0.22	80 - 120
Lead, Total	102	mg/L	.22	0.23	80 - 120
Nickel, Total	97.5	mg/L	.22	0.22	80 - 120
Silver, Total	94.4	mg/L	.11	0.10	80 - 120
Thallium, Total	99.4	mg/L	.22	0.22	80 - 120

MATRIX SPIKE: 2722997 DUPLICATE: 2722998 ORIGINAL: 2308453011

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Arsenic, Total	.00004	mg/L	.22	.19984	.19558	89.9	88	75 - 125	2.16	20

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Beryllium, Total	.00001	mg/L	.22	.20322	.2021	91.4	90.9	75 - 125	.55	20
Cadmium, Total	.00001	mg/L	.22	.2088	.20904	94	94.1	75 - 125	.12	20
Chromium, Total	.00086	mg/L	.22	.21846	.22075	97.9	99	75 - 125	1.04	20
Cobalt, Total	0	mg/L	.22	.2201	.2214	99	99.6	75 - 125	.59	20
Copper, Total	.00052	mg/L	.22	.21571	.21848	96.8	98.1	75 - 125	1.28	20
Lead, Total	.00005	mg/L	.22	.22532	.22673	101	102	75 - 125	.62	20
Nickel, Total	.00025	mg/L	.22	.21679	.21684	97.4	97.5	75 - 125	.02	20
Silver, Total	.00034	mg/L	.11	.10452	.10399	93.8	93.3	75 - 125	.51	20
Thallium, Total	0	mg/L	.22	.22379	.22425	101	101	75 - 125	.21	20

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71233 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2308280002, 2308280019, 2308280021

METHOD BLANK: 2724473

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	ND	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2724474

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	97	mg/L	.22	0.22	80 - 120
Arsenic, Total	89.4	mg/L	.22	0.20	80 - 120
Beryllium, Total	89.1	mg/L	.22	0.20	80 - 120
Cadmium, Total	93.3	mg/L	.22	0.21	80 - 120
Chromium, Total	98.8	mg/L	.22	0.22	80 - 120
Cobalt, Total	99.9	mg/L	.22	0.22	80 - 120
Copper, Total	98.5	mg/L	.22	0.22	80 - 120
Lead, Total	103	mg/L	.22	0.23	80 - 120
Nickel, Total	97.5	mg/L	.22	0.22	80 - 120
Selenium, Total	81.2	mg/L	.22	0.18	80 - 120
Silver, Total	92.3	mg/L	.11	0.10	80 - 120
Thallium, Total	102	mg/L	.22	0.23	80 - 120
Zinc, Total	83.1	mg/L	.22	0.18	80 - 120

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE: 2724475 DUPLICATE: 2724476 ORIGINAL: 2308289001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Antimony, Total	.00009	mg/L	.22	.21764	.21663	97.9	97.4	75 - 125	.46	20
Arsenic, Total	.00015	mg/L	.22	.19483	.20072	87.6	90.3	75 - 125	2.98	20
Beryllium, Total	.00005	mg/L	.22	.19047	.1862	85.7	83.8	75 - 125	2.27	20
Cadmium, Total	.00005	mg/L	.22	.20462	.20354	92.1	91.6	75 - 125	.53	20
Chromium, Total	.00103	mg/L	.22	.21298	.20943	95.4	93.8	75 - 125	1.68	20
Cobalt, Total	.00006	mg/L	.22	.21439	.21078	96.4	94.8	75 - 125	1.7	20
Copper, Total	.00251	mg/L	.22	.21244	.20945	94.5	93.1	75 - 125	1.42	20
Lead, Total	.00023	mg/L	.22	.22939	.22857	103	103	75 - 125	.36	20
Nickel, Total	.00075	mg/L	.22	.20581	.2017	92.3	90.4	75 - 125	2.02	20
Selenium, Total	.0001	mg/L	.22	.17995	.17657	80.9	79.4	75 - 125	1.9	20
Silver, Total	.00025	mg/L	.11	.09988	.09855	89.7	88.5	75 - 125	1.34	20
Thallium, Total	.00006	mg/L	.22	.22787	.22835	103	103	75 - 125	.21	20
Zinc, Total	.00467	mg/L	.22	.18244	.17814	80	78.1	75 - 125	2.39	20

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71289 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2308280006, 2308280011

METHOD BLANK: 2726173

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	ND	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2726174

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	103	mg/L	1.1	1.1	80 - 120
Iron, Total	102	mg/L	1.1	1.1	80 - 120
Magnesium, Total	104	mg/L	1.1	1.2	80 - 120
Manganese, Total	102	mg/L	.11	0.11	80 - 120
Potassium, Total	101	mg/L	22.2	22.4	80 - 120
Sodium, Total	103	mg/L	22.2	22.8	80 - 120

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71322 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2308280001, 2308280002, 2308280019, 2308280021

METHOD BLANK: 2727404

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2727405

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	100	mg/L	.002	0.0020	85 - 115

MATRIX SPIKE: 2727406 DUPLICATE: 2727407 ORIGINAL: 2308242001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00503	.00492	101	98.4	70 - 130	2.21	20

MATRIX SPIKE: 2727408 DUPLICATE: 2727409 ORIGINAL: 2308288001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00514	.00524	103	105	70 - 130	1.93	20

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: MDIG/71333 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2308280001

METHOD BLANK: 2727978

Parameter	Blank Result	Units	Reporting Limit
Selenium, Total	ND	mg/L	0.0056
Zinc, Total	ND	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2727979

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Selenium, Total	88.1	mg/L	.22	0.20	80 - 120
Zinc, Total	90.2	mg/L	.22	0.20	80 - 120

MATRIX SPIKE: 2727980 DUPLICATE: 2727981 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Selenium, Total	.00011	mg/L	.22	.17837	.18777	80.2	84.4	75 - 125	5.14	20
Zinc, Total	.05909	mg/L	.22	.23601	.24647	79.6	84.3	75 - 125	4.34	20

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: SVGC/48941 **Analysis Method:** RSK 175

QC Batch Method: RSK 175

Associated Lab Samples: 2308280002, 2308280006, 2308280011, 2308280024

METHOD BLANK: 2727972

Parameter	Blank Result	Units	Reporting Limit
n-Butane	ND	ug/L	4.3
Ethane	ND	ug/L	3.3
Ethene	ND	ug/L	2.4
Isobutane	ND	ug/L	4.6
Methane	ND	ug/L	1.5
Propane	ND	ug/L	3.2

SAMPLE DUPLICATE: 2727974 ORIGINAL: 2308280024

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	.21	ug/L	.24	13.3	20
Ethene	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	37.03	ug/L	48.27	26.4*	20
Propane	0	ug/L	0	NC	30

SAMPLE DUPLICATE: 2728040 ORIGINAL: 2309141001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	0	ug/L	0	NC	20
Propane	0	ug/L	0	NC	30

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46548 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308280001, 2308280002, 2308280003, 2308280004, 2308280005, 2308280006, 2308280007, 2308280008, 2308280009, 2308280010

METHOD BLANK: 2724316

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Chloroethane	ND	ug/L	1.0
Chloroform	0.31J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	1.1J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	81.4	%	62 - 133
4-Bromofluorobenzene (S)	105	%	79 - 114
Dibromofluoromethane (S)	89	%	78 - 116
Toluene-d8 (S)	87.6	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2724317

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	118	ug/L	20	23.6	78 - 121
1,1,1-Trichloroethane	112	ug/L	20	22.5	66 - 130
1,1,2,2-Tetrachloroethane	96.4	ug/L	20	19.3	74 - 135
1,1,2-Trichloroethane	106	ug/L	20	21.1	82 - 126
1,1-Dichloroethane	105	ug/L	20	21.0	78 - 124
1,1-Dichloroethene	116	ug/L	20	23.1	63 - 128
1,2,3-Trichlorobenzene	143*	ug/L	20	28.6	61 - 126
1,2,3-Trichloropropane	98.7	ug/L	20	19.7	75 - 132
1,2,4-Trichlorobenzene	111	ug/L	20	22.2	67 - 123
1,2,4-Trimethylbenzene	102	ug/L	20	20.4	76 - 125
1,2-Dibromo-3-chloropropane	81.6	ug/L	20	16.3	59 - 133
1,2-Dibromoethane	114	ug/L	20	22.7	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.2	82 - 118
1,2-Dichloroethane	95.2	ug/L	20	19.0	70 - 133
1,2-Dichloroethene, Total	107	ug/L	40	42.8	78 - 125
1,2-Dichloropropane	108	ug/L	20	21.5	81 - 127
1,3-Dichlorobenzene	107	ug/L	20	21.4	81 - 118
1,3-Dichloropropane	106	ug/L	20	21.1	82 - 126
1,3-Dichloropropene, Total	97.2	ug/L	40	38.9	80 - 123
1,4-Dichlorobenzene	103	ug/L	20	20.7	81 - 116
2,2-Dichloropropane	114	ug/L	20	22.8	64 - 129
2-Butanone	94.1	ug/L	100	94.1	50 - 152
2-Chloroethylvinyl ether	73.4	ug/L	20	14.7	1 - 150
2-Hexanone	81.9	ug/L	100	81.9	65 - 154
4-Methyl-2-Pentanone(MIBK)	85.5	ug/L	100	85.5	71 - 146
Acetone	92.1	ug/L	100	92.1	40 - 151
Benzene	103	ug/L	20	20.6	80 - 124
Bromobenzene	113	ug/L	20	22.6	81 - 119
Bromochloromethane	107	ug/L	20	21.4	73 - 117
Bromodichloromethane	101	ug/L	20	20.2	79 - 126
Bromoform	95.8	ug/L	20	19.2	70 - 123
Bromomethane	83.9	ug/L	20	16.8	45 - 148
Carbon Disulfide	106	ug/L	20	21.3	57 - 131
Carbon Tetrachloride	115	ug/L	20	23.0	62 - 132
Chlorobenzene	110	ug/L	20	22.1	85 - 117
Chlorodibromomethane	103	ug/L	20	20.6	77 - 122
Chloroethane	78.5	ug/L	20	15.7	51 - 142
Chloroform	101	ug/L	20	20.3	78 - 122
Chloromethane	95.6	ug/L	20	19.1	38 - 156
Cyclohexane	126	ug/L	20	25.1	66 - 130
Dibromomethane	97.7	ug/L	20	19.5	81 - 125

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	80.4	ug/L	20	16.1	17 - 166
Diisopropyl ether	95	ug/L	20	19.0	74 - 131
Ethyl tert-butyl ether	91.5	ug/L	20	18.3	75 - 123
Ethylbenzene	116	ug/L	20	23.1	80 - 124
Freon 113	124	ug/L	20	24.7	50 - 130
Hexachlorobutadiene	137*	ug/L	20	27.5	55 - 128
Isopropylbenzene	119	ug/L	20	23.8	73 - 129
Methyl acetate	92.9	ug/L	20	18.6	70 - 130
Methyl cyclohexane	127	ug/L	20	25.4	70 - 130
Methyl t-Butyl Ether	104	ug/L	20	20.8	69 - 115
Methylene Chloride	122*	ug/L	20	24.4	76 - 121
Naphthalene	173*	ug/L	20	34.7	56 - 134
Styrene	101	ug/L	20	20.2	79 - 123
Tetrachloroethene	113	ug/L	20	22.7	72 - 124
Toluene	120	ug/L	20	24.0	80 - 125
Total Xylenes	115	ug/L	60	68.8	79 - 125
Trichloroethene	99.5	ug/L	20	19.9	77 - 124
Trichlorofluoromethane	74.4	ug/L	20	14.9	38 - 123
Vinyl Acetate	86.5	ug/L	20	17.3	58 - 136
Vinyl Chloride	82.9	ug/L	20	16.6	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.2	78 - 125
cis-1,3-Dichloropropene	93.8	ug/L	20	18.8	81 - 121
mp-Xylene	120	ug/L	40	48.0	79 - 125
n-Butylbenzene	107	ug/L	20	21.3	71 - 130
n-Propylbenzene	106	ug/L	20	21.2	74 - 122
o-Chlorotoluene	113	ug/L	20	22.6	78 - 126
o-Xylene	104	ug/L	20	20.8	79 - 124
p-Chlorotoluene	114	ug/L	20	22.8	78 - 125
p-Isopropyltoluene	109	ug/L	20	21.8	72 - 123
sec-Butylbenzene	107	ug/L	20	21.3	72 - 127
tert-Amyl methyl ether	88.8	ug/L	20	17.8	75 - 121
tert-Butyl Alcohol	71.5	ug/L	100	71.5	17 - 168
tert-Butylbenzene	110	ug/L	20	22.1	72 - 124
trans-1,2-Dichloroethene	113	ug/L	20	22.5	71 - 122
trans-1,3-Dichloropropene	101	ug/L	20	20.1	78 - 126
1,2-Dichloroethane-d4 (S)	82.7	%			62 - 133
4-Bromofluorobenzene (S)	104	%			79 - 114
Dibromofluoromethane (S)	97.1	%			78 - 116
Toluene-d8 (S)	87.9	%			76 - 127

MATRIX SPIKE: 2724543 DUPLICATE: 2724544 ORIGINAL: 2309086001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

1,2,4-Trimethylbenzene	0	ug/L	20	21.2903	21.9144	106	110	76 - 125	2.89	24
Benzene	0	ug/L	20	20.6449	20.03	103	100	80 - 124	3.02	26
Ethylbenzene	0	ug/L	20	23.989	24.0995	120	120	80 - 124	.46	19
Isopropylbenzene	0	ug/L	20	26.0319	26.5325	130*	133*	73 - 129	1.9	18
Naphthalene	0	ug/L	20	23.8263	26.9429	119	135*	56 - 134	12.3	40
Toluene	0	ug/L	20	25.4628	24.1771	127*	121	80 - 125	5.18	20
Total Xylenes	0	ug/L	60	69.6892	69.6018	116	116	79 - 125	.13	35
n-Butylbenzene	0	ug/L	20	20.1375	22.2871	101	111	71 - 130	10.1	20
n-Propylbenzene	0	ug/L	20	22.89	24.2225	114	121	74 - 122	5.66	20
p-Isopropyltoluene	0	ug/L	20	21.8768	23.8144	109	119	72 - 123	8.48	17
sec-Butylbenzene	0	ug/L	20	21.8517	24.2158	109	121	72 - 127	10.3	17
1,2-Dichloroethane-d4 (S)	76.2	%				76.2	74.4	62 - 133		
4-Bromofluorobenzene (S)	107	%				107	109	79 - 114		
Dibromofluoromethane (S)	95.6	%				95.6	90.8	78 - 116		
Toluene-d8 (S)	89.1	%				89.1	86	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46553 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308280011, 2308280012, 2308280013, 2308280014, 2308280015

METHOD BLANK: 2724402

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Chloroform	0.66J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	99.8	%	62 - 133
4-Bromofluorobenzene (S)	101	%	79 - 114
Dibromofluoromethane (S)	97	%	78 - 116
Toluene-d8 (S)	95.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2724403

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	111	ug/L	20	22.3	78 - 121
1,1,1-Trichloroethane	105	ug/L	20	21.0	66 - 130
1,1,2,2-Tetrachloroethane	81.5	ug/L	20	16.3	74 - 135
1,1,2-Trichloroethane	97.9	ug/L	20	19.6	82 - 126
1,1-Dichloroethane	112	ug/L	20	22.4	78 - 124
1,1-Dichloroethene	112	ug/L	20	22.5	63 - 128
1,2,3-Trichlorobenzene	83.6	ug/L	20	16.7	61 - 126
1,2,3-Trichloropropane	83.7	ug/L	20	16.7	75 - 132
1,2,4-Trichlorobenzene	101	ug/L	20	20.2	67 - 123
1,2,4-Trimethylbenzene	103	ug/L	20	20.7	76 - 125
1,2-Dibromo-3-chloropropane	70.9	ug/L	20	14.2	59 - 133
1,2-Dibromoethane	93	ug/L	20	18.6	80 - 124
1,2-Dichlorobenzene	99.9	ug/L	20	20.0	82 - 118
1,2-Dichloroethane	95.2	ug/L	20	19.0	70 - 133
1,2-Dichloroethene, Total	110	ug/L	40	44.1	78 - 125
1,2-Dichloropropane	108	ug/L	20	21.5	81 - 127
1,3-Dichlorobenzene	105	ug/L	20	21.0	81 - 118
1,3-Dichloropropane	102	ug/L	20	20.4	82 - 126
1,3-Dichloropropene, Total	107	ug/L	40	42.6	80 - 123
1,4-Dichlorobenzene	102	ug/L	20	20.3	81 - 116
2,2-Dichloropropane	103	ug/L	20	20.6	64 - 129
2-Butanone	68.7	ug/L	100	68.7	50 - 152
2-Chloroethylvinyl ether	76.3	ug/L	20	15.3	1 - 150
2-Hexanone	63.7*	ug/L	100	63.7	65 - 154
4-Methyl-2-Pentanone(MIBK)	69.8*	ug/L	100	69.8	71 - 146
Acetone	62.6	ug/L	100	62.6	40 - 151
Benzene	110	ug/L	20	22.0	80 - 124
Bromobenzene	109	ug/L	20	21.9	81 - 119
Bromochloromethane	106	ug/L	20	21.2	73 - 117
Bromodichloromethane	102	ug/L	20	20.4	79 - 126
Bromoform	87.9	ug/L	20	17.6	70 - 123
Bromomethane	85.4	ug/L	20	17.1	45 - 148
Carbon Disulfide	123	ug/L	20	24.7	57 - 131
Carbon Tetrachloride	109	ug/L	20	21.7	62 - 132
Chlorobenzene	100	ug/L	20	20.1	85 - 117
Chlorodibromomethane	99.4	ug/L	20	19.9	77 - 122
Chloroethane	72.5	ug/L	20	14.5	51 - 142
Chloroform	106	ug/L	20	21.3	78 - 122
Chloromethane	105	ug/L	20	21.1	38 - 156
Cyclohexane	125	ug/L	20	24.9	66 - 130
Dibromomethane	92.1	ug/L	20	18.4	81 - 125

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	97.2	ug/L	20	19.4	17 - 166
Diisopropyl ether	119	ug/L	20	23.7	74 - 131
Ethyl tert-butyl ether	98.9	ug/L	20	19.8	75 - 123
Ethylbenzene	107	ug/L	20	21.4	80 - 124
Freon 113	124	ug/L	20	24.9	50 - 130
Hexachlorobutadiene	115	ug/L	20	22.9	55 - 128
Isopropylbenzene	105	ug/L	20	20.9	73 - 129
Methyl acetate	75.5	ug/L	20	15.1	70 - 130
Methyl cyclohexane	150*	ug/L	20	29.9	70 - 130
Methyl t-Butyl Ether	104	ug/L	20	20.8	69 - 115
Methylene Chloride	136*	ug/L	20	27.2	76 - 121
Naphthalene	64.1	ug/L	20	12.8	56 - 134
Styrene	98.6	ug/L	20	19.7	79 - 123
Tetrachloroethene	104	ug/L	20	20.7	72 - 124
Toluene	112	ug/L	20	22.5	80 - 125
Total Xylenes	111	ug/L	60	66.4	79 - 125
Trichloroethene	102	ug/L	20	20.5	77 - 124
Trichlorofluoromethane	78.2	ug/L	20	15.6	38 - 123
Vinyl Acetate	87.4	ug/L	20	17.5	58 - 136
Vinyl Chloride	80.6	ug/L	20	16.1	27 - 138
cis-1,2-Dichloroethene	107	ug/L	20	21.4	78 - 125
cis-1,3-Dichloropropene	110	ug/L	20	21.9	81 - 121
mp-Xylene	111	ug/L	40	44.4	79 - 125
n-Butylbenzene	96.6	ug/L	20	19.3	71 - 130
n-Propylbenzene	102	ug/L	20	20.5	74 - 122
o-Chlorotoluene	101	ug/L	20	20.2	78 - 126
o-Xylene	110	ug/L	20	22.0	79 - 124
p-Chlorotoluene	114	ug/L	20	22.8	78 - 125
p-Isopropyltoluene	100	ug/L	20	20.1	72 - 123
sec-Butylbenzene	107	ug/L	20	21.4	72 - 127
tert-Amyl methyl ether	86.8	ug/L	20	17.4	75 - 121
tert-Butyl Alcohol	38.1	ug/L	100	38.1	17 - 168
tert-Butylbenzene	102	ug/L	20	20.4	72 - 124
trans-1,2-Dichloroethene	114	ug/L	20	22.7	71 - 122
trans-1,3-Dichloropropene	103	ug/L	20	20.7	78 - 126
1,2-Dichloroethane-d4 (S)	89.9	%			62 - 133
4-Bromofluorobenzene (S)	99.2	%			79 - 114
Dibromofluoromethane (S)	93	%			78 - 116
Toluene-d8 (S)	96.8	%			76 - 127

MATRIX SPIKE: 2724700 DUPLICATE: 2724701 ORIGINAL: 2308280014

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	23.5088	23.89	118	119	78 - 121	1.61	16
1,1,1-Trichloroethane	0	ug/L	20	23.1193	23.5568	116	118	66 - 130	1.87	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	18.0478	18.0064	90.2	90	74 - 135	.23	16
1,1,2-Trichloroethane	0	ug/L	20	19.6737	20.6881	98.4	103	82 - 126	5.03	15
1,1-Dichloroethane	2.97408	ug/L	20	26.635	27.775	118	124	78 - 124	4.19	15
1,1-Dichloroethene	0	ug/L	20	26.175	24.9128	131*	125	63 - 128	4.94	21
1,2,3-Trichlorobenzene	0	ug/L	20	15.8346	16.4328	79.2	82.2	61 - 126	3.71	36
1,2,3-Trichloropropane	0	ug/L	20	18.4551	17.7526	92.3	88.8	75 - 132	3.88	19
1,2,4-Trichlorobenzene	0	ug/L	20	19.8299	20.2139	99.1	101	67 - 123	1.92	22
1,2,4-Trimethylbenzene	0	ug/L	20	21.4956	21.751	107	109	76 - 125	1.18	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.5912	15.2567	78	76.3	59 - 133	2.17	26
1,2-Dibromoethane	0	ug/L	20	19.4346	19.6019	97.2	98	80 - 124	.86	19
1,2-Dichlorobenzene	0	ug/L	20	21.2467	21.0772	106	105	82 - 118	.8	15
1,2-Dichloroethane	.84175	ug/L	20	22.0777	21.968	106	106	70 - 133	.5	19
1,2-Dichloroethene, Total	1.15226	ug/L	40	49.3609	50.3878	121	123	78 - 125	2.06	40
1,2-Dichloropropane	0	ug/L	20	23.064	23.5466	115	118	81 - 127	2.07	15
1,3-Dichlorobenzene	0	ug/L	20	21.9658	22.2196	110	111	81 - 118	1.15	16
1,3-Dichloropropane	0	ug/L	20	20.8248	21.3187	104	107	82 - 126	2.34	15
1,3-Dichloropropene, Total	0	ug/L	40	41.6394	45.1179	104	113	80 - 123	8.02	16
1,4-Dichlorobenzene	0	ug/L	20	21.3856	21.5478	107	108	81 - 116	.76	15
2,2-Dichloropropane	0	ug/L	20	20.1983	20.6215	101	103	64 - 129	2.07	18
2-Butanone	0	ug/L	100	85.6878	80.709	85.7	80.7	50 - 152	5.98	16
2-Chloroethylvinyl ether	0	ug/L	20	.16264	.10297	.81*	.51*	1 - 150	44.9	40
2-Hexanone	0	ug/L	100	75.383	75.0773	75.4	75.1	65 - 154	.41	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	82.1199	82.3486	82.1	82.3	71 - 146	.28	16
Acetone	0	ug/L	100	88.571	83.4017	88.6	83.4	40 - 151	6.01	40
Benzene	3.96459	ug/L	20	27.8627	28.6033	119	123	80 - 124	2.62	26
Bromobenzene	0	ug/L	20	22.9064	22.8302	115	114	81 - 119	.33	17
Bromochloromethane	0	ug/L	20	23.4481	24.8413	117	124*	73 - 117	5.77	19
Bromodichloromethane	0	ug/L	20	22.4454	22.0921	112	110	79 - 126	1.59	16
Bromoform	0	ug/L	20	18.6092	18.621	93	93.1	70 - 123	.06	16
Bromomethane	0	ug/L	20	14.1833	9.96194	70.9	49.8	45 - 148	35	26
Carbon Disulfide	0	ug/L	20	28.8925	27.3188	144*	137*	57 - 131	5.6	28
Carbon Tetrachloride	0	ug/L	20	24.2678	24.4877	121	122	62 - 132	.9	17
Chlorobenzene	0	ug/L	20	21.1346	21.4771	106	107	85 - 117	1.61	15
Chlorodibromomethane	0	ug/L	20	20.5936	21.1409	103	106	77 - 122	2.62	15
Chloroethane	4.09359	ug/L	20	22.5708	18.5533	92.4	72.3	51 - 142	19.5	24
Chloroform	0	ug/L	20	22.5621	23.1954	113	116	78 - 122	2.77	16
Chloromethane	0	ug/L	20	24.4269	21.1782	122	106	38 - 156	14.2	27
Cyclohexane	0	ug/L	20	26.6033	28.0132	133*	140*	66 - 130	5.16	20
Dibromomethane	0	ug/L	20	20.1308	20.2282	101	101	81 - 125	.48	16
Dichlorodifluoromethane	0	ug/L	20	19.4421	16.7871	97.2	83.9	17 - 166	14.7	24
Diisopropyl ether	0	ug/L	20	25.4148	24.8175	127	124	74 - 131	2.38	15
Ethyl tert-butyl ether	0	ug/L	20	20.8819	21.1797	104	106	75 - 123	1.42	16
Ethylbenzene	0	ug/L	20	23.1784	23.613	116	118	80 - 124	1.86	19
Freon 113	0	ug/L	20	28.002	26.5426	140*	133*	50 - 130	5.35	26

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Hexachlorobutadiene	0	ug/L	20	22.7963	23.7415	114	119	55 - 128	4.06	35
Isopropylbenzene	0	ug/L	20	21.7225	21.8236	109	109	73 - 129	.46	18
Methyl acetate	0	ug/L	20	15.2879	15.3991	76.4	77	70 - 130	.72	18
Methyl cyclohexane	0	ug/L	20	28.2921	32.7412	141*	164*	70 - 130	14.6	18
Methyl t-Butyl Ether	0	ug/L	20	21.9284	22.214	110	111	69 - 115	1.29	20
Methylene Chloride	0	ug/L	20	26.8508	25.7309	134*	129*	76 - 121	4.26	17
Naphthalene	0	ug/L	20	12.6651	13.2415	63.3	66.2	56 - 134	4.45	40
Styrene	0	ug/L	20	20.9372	20.9191	105	105	79 - 123	.09	16
Tetrachloroethene	0	ug/L	20	21.1785	22.4532	106	112	72 - 124	5.84	38
Toluene	0	ug/L	20	23.1966	25.4053	116	127*	80 - 125	9.09	20
Total Xylenes	0	ug/L	60	71.0923	72.7927	118	121	79 - 125	2.36	35
Trichloroethene	1.02317	ug/L	20	23.3791	23.5525	112	113	77 - 124	.74	18
Trichlorofluoromethane	0	ug/L	20	19.4181	16.8772	97.1	84.4	38 - 123	14	23
Vinyl Acetate	0	ug/L	20	15.3177	16.0366	76.6	80.2	58 - 136	4.59	17
Vinyl Chloride	0	ug/L	20	19.0947	16.8583	95.5	84.3	27 - 138	12.4	40
cis-1,2-Dichloroethene	.70727	ug/L	20	23.6686	24.359	115	118	78 - 125	2.88	21
cis-1,3-Dichloropropene	0	ug/L	20	20.7959	23.0055	104	115	81 - 121	10.1	16
mp-Xylene	0	ug/L	40	47.7258	48.5503	119	121	79 - 125	1.71	21
n-Butylbenzene	0	ug/L	20	19.4529	20.4845	97.3	102	71 - 130	5.17	20
n-Propylbenzene	0	ug/L	20	21.5568	21.5933	108	108	74 - 122	.17	20
o-Chlorotoluene	0	ug/L	20	20.9733	21.2731	105	106	78 - 126	1.42	17
o-Xylene	0	ug/L	20	23.3666	24.2424	117	121	79 - 124	3.68	19
p-Chlorotoluene	0	ug/L	20	23.8906	24.2168	119	121	78 - 125	1.36	16
p-Isopropyltoluene	0	ug/L	20	20.4801	20.4907	102	102	72 - 123	.05	17
sec-Butylbenzene	0	ug/L	20	22.0086	22.1717	110	111	72 - 127	.74	17
tert-Amyl methyl ether	0	ug/L	20	19.8975	18.973	99.5	94.9	75 - 121	4.76	40
tert-Butyl Alcohol	0	ug/L	100	73.4219	78.5658	73.4	78.6	17 - 168	6.77	40
tert-Butylbenzene	0	ug/L	20	20.7945	20.6673	104	103	72 - 124	.61	17
trans-1,2-Dichloroethene	.44499	ug/L	20	25.6923	26.0289	126*	128*	71 - 122	1.3	22
trans-1,3-Dichloropropene	0	ug/L	20	20.8435	22.1124	104	111	78 - 126	5.91	18
1,2-Dichloroethane-d4 (S)	96	%				96	91.1	62 - 133		
4-Bromofluorobenzene (S)	96.1	%				96.1	95.9	79 - 114		
Dibromofluoromethane (S)	93.8	%				93.8	95.3	78 - 116		
Toluene-d8 (S)	89.8	%				89.8	96.7	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46558 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308280016, 2308280017, 2308280018, 2308280019, 2308280020, 2308280021, 2308280022, 2308280023, 2308280024, 2308280025

METHOD BLANK: 2724799

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Chloroethane	ND	ug/L	1.0
Chloroform	0.61J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	99.4	%	62 - 133
4-Bromofluorobenzene (S)	98.3	%	79 - 114
Dibromofluoromethane (S)	98.5	%	78 - 116
Toluene-d8 (S)	92.6	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2724800

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	114	ug/L	20	22.8	78 - 121
1,1,1-Trichloroethane	114	ug/L	20	22.7	66 - 130
1,1,2,2-Tetrachloroethane	83.3	ug/L	20	16.7	74 - 135
1,1,2-Trichloroethane	96	ug/L	20	19.2	82 - 126
1,1-Dichloroethane	118	ug/L	20	23.6	78 - 124
1,1-Dichloroethene	135*	ug/L	20	27.0	63 - 128
1,2,3-Trichlorobenzene	70.7	ug/L	20	14.1	61 - 126
1,2,3-Trichloropropane	83.5	ug/L	20	16.7	75 - 132
1,2,4-Trichlorobenzene	92.4	ug/L	20	18.5	67 - 123
1,2,4-Trimethylbenzene	102	ug/L	20	20.4	76 - 125
1,2-Dibromo-3-chloropropane	69.2	ug/L	20	13.8	59 - 133
1,2-Dibromoethane	95.4	ug/L	20	19.1	80 - 124
1,2-Dichlorobenzene	100	ug/L	20	20.0	82 - 118
1,2-Dichloroethane	103	ug/L	20	20.6	70 - 133
1,2-Dichloroethene, Total	116	ug/L	40	46.4	78 - 125
1,2-Dichloropropane	115	ug/L	20	22.9	81 - 127
1,3-Dichlorobenzene	104	ug/L	20	20.9	81 - 118
1,3-Dichloropropane	101	ug/L	20	20.1	82 - 126
1,3-Dichloropropene, Total	104	ug/L	40	41.7	80 - 123
1,4-Dichlorobenzene	102	ug/L	20	20.4	81 - 116
2,2-Dichloropropane	117	ug/L	20	23.5	64 - 129
2-Butanone	83.2	ug/L	100	83.2	50 - 152
2-Chloroethylvinyl ether	72.8	ug/L	20	14.6	1 - 150
2-Hexanone	71.9	ug/L	100	71.9	65 - 154
4-Methyl-2-Pentanone(MIBK)	71.7	ug/L	100	71.7	71 - 146
Acetone	97.9	ug/L	100	97.9	40 - 151
Benzene	115	ug/L	20	23.0	80 - 124
Bromobenzene	109	ug/L	20	21.8	81 - 119
Bromochloromethane	116	ug/L	20	23.2	73 - 117
Bromodichloromethane	109	ug/L	20	21.9	79 - 126
Bromoform	86.1	ug/L	20	17.2	70 - 123
Bromomethane	90.1	ug/L	20	18.0	45 - 148
Carbon Disulfide	148*	ug/L	20	29.7	57 - 131
Carbon Tetrachloride	117	ug/L	20	23.5	62 - 132
Chlorobenzene	104	ug/L	20	20.8	85 - 117
Chlorodibromomethane	99.3	ug/L	20	19.9	77 - 122
Chloroethane	89.6	ug/L	20	17.9	51 - 142
Chloroform	113	ug/L	20	22.6	78 - 122
Chloromethane	122	ug/L	20	24.5	38 - 156
Cyclohexane	133*	ug/L	20	26.5	66 - 130
Dibromomethane	97.3	ug/L	20	19.5	81 - 125

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	109	ug/L	20	21.8	17 - 166
Diisopropyl ether	122	ug/L	20	24.4	74 - 131
Ethyl tert-butyl ether	101	ug/L	20	20.2	75 - 123
Ethylbenzene	114	ug/L	20	22.9	80 - 124
Freon 113	147*	ug/L	20	29.5	50 - 130
Hexachlorobutadiene	119	ug/L	20	23.8	55 - 128
Isopropylbenzene	103	ug/L	20	20.6	73 - 129
Methyl acetate	80.7	ug/L	20	16.1	70 - 130
Methyl cyclohexane	148*	ug/L	20	29.6	70 - 130
Methyl t-Butyl Ether	106	ug/L	20	21.3	69 - 115
Methylene Chloride	128*	ug/L	20	25.5	76 - 121
Naphthalene	56.5	ug/L	20	11.3	56 - 134
Styrene	99.6	ug/L	20	19.9	79 - 123
Tetrachloroethene	106	ug/L	20	21.2	72 - 124
Toluene	112	ug/L	20	22.5	80 - 125
Total Xylenes	116	ug/L	60	69.7	79 - 125
Trichloroethene	110	ug/L	20	22.0	77 - 124
Trichlorofluoromethane	95.4	ug/L	20	19.1	38 - 123
Vinyl Acetate	86.2	ug/L	20	17.2	58 - 136
Vinyl Chloride	92	ug/L	20	18.4	27 - 138
cis-1,2-Dichloroethene	113	ug/L	20	22.6	78 - 125
cis-1,3-Dichloropropene	107	ug/L	20	21.3	81 - 121
mp-Xylene	118	ug/L	40	47.1	79 - 125
n-Butylbenzene	94.8	ug/L	20	19.0	71 - 130
n-Propylbenzene	101	ug/L	20	20.3	74 - 122
o-Chlorotoluene	101	ug/L	20	20.2	78 - 126
o-Xylene	113	ug/L	20	22.6	79 - 124
p-Chlorotoluene	114	ug/L	20	22.9	78 - 125
p-Isopropyltoluene	98.6	ug/L	20	19.7	72 - 123
sec-Butylbenzene	105	ug/L	20	20.9	72 - 127
tert-Amyl methyl ether	89.9	ug/L	20	18.0	75 - 121
tert-Butyl Alcohol	60.8	ug/L	100	60.8	17 - 168
tert-Butylbenzene	95.9	ug/L	20	19.2	72 - 124
trans-1,2-Dichloroethene	119	ug/L	20	23.8	71 - 122
trans-1,3-Dichloropropene	102	ug/L	20	20.4	78 - 126
1,2-Dichloroethane-d4 (S)	99.1	%			62 - 133
4-Bromofluorobenzene (S)	96.5	%			79 - 114
Dibromofluoromethane (S)	93.1	%			78 - 116
Toluene-d8 (S)	91.4	%			76 - 127

MATRIX SPIKE: 2724873 DUPLICATE: 2724874 ORIGINAL: 2308280024

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

1,1,1,2-Tetrachloroethane	0	ug/L	20	23.216	22.9661	116	115	78 - 121	1.08	16
1,1,1-Trichloroethane	0	ug/L	20	23.933	23.7296	120	119	66 - 130	.85	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	16.523	17.0109	82.6	85.1	74 - 135	2.91	16
1,1,2-Trichloroethane	0	ug/L	20	19.2991	19.948	96.5	99.7	82 - 126	3.31	15
1,1-Dichloroethane	.91975	ug/L	20	25.9767	25.7546	125*	124	78 - 124	.86	15
1,1-Dichloroethene	0	ug/L	20	26.0783	26.2607	130*	131*	63 - 128	.7	21
1,2,3-Trichlorobenzene	0	ug/L	20	14.7402	16.2112	73.7	81.1	61 - 126	9.51	36
1,2,3-Trichloropropane	0	ug/L	20	16.4331	17.0627	82.2	85.3	75 - 132	3.76	19
1,2,4-Trichlorobenzene	0	ug/L	20	17.6363	19.7346	88.2	98.7	67 - 123	11.2	22
1,2,4-Trimethylbenzene	0	ug/L	20	20.5899	21.1821	103	106	76 - 125	2.84	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	13.9397	14.368	69.7	71.8	59 - 133	3.03	26
1,2-Dibromoethane	0	ug/L	20	18.9909	19.6706	95	98.4	80 - 124	3.52	19
1,2-Dichlorobenzene	0	ug/L	20	19.9038	20.4303	99.5	102	82 - 118	2.61	15
1,2-Dichloroethane	0	ug/L	20	21.2259	21.101	106	106	70 - 133	.59	19
1,2-Dichloroethene, Total	16.6464	ug/L	40	65.2177	65.7772	121	123	78 - 125	.85	40
1,2-Dichloropropane	0	ug/L	20	23.4631	23.7238	117	119	81 - 127	1.1	15
1,3-Dichlorobenzene	0	ug/L	20	20.7939	21.6851	104	108	81 - 118	4.2	16
1,3-Dichloropropane	0	ug/L	20	20.5295	21.2225	103	106	82 - 126	3.32	15
1,3-Dichloropropene, Total	0	ug/L	40	41.9216	42.3913	105	106	80 - 123	1.11	16
1,4-Dichlorobenzene	0	ug/L	20	20.5667	20.9445	103	105	81 - 116	1.82	15
2,2-Dichloropropane	0	ug/L	20	20.6224	20.6491	103	103	64 - 129	.13	18
2-Butanone	0	ug/L	100	78.7038	79.6073	78.7	79.6	50 - 152	1.14	16
2-Chloroethylvinyl ether	0	ug/L	20	.101	.11524	.5*	.58*	1 - 150	13.2	40
2-Hexanone	0	ug/L	100	68.4226	68.5733	68.4	68.6	65 - 154	.22	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	73.9645	72.3286	74	72.3	71 - 146	2.24	16
Acetone	0	ug/L	100	79.8921	81.4049	79.9	81.4	40 - 151	1.88	40
Benzene	0	ug/L	20	24.3104	24.6229	122	123	80 - 124	1.28	26
Bromobenzene	0	ug/L	20	21.643	22.271	108	111	81 - 119	2.86	17
Bromochloromethane	0	ug/L	20	24.2956	24.1	121*	121*	73 - 117	.81	19
Bromodichloromethane	0	ug/L	20	22.0073	22.409	110	112	79 - 126	1.81	16
Bromoform	0	ug/L	20	16.8838	18.0166	84.4	90.1	70 - 123	6.49	16
Bromomethane	0	ug/L	20	19.7101	13.7555	98.6	68.8	45 - 148	35.6	26
Carbon Disulfide	0	ug/L	20	29.2149	29.1993	146*	146*	57 - 131	.05	28
Carbon Tetrachloride	3.51337	ug/L	20	28.0224	28.3818	123	124	62 - 132	1.27	17
Chlorobenzene	0	ug/L	20	21.1231	21.0461	106	105	85 - 117	.37	15
Chlorodibromomethane	0	ug/L	20	19.6506	20.7607	98.3	104	77 - 122	5.49	15
Chloroethane	0	ug/L	20	18.3328	17.2577	91.7	86.3	51 - 142	6.04	24
Chloroform	1.29462	ug/L	20	24.5696	24.7565	116	117	78 - 122	.76	16
Chloromethane	0	ug/L	20	24.4916	25.4737	122	127	38 - 156	3.93	27
Cyclohexane	0	ug/L	20	28.7551	28.5718	144*	143*	66 - 130	.64	20
Dibromomethane	0	ug/L	20	19.7594	20.1249	98.8	101	81 - 125	1.83	16
Dichlorodifluoromethane	0	ug/L	20	22.1023	22.9306	111	115	17 - 166	3.68	24
Diisopropyl ether	0	ug/L	20	25.759	25.924	129	130	74 - 131	.64	15
Ethyl tert-butyl ether	0	ug/L	20	21.1665	20.9156	106	105	75 - 123	1.19	16
Ethylbenzene	0	ug/L	20	22.8812	22.861	114	114	80 - 124	.09	19
Freon 113	0	ug/L	20	28.8659	28.6673	144*	143*	50 - 130	.69	26

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Hexachlorobutadiene	0	ug/L	20	22.698	24.4404	113	122	55 - 128	7.39	35
Isopropylbenzene	0	ug/L	20	20.9388	21.387	105	107	73 - 129	2.12	18
Methyl acetate	0	ug/L	20	14.4203	14.8578	72.1	74.3	70 - 130	2.99	18
Methyl cyclohexane	0	ug/L	20	31.6319	31.7806	158*	159*	70 - 130	.47	18
Methyl t-Butyl Ether	24.0564	ug/L	20	45.0215	45.8001	105	109	69 - 115	1.71	20
Methylene Chloride	0	ug/L	20	25.5321	26.9571	128*	135*	76 - 121	5.43	17
Naphthalene	0	ug/L	20	11.1085	12.3576	55.5*	61.8	56 - 134	10.6	40
Styrene	0	ug/L	20	20.1415	20.7834	101	104	79 - 123	3.14	16
Tetrachloroethene	0	ug/L	20	21.8062	22.2652	109	111	72 - 124	2.08	38
Toluene	0	ug/L	20	23.7599	24.0722	119	120	80 - 125	1.31	20
Total Xylenes	0	ug/L	60	70.0626	70.3773	117	117	79 - 125	.45	35
Trichloroethene	15.1676	ug/L	20	36.6774	36.6437	108	107	77 - 124	.09	18
Trichlorofluoromethane	0	ug/L	20	19.497	19.2825	97.5	96.4	38 - 123	1.11	23
Vinyl Acetate	0	ug/L	20	15.5749	15.6375	77.9	78.2	58 - 136	.4	17
Vinyl Chloride	1.51923	ug/L	20	20.3523	20.7037	94.2	95.9	27 - 138	1.71	40
cis-1,2-Dichloroethene	15.6442	ug/L	20	38.7778	39.1363	116	117	78 - 125	.92	21
cis-1,3-Dichloropropene	0	ug/L	20	21.1396	21.5147	106	108	81 - 121	1.76	16
mp-Xylene	0	ug/L	40	46.722	47.2877	117	118	79 - 125	1.2	21
n-Butylbenzene	0	ug/L	20	18.9363	19.6907	94.7	98.5	71 - 130	3.91	20
n-Propylbenzene	0	ug/L	20	20.1597	20.9936	101	105	74 - 122	4.05	20
o-Chlorotoluene	0	ug/L	20	20.1024	20.7557	101	104	78 - 126	3.2	17
o-Xylene	0	ug/L	20	23.3406	23.0897	117	115	79 - 124	1.08	19
p-Chlorotoluene	0	ug/L	20	22.9126	23.546	115	118	78 - 125	2.73	16
p-Isopropyltoluene	0	ug/L	20	19.9404	20.5848	99.7	103	72 - 123	3.18	17
sec-Butylbenzene	0	ug/L	20	21.045	21.7052	105	109	72 - 127	3.09	17
tert-Amyl methyl ether	0	ug/L	20	18.6476	18.6338	93.2	93.2	75 - 121	.07	40
tert-Butyl Alcohol	0	ug/L	100	62.363	76.087	62.4	76.1	17 - 168	19.8	40
tert-Butylbenzene	0	ug/L	20	20.092	20.3445	100	102	72 - 124	1.25	17
trans-1,2-Dichloroethene	1.00227	ug/L	20	26.4399	26.641	127*	128*	71 - 122	.76	22
trans-1,3-Dichloropropene	0	ug/L	20	20.782	20.8767	104	104	78 - 126	.45	18
1,2-Dichloroethane-d4 (S)	97.8	%				97.8	92.6	62 - 133		
4-Bromofluorobenzene (S)	96.2	%				96.2	95.2	79 - 114		
Dibromofluoromethane (S)	95.4	%				95.4	95.8	78 - 116		
Toluene-d8 (S)	91.8	%				91.8	93.9	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46565 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308280001, 2308280002, 2308280006, 2308280007

METHOD BLANK: 2725080

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Chloroform	0.26J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	113	%	62 - 133
4-Bromofluorobenzene (S)	98.2	%	79 - 114
Dibromofluoromethane (S)	108	%	78 - 116
Toluene-d8 (S)	100	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2725081

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	104	ug/L	20	20.8	78 - 121
1,1,1-Trichloroethane	106	ug/L	20	21.2	66 - 130
1,1,2,2-Tetrachloroethane	92.8	ug/L	20	18.6	74 - 135
1,1,2-Trichloroethane	93.1	ug/L	20	18.6	82 - 126
1,1-Dichloroethane	102	ug/L	20	20.5	78 - 124
1,1-Dichloroethene	134*	ug/L	20	26.7	63 - 128
1,2,3-Trichlorobenzene	85.4	ug/L	20	17.1	61 - 126
1,2,3-Trichloropropane	95.6	ug/L	20	19.1	75 - 132
1,2,4-Trichlorobenzene	92.5	ug/L	20	18.5	67 - 123
1,2,4-Trimethylbenzene	110	ug/L	20	22.1	76 - 125
1,2-Dibromo-3-chloropropane	95.4	ug/L	20	19.1	59 - 133
1,2-Dibromoethane	98.9	ug/L	20	19.8	80 - 124
1,2-Dichlorobenzene	95.8	ug/L	20	19.2	82 - 118
1,2-Dichloroethane	96.1	ug/L	20	19.2	70 - 133
1,2-Dichloroethene, Total	108	ug/L	40	43.3	78 - 125
1,2-Dichloropropane	96.7	ug/L	20	19.3	81 - 127
1,3-Dichlorobenzene	97.3	ug/L	20	19.5	81 - 118
1,3-Dichloropropane	98.8	ug/L	20	19.8	82 - 126
1,3-Dichloropropene, Total	103	ug/L	40	41.0	80 - 123
1,4-Dichlorobenzene	96.5	ug/L	20	19.3	81 - 116
2,2-Dichloropropane	116	ug/L	20	23.2	64 - 129
2-Butanone	91.8	ug/L	100	91.8	50 - 152
2-Chloroethylvinyl ether	86.6	ug/L	20	17.3	1 - 150
2-Hexanone	102	ug/L	100	102	65 - 154
4-Methyl-2-Pentanone(MIBK)	103	ug/L	100	103	71 - 146
Acetone	114	ug/L	100	114	40 - 151
Benzene	107	ug/L	20	21.3	80 - 124
Bromobenzene	99.3	ug/L	20	19.9	81 - 119
Bromochloromethane	102	ug/L	20	20.4	73 - 117
Bromodichloromethane	96	ug/L	20	19.2	79 - 126
Bromoform	93.8	ug/L	20	18.8	70 - 123
Bromomethane	120	ug/L	20	24.1	45 - 148
Carbon Disulfide	133*	ug/L	20	26.6	57 - 131
Carbon Tetrachloride	109	ug/L	20	21.8	62 - 132
Chlorobenzene	97.1	ug/L	20	19.4	85 - 117
Chlorodibromomethane	96.6	ug/L	20	19.3	77 - 122
Chloroethane	97.6	ug/L	20	19.5	51 - 142
Chloroform	102	ug/L	20	20.3	78 - 122
Chloromethane	98.4	ug/L	20	19.7	38 - 156
Cyclohexane	141*	ug/L	20	28.2	66 - 130
Dibromomethane	97.2	ug/L	20	19.4	81 - 125

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	84.9	ug/L	20	17.0	17 - 166
Diisopropyl ether	103	ug/L	20	20.6	74 - 131
Ethyl tert-butyl ether	99.9	ug/L	20	20.0	75 - 123
Ethylbenzene	106	ug/L	20	21.2	80 - 124
Freon 113	165*	ug/L	20	33.1	50 - 130
Hexachlorobutadiene	102	ug/L	20	20.4	55 - 128
Isopropylbenzene	114	ug/L	20	22.8	73 - 129
Methyl acetate	97.8	ug/L	20	19.6	70 - 130
Methyl cyclohexane	113	ug/L	20	22.5	70 - 130
Methyl t-Butyl Ether	100	ug/L	20	20.0	69 - 115
Methylene Chloride	110	ug/L	20	22.1	76 - 121
Naphthalene	88	ug/L	20	17.6	56 - 134
Styrene	109	ug/L	20	21.8	79 - 123
Tetrachloroethene	102	ug/L	20	20.5	72 - 124
Toluene	107	ug/L	20	21.4	80 - 125
Total Xylenes	108	ug/L	60	65.0	79 - 125
Trichloroethene	99.2	ug/L	20	19.8	77 - 124
Trichlorofluoromethane	101	ug/L	20	20.3	38 - 123
Vinyl Acetate	97.1	ug/L	20	19.4	58 - 136
Vinyl Chloride	96.8	ug/L	20	19.4	27 - 138
cis-1,2-Dichloroethene	98.6	ug/L	20	19.7	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.2	81 - 121
mp-Xylene	110	ug/L	40	44.0	79 - 125
n-Butylbenzene	91.1	ug/L	20	18.2	71 - 130
n-Propylbenzene	108	ug/L	20	21.7	74 - 122
o-Chlorotoluene	107	ug/L	20	21.4	78 - 126
o-Xylene	105	ug/L	20	20.9	79 - 124
p-Chlorotoluene	105	ug/L	20	21.1	78 - 125
p-Isopropyltoluene	93.3	ug/L	20	18.7	72 - 123
sec-Butylbenzene	114	ug/L	20	22.8	72 - 127
tert-Amyl methyl ether	90.1	ug/L	20	18.0	75 - 121
tert-Butyl Alcohol	90.5	ug/L	100	90.5	17 - 168
tert-Butylbenzene	107	ug/L	20	21.4	72 - 124
trans-1,2-Dichloroethene	118	ug/L	20	23.6	71 - 122
trans-1,3-Dichloropropene	104	ug/L	20	20.8	78 - 126
1,2-Dichloroethane-d4 (S)	102	%			62 - 133
4-Bromofluorobenzene (S)	95.7	%			79 - 114
Dibromofluoromethane (S)	102	%			78 - 116
Toluene-d8 (S)	98.1	%			76 - 127

MATRIX SPIKE: 2725697 DUPLICATE: 2725698 ORIGINAL: 2308649003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

1,1-Dichloroethene	0	ug/L	20	26.2709	26.318	131*	132*	63 - 128	.18	21
1,2-Dichloroethane	0	ug/L	20	19.7128	19.6461	98.6	98.2	70 - 133	.34	19
Benzene	0	ug/L	20	21.9527	21.7385	110	109	80 - 124	.98	26
Tetrachloroethene	0	ug/L	20	20.755	20.0742	104	100	72 - 124	3.33	38
Trichloroethene	0	ug/L	20	20.4978	20.4523	102	102	77 - 124	.22	18
Vinyl Chloride	0	ug/L	20	19.9315	18.9075	99.7	94.5	27 - 138	5.27	40
1,2-Dichloroethane-d4 (S)	108	%				108	110	62 - 133		
4-Bromofluorobenzene (S)	95.4	%				95.4	97.6	79 - 114		
Dibromofluoromethane (S)	99.7	%				99.7	102	78 - 116		
Toluene-d8 (S)	97	%				97	96.4	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: VOMS/46574 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308280017, 2308280018, 2308280022, 2308280023

METHOD BLANK: 2725883

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	1.3J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	77.5	%	62 - 133
4-Bromofluorobenzene (S)	110	%	79 - 114
Dibromofluoromethane (S)	84.9	%	78 - 116
Toluene-d8 (S)	88.7	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2725884

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	114	ug/L	20	22.8	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.9	66 - 130
1,1,2,2-Tetrachloroethane	101	ug/L	20	20.2	74 - 135
1,1,2-Trichloroethane	107	ug/L	20	21.4	82 - 126
1,1-Dichloroethane	101	ug/L	20	20.2	78 - 124
1,1-Dichloroethene	106	ug/L	20	21.2	63 - 128
1,2,3-Trichlorobenzene	123	ug/L	20	24.6	61 - 126
1,2,3-Trichloropropane	102	ug/L	20	20.4	75 - 132
1,2,4-Trichlorobenzene	96.5	ug/L	20	19.3	67 - 123
1,2,4-Trimethylbenzene	102	ug/L	20	20.4	76 - 125
1,2-Dibromo-3-chloropropane	76.6	ug/L	20	15.3	59 - 133
1,2-Dibromoethane	111	ug/L	20	22.3	80 - 124
1,2-Dichlorobenzene	105	ug/L	20	21.0	82 - 118
1,2-Dichloroethane	90.5	ug/L	20	18.1	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.4	78 - 125
1,2-Dichloropropane	104	ug/L	20	20.8	81 - 127
1,3-Dichlorobenzene	107	ug/L	20	21.5	81 - 118
1,3-Dichloropropane	106	ug/L	20	21.2	82 - 126
1,3-Dichloropropene, Total	94.1	ug/L	40	37.6	80 - 123
1,4-Dichlorobenzene	103	ug/L	20	20.6	81 - 116
2,2-Dichloropropane	102	ug/L	20	20.5	64 - 129
2-Butanone	90.4	ug/L	100	90.4	50 - 152
2-Chloroethylvinyl ether	63.8	ug/L	20	12.8	1 - 150
2-Hexanone	74.8	ug/L	100	74.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	82.8	ug/L	100	82.8	71 - 146
Acetone	73.5	ug/L	100	73.5	40 - 151
Benzene	97.8	ug/L	20	19.6	80 - 124
Bromobenzene	114	ug/L	20	22.8	81 - 119
Bromochloromethane	99.1	ug/L	20	19.8	73 - 117
Bromodichloromethane	95	ug/L	20	19.0	79 - 126
Bromoform	99.5	ug/L	20	19.9	70 - 123
Bromomethane	72.4	ug/L	20	14.5	45 - 148
Carbon Disulfide	96.3	ug/L	20	19.3	57 - 131
Carbon Tetrachloride	110	ug/L	20	22.0	62 - 132
Chlorobenzene	105	ug/L	20	21.1	85 - 117
Chlorodibromomethane	99.1	ug/L	20	19.8	77 - 122
Chloroethane	68.3	ug/L	20	13.7	51 - 142
Chloroform	96.7	ug/L	20	19.3	78 - 122
Chloromethane	90.3	ug/L	20	18.1	38 - 156
Cyclohexane	120	ug/L	20	23.9	66 - 130
Dibromomethane	93	ug/L	20	18.6	81 - 125

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Dichlorodifluoromethane	69.8	ug/L	20	14.0	17 - 166
Diisopropyl ether	91.5	ug/L	20	18.3	74 - 131
Ethyl tert-butyl ether	85.5	ug/L	20	17.1	75 - 123
Ethylbenzene	112	ug/L	20	22.4	80 - 124
Freon 113	117	ug/L	20	23.4	50 - 130
Hexachlorobutadiene	109	ug/L	20	21.7	55 - 128
Isopropylbenzene	121	ug/L	20	24.2	73 - 129
Methyl acetate	84	ug/L	20	16.8	70 - 130
Methyl cyclohexane	125	ug/L	20	25.1	70 - 130
Methyl t-Butyl Ether	95.7	ug/L	20	19.1	69 - 115
Methylene Chloride	99.1	ug/L	20	19.8	76 - 121
Naphthalene	158*	ug/L	20	31.7	56 - 134
Styrene	103	ug/L	20	20.6	79 - 123
Tetrachloroethene	111	ug/L	20	22.2	72 - 124
Toluene	119	ug/L	20	23.8	80 - 125
Total Xylenes	110	ug/L	60	66.1	79 - 125
Trichloroethene	94.7	ug/L	20	18.9	77 - 124
Trichlorofluoromethane	65.5	ug/L	20	13.1	38 - 123
Vinyl Acetate	83.8	ug/L	20	16.8	58 - 136
Vinyl Chloride	71.6	ug/L	20	14.3	27 - 138
cis-1,2-Dichloroethene	98.1	ug/L	20	19.6	78 - 125
cis-1,3-Dichloropropene	92	ug/L	20	18.4	81 - 121
mp-Xylene	116	ug/L	40	46.3	79 - 125
n-Butylbenzene	93.5	ug/L	20	18.7	71 - 130
n-Propylbenzene	106	ug/L	20	21.2	74 - 122
o-Chlorotoluene	116	ug/L	20	23.2	78 - 126
o-Xylene	99.1	ug/L	20	19.8	79 - 124
p-Chlorotoluene	116	ug/L	20	23.3	78 - 125
p-Isopropyltoluene	101	ug/L	20	20.2	72 - 123
sec-Butylbenzene	101	ug/L	20	20.2	72 - 127
tert-Amyl methyl ether	84.5	ug/L	20	16.9	75 - 121
tert-Butyl Alcohol	40.3	ug/L	100	40.3	17 - 168
tert-Butylbenzene	107	ug/L	20	21.4	72 - 124
trans-1,2-Dichloroethene	104	ug/L	20	20.8	71 - 122
trans-1,3-Dichloropropene	96.3	ug/L	20	19.3	78 - 126
1,2-Dichloroethane-d4 (S)	78.1	%			62 - 133
4-Bromofluorobenzene (S)	110	%			79 - 114
Dibromofluoromethane (S)	89.4	%			78 - 116
Toluene-d8 (S)	86.9	%			76 - 127

MATRIX SPIKE: 2726106 DUPLICATE: 2726107 ORIGINAL: 2309477001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

1,1,1-Trichloroethane	0	ug/L	20	21.9484	21.6926	110	108	66 - 130	1.17	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.5925	21.3469	103	107	74 - 135	3.6	16
1,1,2-Trichloroethane	0	ug/L	20	21.9268	21.8612	110	109	82 - 126	.3	15
1,1-Dichloroethane	0	ug/L	20	20.7099	20.5405	104	103	78 - 124	.82	15
1,1-Dichloroethene	0	ug/L	20	22.7352	22.127	114	111	63 - 128	2.71	21
1,2,3-Trichlorobenzene	0	ug/L	20	21.557	26.2686	108	131*	61 - 126	19.7	36
1,2,4-Trichlorobenzene	0	ug/L	20	16.738	18.8319	83.7	94.2	67 - 123	11.8	22
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.439	16.3262	77.2	81.6	59 - 133	5.59	26
1,2-Dibromoethane	0	ug/L	20	22.04	22.2395	110	111	80 - 124	.9	19
1,2-Dichlorobenzene	0	ug/L	20	20.9218	21.9903	105	110	82 - 118	4.98	15
1,2-Dichloroethane	0	ug/L	20	18.7733	18.6912	93.9	93.5	70 - 133	.44	19
1,2-Dichloropropane	0	ug/L	20	20.9584	21.1601	105	106	81 - 127	.96	15
1,3-Dichlorobenzene	0	ug/L	20	21.1548	22.2529	106	111	81 - 118	5.06	16
1,4-Dichlorobenzene	0	ug/L	20	20.5644	21.233	103	106	81 - 116	3.2	15
2-Butanone	0	ug/L	100	90.5414	94.4895	90.5	94.5	50 - 152	4.27	16
2-Hexanone	0	ug/L	100	80.7683	83.0989	80.8	83.1	65 - 154	2.84	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	86.5132	89.4144	86.5	89.4	71 - 146	3.3	16
Acetone	0	ug/L	100	84.5531	86.1194	84.6	86.1	40 - 151	1.84	40
Benzene	0	ug/L	20	20.4486	20.1678	102	101	80 - 124	1.38	26
Bromochloromethane	0	ug/L	20	20.2748	19.7231	101	98.6	73 - 117	2.76	19
Bromodichloromethane	0	ug/L	20	19.0444	18.6924	95.2	93.5	79 - 126	1.87	16
Bromoform	0	ug/L	20	16.7675	17.4352	83.8	87.2	70 - 123	3.9	16
Bromomethane	0	ug/L	20	12.2396	11.8621	61.2	59.3	45 - 148	3.13	26
Carbon Disulfide	0	ug/L	20	20.3103	19.1952	102	96	57 - 131	5.65	28
Carbon Tetrachloride	0	ug/L	20	22.7679	22.5902	114	113	62 - 132	.78	17
Chlorobenzene	0	ug/L	20	21.5746	21.406	108	107	85 - 117	.78	15
Chlorodibromomethane	0	ug/L	20	18.8673	18.9946	94.3	95	77 - 122	.67	15
Chloroethane	0	ug/L	20	14.2462	13.8192	71.2	69.1	51 - 142	3.04	24
Chloroform	0	ug/L	20	19.3005	19.3928	96.5	97	78 - 122	.48	16
Chloromethane	0	ug/L	20	20.5098	19.6595	103	98.3	38 - 156	4.23	27
Cyclohexane	.44851	ug/L	20	25.58	26.159	126	129	66 - 130	2.24	20
Dichlorodifluoromethane	0	ug/L	20	15.9696	15.3886	79.8	76.9	17 - 166	3.71	24
Ethylbenzene	0	ug/L	20	23.1579	23.0867	116	115	80 - 124	.31	19
Freon 113	0	ug/L	20	24.6944	23.7819	123	119	50 - 130	3.76	26
Isopropylbenzene	0	ug/L	20	25.1558	26.4028	126	132*	73 - 129	4.84	18
Methyl acetate	0	ug/L	20	16.0039	16.804	80	84	70 - 130	4.88	18
Methyl cyclohexane	.30388	ug/L	20	25.3381	27.2719	125	135*	70 - 130	7.35	18
Methyl t-Butyl Ether	6.50502	ug/L	20	25.3107	25.7411	94	96.2	69 - 115	1.69	20
Methylene Chloride	0	ug/L	20	18.7535	18.1087	93.8	90.5	76 - 121	3.5	17
Styrene	0	ug/L	20	20.9587	21.0263	105	105	79 - 123	.32	16
Tetrachloroethene	0	ug/L	20	22.5332	22.724	113	114	72 - 124	.84	38
Toluene	0	ug/L	20	24.437	24.3701	122	122	80 - 125	.27	20
Total Xylenes	0	ug/L	60	67.7226	68.022	113	113	79 - 125	.44	35
Trichloroethene	0	ug/L	20	19.7	19.4494	98.5	97.2	77 - 124	1.28	18
Trichlorofluoromethane	0	ug/L	20	14.5618	14.181	72.8	70.9	38 - 123	2.65	23
Vinyl Chloride	0	ug/L	20	15.7695	15.4081	78.8	77	27 - 138	2.32	40

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

cis-1,2-Dichloroethene	0	ug/L	20	20.2622	20.2351	101	101	78 - 125	.13	21
cis-1,3-Dichloropropene	0	ug/L	20	16.4189	16.3932	82.1	82	81 - 121	.16	16
mp-Xylene	0	ug/L	40	47.42	47.7159	119	119	79 - 125	.62	21
o-Xylene	0	ug/L	20	20.3026	20.3061	102	102	79 - 124	.02	19
trans-1,2-Dichloroethene	0	ug/L	20	21.7108	20.7588	109	104	71 - 122	4.48	22
trans-1,3-Dichloropropene	0	ug/L	20	17.7336	17.916	88.7	89.6	78 - 126	1.02	18
1,2-Dichloroethane-d4 (S)	74.3	%				74.3	80.1	62 - 133		
4-Bromofluorobenzene (S)	110	%				110	110	79 - 114		
Dibromofluoromethane (S)	90.5	%				90.5	91.2	78 - 116		
Toluene-d8 (S)	85.8	%				85.8	86.9	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WCPR/43308 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples: 2308280002, 2308280006, 2308280011, 2308280024

METHOD BLANK: 2725815

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

LABORATORY CONTROL SAMPLE: 2725816

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Phosphorus, Total	99.7	mg/L	2.5	2.5	90 - 110

SAMPLE DUPLICATE: 2725817 ORIGINAL: 2308228001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.066	mg/L	.701	166*	10

MATRIX SPIKE SAMPLE: 2725818 ORIGINAL: 2308228001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.066	mg/L	2.5	1.518	58.1*	90 - 110

MATRIX SPIKE SAMPLE: 2725819 ORIGINAL: 2308280024

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.011	mg/L	2.5	2.479	98.7	90 - 110

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202858 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2308280002, 2308280006, 2308280011, 2308280024

METHOD BLANK: 2721485

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.12J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2721487

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	98.8	mg/L	20	19.8	90 - 110
Nitrate-N	97.2	mg/L	2.5	2.4	90 - 110
Nitrite-N	108	mg/L	.5	0.54	90 - 110
Sulfate	99.3	mg/L	20	19.9	90 - 110

MATRIX SPIKE: 2722079 DUPLICATE: 2722080 ORIGINAL: 2308280024

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrate-N	.16	mg/L	5	5.38	5.4	104	105	80 - 120	.37	20
Nitrite-N	0	mg/L	1	1.16	1.12	116	112	80 - 120	3.51	20
Sulfate	23.5	mg/L	40	60.88	61.56	93.5	95.2	80 - 120	1.11	20

METHOD BLANK: 2722082

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.13J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

MATRIX SPIKE SAMPLE: 2722083 ORIGINAL: 2307006009

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Chloride	2.94	mg/L	40	44.9	105	80 - 120

LABORATORY CONTROL SAMPLE: 2722085

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	101	mg/L	20	20.1	90 - 110
Nitrate-N	98.8	mg/L	2.5	2.5	90 - 110
Nitrite-N	108	mg/L	.5	0.54	90 - 110
Sulfate	100	mg/L	20	20.0	90 - 110

METHOD BLANK: 2722086

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.15J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

MATRIX SPIKE: 2722087 DUPLICATE: 2722088 ORIGINAL: 2307007007

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Chloride	3.96	mg/L	40	46.24	46.94	106	107	80 - 120	1.5	20

METHOD BLANK: 2722090

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.16J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Sulfate	ND	mg/L	1.0

MATRIX SPIKE SAMPLE: 2722091 ORIGINAL: 2307952001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Nitrate-N	3.64	mg/L	5	8.64	100	80 - 120
Nitrite-N	0	mg/L	1	1.1	110	80 - 120

LABORATORY CONTROL SAMPLE: 2722093

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	101	mg/L	20	20.1	90 - 110
Nitrate-N	98.8	mg/L	2.5	2.5	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110
Sulfate	100	mg/L	20	20.0	90 - 110

METHOD BLANK: 2722094

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.17J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

MATRIX SPIKE: 2722095 DUPLICATE: 2722096 ORIGINAL: 2308062001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrite-N	0	mg/L	1	1.14	1.16	114	116	80 - 120	1.74	20

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

METHOD BLANK: 2722098

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.18J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202916 **Analysis Method:** S4500PE-99

QC Batch Method: S4500PE-99

Associated Lab Samples: 2308280002, 2308280006, 2308280011, 2308280024

METHOD BLANK: 2722228

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

MATRIX SPIKE: 2722768 DUPLICATE: 2722769 ORIGINAL: 2308543002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	.0489	mg/L	.5	.5052	.5141	91.3	93	90 - 110	1.75	10

MATRIX SPIKE: 2722230 DUPLICATE: 2722231 ORIGINAL: 2308280024

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	.0059	mg/L	.5	.4563	.4667	90.1	92.2	90 - 110	2.25	10

METHOD BLANK: 2722232

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/202970 **Analysis Method:** S2320B-97

QC Batch Method: S2320B-97

Associated Lab Samples: 2308280002, 2308280006, 2308280011, 2308280024

METHOD BLANK: 2722828

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2722833 ORIGINAL: 2308286001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	296.34424	mg/L	287.92404	2.88	20

SAMPLE DUPLICATE: 2722834 ORIGINAL: 2308280024

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	5.42104	mg/L	5.39957	.4	20

METHOD BLANK: 2722837

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2722838 ORIGINAL: 2308287001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	274.11081	mg/L	270.13382	1.46	20

METHOD BLANK: 2722841

Parameter	Blank Result	Units	Reporting Limit

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Alkalinity, Total	2J	mg/L	5

SAMPLE DUPLICATE: 2722842 ORIGINAL: 2308462001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	7.51063	mg/L	7.3318	2.41	20

METHOD BLANK: 2722845

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2722846 ORIGINAL: 2308462002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	14.82182	mg/L	12.95618	13.4	20

METHOD BLANK: 2722849

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

METHOD BLANK: 2722853

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	2J	mg/L	5

METHOD BLANK: 2722885

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	1J	mg/L	5

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203017 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2723429

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2723430

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2723431

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	104	mg/L	500	519	90 - 110

SAMPLE DUPLICATE: 2723432 ORIGINAL: 2308278001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	155	mg/L	150	3.28	5

SAMPLE DUPLICATE: 2723433 ORIGINAL: 2308521001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	215	mg/L	210	2.35	5

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203031 **Analysis Method:** S5310B-00

QC Batch Method: 415.1/9060/5310B

Associated Lab Samples: 2308280002, 2308280006, 2308280011, 2308280024

METHOD BLANK: 2723601

Parameter	Blank Result	Units	Reporting Limit
Total Organic Carbon (TOC)	ND	mg/L	0.50

LABORATORY CONTROL SAMPLE: 2723602

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Organic Carbon (TOC)	103	mg/L	1	1.0	85 - 115

MATRIX SPIKE: 2723603 DUPLICATE: 2723604 ORIGINAL: 2308325002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	1.474	mg/L	6	7.435	7.497	99.4	100	85 - 115	.83	20

MATRIX SPIKE: 2723605 DUPLICATE: 2723606 ORIGINAL: 2308280024

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	1.615	mg/L	6	7.402	7.433	96.5	97	85 - 115	.42	20

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203065 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2308280011, 2308280024

METHOD BLANK: 2724113

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.12J	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2724115

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	98.8	mg/L	20	19.8	90 - 110
Nitrite-N	104	mg/L	.5	0.52	90 - 110
Nitrate-N	97.6	mg/L	2.5	2.4	90 - 110
Sulfate	99.1	mg/L	20	19.8	90 - 110

MATRIX SPIKE: 2724836 DUPLICATE: 2724837 ORIGINAL: 2308280024

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Chloride	197.65	mg/L	100	306.75	290.2	109	92.5	80 - 120	5.54	20

METHOD BLANK: 2724839

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.14J	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

LABORATORY CONTROL SAMPLE: 2724842

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	98.7	mg/L	20	19.7	90 - 110
Nitrite-N	102	mg/L	.5	0.51	90 - 110
Nitrate-N	97.6	mg/L	2.5	2.4	90 - 110
Sulfate	99.5	mg/L	20	19.9	90 - 110

METHOD BLANK: 2724843

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.14J	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

MATRIX SPIKE: 2724844 DUPLICATE: 2724845 ORIGINAL: 2309081001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrite-N	0	mg/L	1	1.06	1.14	106	114	80 - 120	7.27	20
Nitrate-N	3.66	mg/L	5	8.56	8.6	98	98.8	80 - 120	.47	20

METHOD BLANK: 2724847

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.16J	mg/L	1.0
Nitrite-N	ND	mg/L	0.10
Nitrate-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203083 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2724361

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2724362

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2724363

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	106	mg/L	500	528	90 - 110

SAMPLE DUPLICATE: 2724364 ORIGINAL: 2307664001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	196	mg/L	199	1.52	5

SAMPLE DUPLICATE: 2724365 ORIGINAL: 2307990001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	549	mg/L	572	4.1	5

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203115 **Analysis Method:** D6919-09

QC Batch Method: D6919-09

Associated Lab Samples: 2308280002, 2308280006, 2308280011, 2308280024

LABORATORY CONTROL SAMPLE: 2724780

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Ammonia-N	93.2	mg/L	2.5	2.33	90 - 110

METHOD BLANK: 2724781

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	ND	mg/L	0.010

METHOD BLANK: 2724783

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	ND	mg/L	0.010

MATRIX SPIKE: 2724784 DUPLICATE: 2724785 ORIGINAL: 2308280024

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Ammonia-N	.212	mg/L	10	9.286	9.33	90.7	91.2	75 - 125	.47	25

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203322 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2308280001, 2308280002, 2308280004, 2308280005, 2308280013, 2308280017, 2308280018, 2308280019, 2308280021

METHOD BLANK: 2727066

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

LABORATORY CONTROL SAMPLE: 2727069

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	101	ug/L	10	10.1	90 - 110

MATRIX SPIKE: 2727070 DUPLICATE: 2727071 ORIGINAL: 2310130001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	0	ug/L	5	5.431	5.423	109	108	90 - 110	.15	20

METHOD BLANK: 2727073

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

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QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203412 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2308280002, 2308280004

METHOD BLANK: 2728054

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

LABORATORY CONTROL SAMPLE: 2728057

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	109	ug/L	10	10.9	90 - 110

MATRIX SPIKE: 2728058 DUPLICATE: 2728059 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	0	ug/L	5	4.804	4.726	96.1	94.5	90 - 110	1.64	20

METHOD BLANK: 2728061

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

QUALITY CONTROL DATA

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QC Batch: WETC/203647 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples:

METHOD BLANK: 2730848

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730850

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730852

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730854

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730856

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2724317	1	Lab Control Standard	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 173 and the control limits were 56 to 134.				
2724317	2	Lab Control Standard	SW846 8260B	Hexachlorobutadiene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 137 and the control limits were 55 to 128.				
2724317	3	Lab Control Standard	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 122 and the control limits were 76 to 121.				
2724317	4	Lab Control Standard	SW846 8260B	1,2,3-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 143 and the control limits were 61 to 126.				
2724364	5	Duplicate	S2540C-11	Total Dissolved Solids
The sample was originally run within hold time, but required further analysis that exceeded hold time.				
2724403	6	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 150 and the control limits were 70 to 130.				
2724403	7	Lab Control Standard	SW846 8260B	4-Methyl-2-Pentanone(MIBK)
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 4-Methyl-2-Pentanone(MIBK). The % Recovery was reported as 69.8 and the control limits were 71 to 146.				
2724403	8	Lab Control Standard	SW846 8260B	2-Hexanone
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2-Hexanone. The % Recovery was reported as 63.7 and the control limits were 65 to 154.				
2724403	9	Lab Control Standard	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 136 and the control limits were 76 to 121.				
2724800	10	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 147 and the control limits were 50 to 130.				
2724800	11	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 133 and the control limits were 66 to 130.				
2724800	12	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 148 and the control limits were 70 to 130.				
2724800	13	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 135 and the control limits were 63 to 128.				
2724800	14	Lab Control Standard	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 148 and the control limits were 57 to 131.				

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2724800	15	Lab Control Standard	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 128 and the control limits were 76 to 121.				
2725081	16	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 165 and the control limits were 50 to 130.				
2725081	17	Lab Control Standard	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 133 and the control limits were 57 to 131.				
2725081	18	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 134 and the control limits were 63 to 128.				
2725081	19	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 141 and the control limits were 66 to 130.				
2725884	20	Lab Control Standard	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 158 and the control limits were 56 to 134.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308280002	FB-041018-ZN			EPA 300.0	WETC/202858
2308280006	MRC-MW27B			EPA 300.0	WETC/202858
2308280011	MRC-MW27A			EPA 300.0	WETC/202858
2308280024	MRC-MW34B			EPA 300.0	WETC/202858
2308280002	FB-041018-ZN			S4500PE-99	WETC/202916
2308280006	MRC-MW27B			S4500PE-99	WETC/202916
2308280011	MRC-MW27A			S4500PE-99	WETC/202916
2308280024	MRC-MW34B			S4500PE-99	WETC/202916
2308280002	FB-041018-ZN			S2320B-97	WETC/202970
2308280006	MRC-MW27B			S2320B-97	WETC/202970
2308280011	MRC-MW27A			S2320B-97	WETC/202970
2308280024	MRC-MW34B			S2320B-97	WETC/202970
2308280002	FB-041018-ZN	SW846 3015	MDIG/71189	SW846 6010C	META/61685
2308280002	FB-041018-ZN	SW846 3015	MDIG/71189	SW846 6010C	META/61707
2308280001	MRC-MW128B	SW846 3015	MDIG/71191	SW846 6020A	META/61641
2308280002	FB-041018-ZN			S2540C-11	WETC/203017
2308280006	MRC-MW27B			S2540C-11	WETC/203017
2308280011	MRC-MW27A			S2540C-11	WETC/203017
2308280002	FB-041018-ZN			S5310B-00	WETC/203031
2308280006	MRC-MW27B			S5310B-00	WETC/203031
2308280011	MRC-MW27A			S5310B-00	WETC/203031
2308280024	MRC-MW34B			S5310B-00	WETC/203031
2308280011	MRC-MW27A			EPA 300.0	WETC/203065
2308280024	MRC-MW34B			EPA 300.0	WETC/203065

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308280001	MRC-MW128B			SW846 8260B	VOMS/46548
2308280003	TB-041118-1			SW846 8260B	VOMS/46548
2308280004	MRC-MW118A			SW846 8260B	VOMS/46548
2308280005	MRC-MW118B			SW846 8260B	VOMS/46548
2308280006	MRC-MW27B			SW846 8260B	VOMS/46548
2308280008	MRC-MW32A			SW846 8260B	VOMS/46548
2308280009	MRC-MW33A			SW846 8260B	VOMS/46548
2308280010	MRC-MW109A			SW846 8260B	VOMS/46548
2308280024	MRC-MW34B			S2540C-11	WETC/203083
2308280011	MRC-MW27A			SW846 8260B	VOMS/46553
2308280012	MRC-MW13A			SW846 8260B	VOMS/46553
2308280013	MRC-MW122A			SW846 8260B	VOMS/46553
2308280014	MRC-SWMW-5I			SW846 8260B	VOMS/46553
2308280015	MRC-SWMW-5I-D			SW846 8260B	VOMS/46553
2308280002	FB-041018-ZN	SW846 3015	MDIG/71233	SW846 6020A	META/61671
2308280019	MRC-MW129A	SW846 3015	MDIG/71233	SW846 6020A	META/61671
2308280021	MRC-MW129B	SW846 3015	MDIG/71233	SW846 6020A	META/61671
2308280001	MRC-MW128B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280002	FB-041018-ZN	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280004	MRC-MW118A	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280005	MRC-MW118B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280006	MRC-MW27B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280012	MRC-MW13A	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280017	MRC-MW131B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280018	MRC-MW131B-D	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280019	MRC-MW129A	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280021	MRC-MW129B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308280023	MRC-MW100B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308280017	MRC-MW131B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30471
2308280018	MRC-MW131B-D	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30471
2308280023	MRC-MW100B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30471
2308280002	FB-041018-ZN			D6919-09	WETC/203115
2308280006	MRC-MW27B			D6919-09	WETC/203115
2308280011	MRC-MW27A			D6919-09	WETC/203115
2308280024	MRC-MW34B			D6919-09	WETC/203115
2308280016	TB-041118-3			SW846 8260B	VOMS/46558
2308280017	MRC-MW131B			SW846 8260B	VOMS/46558
2308280018	MRC-MW131B-D			SW846 8260B	VOMS/46558
2308280019	MRC-MW129A			SW846 8260B	VOMS/46558
2308280020	TB-041118-4			SW846 8260B	VOMS/46558
2308280021	MRC-MW129B			SW846 8260B	VOMS/46558
2308280023	MRC-MW100B			SW846 8260B	VOMS/46558
2308280024	MRC-MW34B			SW846 8260B	VOMS/46558
2308280025	TB-041118-5			SW846 8260B	VOMS/46558
2308280001	MRC-MW128B			SW846 8260B	VOMS/46565
2308280002	FB-041018-ZN			SW846 8260B	VOMS/46565
2308280006	MRC-MW27B			SW846 8260B	VOMS/46565
2308280007	TB-041118-2			SW846 8260B	VOMS/46565
2308280002	FB-041018-ZN	EPA 365.1	WCPR/43308	EPA 365.1	WETC/203647
2308280006	MRC-MW27B	EPA 365.1	WCPR/43308	EPA 365.1	WETC/203647
2308280011	MRC-MW27A	EPA 365.1	WCPR/43308	EPA 365.1	WETC/203647
2308280024	MRC-MW34B	EPA 365.1	WCPR/43308	EPA 365.1	WETC/203647
2308280017	MRC-MW131B			SW846 8260B	VOMS/46574
2308280018	MRC-MW131B-D			SW846 8260B	VOMS/46574

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308280 2018-MIDDLE RIVER COMPLEX

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308280022	MRC-MW100A			SW846 8260B	VOMS/46574
2308280023	MRC-MW100B			SW846 8260B	VOMS/46574
2308280006	MRC-MW27B	SW846 3015	MDIG/71289	SW846 6010C	META/61733
2308280011	MRC-MW27A	SW846 3015	MDIG/71289	SW846 6010C	META/61733
2308280006	MRC-MW27B	SW846 3015	MDIG/71289	SW846 6010C	META/61750
2308280011	MRC-MW27A	SW846 3015	MDIG/71289	SW846 6010C	META/61750
2308280001	MRC-MW128B			EPA 218.6	WETC/203322
2308280005	MRC-MW118B			EPA 218.6	WETC/203322
2308280013	MRC-MW122A			EPA 218.6	WETC/203322
2308280017	MRC-MW131B			EPA 218.6	WETC/203322
2308280018	MRC-MW131B-D			EPA 218.6	WETC/203322
2308280019	MRC-MW129A			EPA 218.6	WETC/203322
2308280021	MRC-MW129B			EPA 218.6	WETC/203322
2308280001	MRC-MW128B	SW846 7470A	MDIG/71322	SW846 7470A	META/61741
2308280002	FB-041018-ZN	SW846 7470A	MDIG/71322	SW846 7470A	META/61741
2308280019	MRC-MW129A	SW846 7470A	MDIG/71322	SW846 7470A	META/61741
2308280021	MRC-MW129B	SW846 7470A	MDIG/71322	SW846 7470A	META/61741
2308280002	FB-041018-ZN			RSK 175	SVGC/48941
2308280006	MRC-MW27B			RSK 175	SVGC/48941
2308280011	MRC-MW27A			RSK 175	SVGC/48941
2308280024	MRC-MW34B			RSK 175	SVGC/48941
2308280001	MRC-MW128B	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308280002	FB-041018-ZN			EPA 218.6	WETC/203412
2308280004	MRC-MW118A			EPA 218.6	WETC/203412

ALS Environmental

34 Dogwood Lane
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F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 4

Courier:

Tracking #:

* 2 3 0 8 2 8 0 *

Co. Name: AECOM

Contact (Report to): Ravi Danera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Danera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y ravi.danera@aecom.com

Fax? [ ] -Y No.:

***Container Type	CG	AG	P	P	AG	CG	P	P	P	AG					
***Container Size	40mL	1L	250	250	1L	40mL	500	250	250	40mL					
***Preservative	HCl	—	HNO_3	Cr Tube	—	HCl	—	—	H_2SO_4	HCl					

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	TAL Metals (6020A/7470)	Hex chromium (208.6)	RCB Hemologs (680/8260C)	MEE (RSK 175)	MNA (Cl, NO_2, NO_3, SO_4, TDS, orthophos)	Alkalinity	Ammonia-N (NH_3)	TOC (S5310B)
1	MRC-MW128B		4-11-18	1415	G	GW	2	2	1	1	2	4-12				
2	FB-041018-2N	equip. blank	4-10-18	1700	G	WQ	2	2	1	1	2	2	1	1	1	2
3	TB-041118-1	trip blank	NA	NA	G	WQ	2	—								
4	MRC-MW118A		4-10-18	1500	G	GW	2	2		1						
5	MRC-MW118B		4-10-18	1700	G	GW	2	2		1						
6	MRC-MW27B		4-10-18	1615	G	GW	2	2				2	1	1	1	2
7	TB-041118-2	trip blank	NA	NA	G	WQ	2									
8	MRC-MW32A		4-10-18	1735	G	GW	2									

Receipt Information (completed by Sample Receiving)

Performed by: Cooler

Cooler Temp: 2 °C

Therm. ID: 318

No. of Coolers:

Notes:

	Corrected containers?	Corrected sample volume?	Corrected preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	Y	Y	Y	Y	
	N	N	N	N	
	Y	Y	Y	Y	
	N	N	N	N	
	Y	Y	Y	Y	
	N	N	N	N	
	Y	Y	Y	Y	
	N	N	N	N	

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
	Y	Y	Y	Y	Y
	N	N	N	N	N
	Y	Y	Y	Y	Y
	N	N	N	N	N

SAMPLED BY (Please Print): Holly Brown

Project Comments: Please also email data to holly brown@aecom.com & naam.twentzis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] / AECOM	4-11-18	1545	2	[signature]	4/11	1545
3	[signature]	4/11	1736	4	[signature]	4/11	2230
5	[signature]	4/11	2330	6	[signature]	4/11	~~2230~~
7				8			2330
9				10			Rm

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ___ [ ] ___

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: Other

EDDs Required? Equis & CSV for PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

4-12-18 1941

ALS Environmental

34 Dogwood Lane
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F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 4

Courier:

Tracking #: W4 2308280

Co. Name: AECOM

Contact (Report to): Ravi Danera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Danera PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.danera@aecom.com
Fax? [ ] -Y No.:

***Container Type	CG	CG	P	P	P	AG	AG	P							
***Container Size	40mL	40mL	500	250	250	40mL	1L	250							
Preservative	HCl	HCl	—	—	H2SO4	HCl	—	6 bags							

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	MEF (RSK175)	MNA (Cl, NO2, NO3, SO4, TDS, ortho-PO4)	Alkalinity	Ammonia (NH3-N)	TOC (SS310B)	14-Dioxane (8270D SIM)	Hex chromium (208.6)		
1	MRC-MW33A		4-10-18	1630	G	GW	2									
2	MRC-MW109A		4-10-18	1740	G	GW	2									
3	MRC-MW27A		4-10-18	1425	G	GW	2	2	1	1	1	2				
4	MRC-MW13A		4-10-18	1515	G	GW	2						2			
5	MRC-MW122A	ran dry	4-10-18	1720	G	GW	2							1		
6	MRC-SWMW-5I	ms/msd	4-11-18	0925	G	GW	6									
7	MRC-SWMW-5I-D	dup.	4-11-18	0930	G	GW	2									
8	TB-041118-3	trip blank	NA	NA	G	WQ	2									

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: GGW
Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers:
Notes:

	Corrected containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	N	N	N	N	
3	Y	Y	Y	Y	
4	N	N	N	N	
5	N	N	N	N	
6	N	N	N	N	
7	N	N	N	N	
8	N	N	N	N	

Custody seals Present? (if present) Seals intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): Holly Brown

Project Comments: Please also email data to holly.brown@aecom.com & naum.tavantzis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] / AECOM	4-11-18	1545	2	[signature]	4/11	1545
3	[signature]	4/11	1736	4	[signature]	4/11	2230
5	[signature]	4/11	2330	6	[signature]	4/11	2330
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ___ sow

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Fills Required? [X] If yes, format type: EQuIS & CSV Other

Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 280ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 3 of 4

Courier:

Tracking #: W 4-12

2308280

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

***Container Type	CG	AG	P	AG	P	CG	P	P	AG	P					
***Container Size	40mL	1L	750	1L	750	40mL	500	750	40mL	750					
Preservative	HCl	—	Cl buff	—	HNO3	HCl	—	H2SO4	HCl	—					

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane (8270D SIM)	Hex. Chromium (2015.6)	PCB Homologs (Cas/Rev.)	TAL Metals (6020A/7470)	MEE (Rsk 175)	MNA (Cl, NO2, NO3, SO4, TDS, ortho-phos)	NH3-N Ammonia-N	TOC (SS310B)	Alkalinity W 4-12
1 MRC-MW131B		4-11-18	0945	G	GW	2	2	1							
2 MRC-MW131B-D	dup.	4-11-18	0955	G	GW	2	2	1							
3 MRC-MW129A		4-11-18	1000	G	GW	2	2	1	2	1					
4 TB-041118-4	trip blank	NA	NA	G	WQ	2									
5 MRC-MW129B		4-11-18	1210	G	GW	2	2	1	2	1					
6 MRC-MW100A		4-11-18	0913	G	GW	2									
7 MRC-MW100B		4-11-18	1109	G	GW	2	2								W 4-12
8 MRC-MW34B	MS/MSD	4-11-18	1215	G	GW	6					6	3	3	6	3

Receipt Information (completed by Sample Receiving)
Performed by: [signature]
Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers:
Notes:

Sample Description/Location	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 MRC-MW131B	Y	N	Y	N	Y
2 MRC-MW131B-D	Y	N	Y	N	Y
3 MRC-MW129A	Y	N	Y	N	Y
4 TB-041118-4	Y	N	Y	N	Y
5 MRC-MW129B	Y	N	Y	N	Y
6 MRC-MW100A	Y	N	Y	N	Y
7 MRC-MW100B	Y	N	Y	N	Y
8 MRC-MW34B	Y	N	Y	N	Y

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to naoum.tavatzis@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4-11-18	1545	2 [signature]	4/11	1545
3 [signature]	4/11	1736	4 [signature]	4/11	2230
5 [signature]	4/11	2330	6 [signature]	4/11	2330
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] new

SOWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQUIS & CSV Other: Enter PW/SID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #: 1308280

Co. Name: AECOM
Contact (Report to): Ravi Pamra & Holly Brown Phone: 301-674-3199
Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Pamra PO#: 95540ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] Y ravi.pamra@aecom.com
Fax? [ ] Y No:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	*** Preservative	WWM	ANALYSES/METHOD REQUESTED
										Enter Number of Containers Per Analysis
1 TB-041118-5	trip blank	NA	NA	G	WW	CG	40ml	HCl		VOCs (8260)
2										
3										
4										
5										
6										
7										
8										

Receipt Information (completed by Sample Receipting)
Relinquished by: Cooler
Cooler Temp: 2°C
Therm. ID: 318
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	Y	Y	Y	Y	
	Custody seals Present?	(if present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to raoum.tavantzis@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AECOM	4-11-18	1545	2	4/11	1545
3	4/11	1736	4	4/11	2220
5	4/11	2330	6	4/11	2330
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ]
EDDs Required? [X] If yes, format type: EQUIS & .csv
DOD Criteria Required?

SDWA Forms? yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
Enter PWSID No.

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

Monday, April 30, 2018 6:29:19 PM
Page 155 of 182
ALS

April 27, 2018 Service Request No:R1803359

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2308280

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 17, 2018
For your reference, these analyses have been assigned our service request number **R1803359.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2308280
Sample Matrix: Water

Service Request: R1803359
Date Received: 04/17/2018 - 04/18/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Four water samples were received for analysis at ALS Environmental on 04/17/2018 - 04/18/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/24/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Method 680, One or more samples were received past the recommended holding time. The customer was notified when the discrepancy was found and instructed the laboratory to proceed with processing. The analysis was performed as soon as possible after receipt by the laboratory. The data is flagged to indicate the holding time violation.

Approved by _____ Date 04/27/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2308280 001			Lab ID: R1803359-001			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.010		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.0085		0.00059	0.0050	ug/L	680

CLIENT ID: 2308280 002			Lab ID: R1803359-002			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0090		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.0045	J	0.00059	0.0050	ug/L	680
Trichlorobiphenyls, Total	0.0055		0.0022	0.0050	ug/L	680

CLIENT ID: 2308280 019			Lab ID: R1803359-003			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0065		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.0050		0.00059	0.0050	ug/L	680

CLIENT ID: 2308280 021			Lab ID: R1803359-004			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Monochlorobiphenyls, Total	0.0020	J	0.00059	0.0050	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803359-001	2308280 001	4/11/2018	1415
R1803359-002	2308280 002	4/10/2018	1700
R1803359-003	2308280 019	4/11/2018	1000
R1803359-004	2308280 021	4/11/2018	1210

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2308280

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/24/2018 Approved By:

Email? [ ] -Y

Fax? [ ] -Y No.:

Container Type	AN									
Container Size	1 L									
Preservative	None									

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.									Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.										
1 2308280 001	4/11/18	1415	G	WT	2	*									
2 2308280 002	4/10/18	1700	G	WT	2	*									Sub to ALS Rochester
3 2308280 019	4/11/18	1000	G	WT	2	*									
4 2308280 021	4/11/18	1210	G	WT	2	*									
6															
7															
8															
9															
10															

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?	[ ]	[ ]	
(If present) Seals Intact?	[ ]	[ ]	
Received on Ice?	[ ]	[ ]	
COC/Labels Complete/Accurate?	[ ]	[ ]	
Cont. in Good Cond.?	[ ]	[ ]	
Correct Containers?	[ ]	[ ]	
Correct Sample Volumes?	[ ]	[ ]	
Correct Preservation?	[ ]	[ ]	
Headspace/Volatiles?	[ ]	[ ]	

Courier/Tracking #:

ALS Field Services: ☐Pickup ☐Labor ☐Composite_Sampling ☐Rental_Equipment ☐Other:

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Greg Bartels/ALS	4/11/18	1710	2	4/12/18	0820
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected in: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ]

PWSID # ____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- EQUIS EDD

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wr

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

R1803359 5

ALS Environmental
UR115: 2308280

R1803359 5
ALS Environmental
UR116: 2309280

Cooler Receipt and Preservation Check Form

Project/Client ALS – MDT Folder Number _____

Cooler received on 4/17/18 by: @ COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y N	5a	**Perchlorate** samples have required headspace?	Y N NA
2	**Custody papers** properly completed (ink, signed)?	Y N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N NA
3	Did all bottles arrive in good **condition** (unbroken)?	Y N	6	Where did the bottles originate? ALS/ROC CLIENT	
4	Circle: **Wet Ice** **Dry Ice** **Gel packs** present?	Y N	7	Soil VOA received as: Bulk Encore 5035set NA	

8. Temperature Readings Date: 4/17/18 Time: 0927 ID: IR#7 IR#9 From: Temp Blank Sample Bottle

Observed Temp (°C)	1.8	2.0	1.9	1.7			
Correction Factor (°C)	—	—	—	—			
Corrected Temp (°C)	1.8	2.0	1.9	1.7			
Temp from:Type of bottle	—	—	—	—			
Within 0-6°C?	Y N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: Rack by @ on 4/17/18 at 0930
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 4/17/18 Time: 1256 by: @

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol)					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: MDT
Explain all Discrepancies/ Other Comments:

missing samples left on hold

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: @
PC Secondary Review: Jims 4/18/18 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Cooler Receipt and Preservation Check Form

Project/Client ALS- MDT Folder Number

Cooler received on 4/18/18 by: @

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	Y (N)	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC (CLIENT)
4	Circle: **Wet Ice Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/18/18 Time: 0953 ID: IR#7 (IR#9) From: Temp Blank (Sample Bottle)

Observed Temp (°C)	0.9						
Correction Factor (°C)	—						
Corrected Temp (°C)	0.9						
Temp from:Type of bottle	—						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R002 by @ on 4/18/18 at 0956
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: _____ Time: _____ by: _____

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
10. Did all bottle labels and tags agree with custody papers? YES NO
11. Were correct containers used for the tests indicated? YES NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: _____

Explain all Discrepancies/ Other Comments:

missing coolers from 4/17/18 except GFO's

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: _____

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm ; WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

\# Spike was diluted out

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client: ALS Environmental - US
Project: UR115: 2308280
Service Request: R1803359

Sample Name: 2308280 001
Lab Code: R1803359-001
Sample Matrix: Water
Date Collected: 04/11/18
Date Received: 04/18/18

Analysis Method	Extracted/Digested By	Analyzed By
680	JMISIUREWICZ	JMISIUREWICZ

Sample Name: 2308280 002
Lab Code: R1803359-002
Sample Matrix: Water
Date Collected: 04/10/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308280 019
Lab Code: R1803359-003
Sample Matrix: Water
Date Collected: 04/11/18
Date Received: 04/18/18

Analysis Method	Extracted/Digested By	Analyzed By
680	JMISIUREWICZ	JMISIUREWICZ

Sample Name: 2308280 021
Lab Code: R1803359-004
Sample Matrix: Water
Date Collected: 04/11/18
Date Received: 04/18/18

Analysis Method	Extracted/Digested By	Analyzed By
680	JMISIUREWICZ	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	ALS Environmental - US	**Service Request:**	R1803359
Project:	UR115: 2308280	**Date Collected:**	04/11/18 14:15
Sample Matrix:	Water	**Date Received:**	04/18/18 09:53
Sample Name:	2308280 001	**Units:**	ug/L
Lab Code:	R1803359-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 11:08	4/19/18	*
Dichlorobiphenyls, Total	**0.010**	0.0050	0.0016	1	04/24/18 11:08	4/19/18	*
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 11:08	4/19/18	*
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 11:08	4/19/18	*
Monochlorobiphenyls, Total	**0.0085**	0.0050	0.00059	1	04/24/18 11:08	4/19/18	*
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 11:08	4/19/18	*
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 11:08	4/19/18	*
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 11:08	4/19/18	*
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 11:08	4/19/18	*
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 11:08	4/19/18	*
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 11:08	4/19/18	*

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	91	58 - 125	04/24/18 11:08	
4,4'-DDT	106	37 - 166	04/24/18 11:08	

Client:	ALS Environmental - US	**Service Request:**	R1803359
Project:	UR115: 2308280	**Date Collected:**	04/10/18 17:00
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308280 002	**Units:**	ug/L
Lab Code:	R1803359-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 18:24	4/17/18	
Dichlorobiphenyls, Total	**0.0090**	0.0050	0.0016	1	04/24/18 18:24	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 18:24	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 18:24	4/17/18	
Monochlorobiphenyls, Total	**0.0045 J**	0.0050	0.00059	1	04/24/18 18:24	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 18:24	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 18:24	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 18:24	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 18:24	4/17/18	
Trichlorobiphenyls, Total	**0.0055**	0.0050	0.0022	1	04/24/18 18:24	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 18:24	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	89	58 - 125	04/24/18 18:24	
4,4'-DDT	110	37 - 166	04/24/18 18:24	

Client:	ALS Environmental - US	**Service Request:**	R1803359
Project:	UR115: 2308280	**Date Collected:**	04/11/18 10:00
Sample Matrix:	Water	**Date Received:**	04/18/18 09:53
Sample Name:	2308280 019	**Units:**	ug/L
Lab Code:	R1803359-003	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method:	680
Prep Method:	EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 11:37	4/19/18	*
Dichlorobiphenyls, Total	**0.0065**	0.0050	0.0016	1	04/24/18 11:37	4/19/18	*
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 11:37	4/19/18	*
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 11:37	4/19/18	*
Monochlorobiphenyls, Total	**0.0050**	0.0050	0.00059	1	04/24/18 11:37	4/19/18	*
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 11:37	4/19/18	*
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 11:37	4/19/18	*
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 11:37	4/19/18	*
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 11:37	4/19/18	*
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 11:37	4/19/18	*
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 11:37	4/19/18	*

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	111	58 - 125	04/24/18 11:37	
4,4'-DDT	130	37 - 166	04/24/18 11:37	

Client:	ALS Environmental - US	**Service Request:**	R1803359
Project:	UR115: 2308280	**Date Collected:**	04/11/18 12:10
Sample Matrix:	Water	**Date Received:**	04/18/18 09:53
Sample Name:	2308280 021	**Units:**	ug/L
Lab Code:	R1803359-004	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method:	680
Prep Method:	EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 12:06	4/19/18	*
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 12:06	4/19/18	*
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 12:06	4/19/18	*
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 12:06	4/19/18	*
Monochlorobiphenyls, Total	**0.0020 J**	0.0050	0.00059	1	04/24/18 12:06	4/19/18	*
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 12:06	4/19/18	*
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 12:06	4/19/18	*
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 12:06	4/19/18	*
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 12:06	4/19/18	*
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 12:06	4/19/18	*
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 12:06	4/19/18	*

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	101	58 - 125	04/24/18 12:06	
4,4'-DDT	125	37 - 166	04/24/18 12:06	

QC Summary Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:** R1803359
Project: UR115: 2308280
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2308280 001	R1803359-001	106	91
2308280 002	R1803359-002	110	89
2308280 019	R1803359-003	130	111
2308280 021	R1803359-004	125	101
Method Blank	RQ1803502-01	111	86
Lab Control Sample	RQ1803502-02	106	86
Duplicate Lab Control Sample	RQ1803502-03	106	88
Method Blank	RQ1803584-01	126	99
Lab Control Sample	RQ1803584-02	128	100

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1803359
Project:	UR115: 2308280	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803502-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 15:28	4/17/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 15:28	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 15:28	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 15:28	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/24/18 15:28	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 15:28	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 15:28	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 15:28	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 15:28	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 15:28	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 15:28	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	86	58 - 125	04/24/18 15:28	
4,4'-DDT	111	37 - 166	04/24/18 15:28	

Client:	ALS Environmental - US	**Service Request:**	R1803359
Project:	UR115: 2308280	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803584-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 09:20	4/19/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 09:20	4/19/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 09:20	4/19/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 09:20	4/19/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/24/18 09:20	4/19/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 09:20	4/19/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 09:20	4/19/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 09:20	4/19/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 09:20	4/19/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 09:20	4/19/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 09:20	4/19/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	99	58 - 125	04/24/18 09:20	
4,4'-DDT	126	37 - 166	04/24/18 09:20	

Client: ALS Environmental - US
Project: UR115: 2308280
Sample Matrix: Water

Service Request: R1803359
Date Analyzed: 04/24/18

Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

Lab Control Sample
RQ1803584-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Decachlorobiphenyl	680	0.530	1.25	42	29-162
Dichlorobiphenyls, Total	680	0.212	0.250	85	37-139
Heptachlorobiphenyls, Total	680	0.506	0.750	67	53-130
Hexachlorobiphenyls, Total	680	0.388	0.500	78	11-160
Monochlorobiphenyls, Total	680	0.190	0.250	76	34-137
Octachlorobiphenyls, Total	680	0.469	0.750	63	57-125
Pentachlorobiphenyls, Total	680	0.433	0.500	87	10-180
Tetrachlorobiphenyls, Total	680	0.447	0.500	89	14-153
Trichlorobiphenyls, Total	680	0.208	0.250	83	10-173

Client: ALS Environmental - US
Project: UR115: 2308280
Sample Matrix: Water

Service Request: R1803359
Date Analyzed: 04/24/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803502-02			Duplicate Lab Control Sample RQ1803502-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.468	1.25	37	0.509	1.25	41	29-162	8	30
Dichlorobiphenyls, Total	680	0.186	0.250	74	0.190	0.250	76	37-139	2	30
Heptachlorobiphenyls, Total	680	0.484	0.750	65	0.492	0.750	66	53-120	2	30
Hexachlorobiphenyls, Total	680	0.373	0.500	75	0.368	0.500	74	11-160	1	30
Monochlorobiphenyls, Total	680	0.159	0.250	63	0.172	0.250	69	34-137	8	30
Octachlorobiphenyls, Total	680	0.439	0.750	59	0.445	0.750	59	57-125	1	30
Pentachlorobiphenyls, Total	680	0.418	0.500	84	0.414	0.500	83	10-180	<1	30
Tetrachlorobiphenyls, Total	680	0.360	0.500	72	0.384	0.500	77	14-153	6	30
Trichlorobiphenyls, Total	680	0.180	0.250	72	0.187	0.250	75	10-173	4	30

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 30, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2308629**
Purchase Order:	**95840ACM**	Workorder ID:	**LMC MRC 04/11/18**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, April 12, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2308629 LMC MRC 04/11/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2308629001	MRC-MW130A-D	Water	4/11/2018 15:00	4/12/2018 21:10	Collected by Client
2308629002	MRC-MW130A	Water	4/11/2018 14:55	4/12/2018 21:10	Collected by Client
2308629003	TB-041218-1	Water	4/12/2018 21:10	4/12/2018 21:10	Collected by Client
2308629004	MRC-MW130B	Water	4/11/2018 15:23	4/12/2018 21:10	Collected by Client
2308629005	MRC-MW111B	Water	4/11/2018 15:23	4/12/2018 21:10	Collected by Client
2308629006	MRC-MW96B	Water	4/12/2018 11:20	4/12/2018 21:10	Collected by Client
2308629007	TB-041218-2	Water	4/12/2018 21:10	4/12/2018 21:10	Collected by Client
2308629008	MRC-MW111B-DUP	Water	4/11/2018 15:25	4/12/2018 21:10	Collected by Client
2308629009	TB-041218-3	Water	4/12/2018 21:10	4/12/2018 21:10	Collected by Client
2308629010	MRC-MW38A	Water	4/11/2018 18:25	4/12/2018 21:10	Collected by Client
2308629011	MRC-MW29A	Water	4/11/2018 13:10	4/12/2018 21:10	Collected by Client
2308629012	MRC-MW58A	Water	4/11/2018 15:35	4/12/2018 21:10	Collected by Client
2308629013	MRC-MW18A	Water	4/11/2018 16:55	4/12/2018 21:10	Collected by Client
2308629014	TB-041218-4	Water	4/12/2018 21:10	4/12/2018 21:10	Collected by Client
2308629015	MRC-MW96B-DUP	Water	4/11/2018 11:20	4/12/2018 21:10	Collected by Client

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2308629 LMC MRC 04/11/18

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2308629 LMC MRC 04/11/18

Workorder Comments

Please see attached subcontracting report from ALS Rochester. VNB 4/30/18

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629001** Date Collected: 4/11/2018 15:00 Matrix: Water

Sample ID: **MRC-MW130A-D** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 04:15	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 04:15	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 04:15	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 04:15	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 04:15	CJG	A
1,2,3-Trichlorobenzene	13.9		ug/L	2.0	0.93	SW846 8260B		4/20/18 04:15	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 04:15	CJG	A
1,2,4-Trichlorobenzene	80.7		ug/L	2.0	0.82	SW846 8260B		4/20/18 04:15	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 04:15	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 04:15	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 04:15	CJG	A
1,2-Dichlorobenzene	1.0		ug/L	1.0	0.38	SW846 8260B		4/20/18 04:15	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:15	CJG	A
1,2-Dichloroethene, Total	3.7		ug/L	2.0	0.45	SW846 8260B		4/20/18 04:15	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 04:15	CJG	A
1,3-Dichlorobenzene	10.6		ug/L	1.0	0.25	SW846 8260B		4/20/18 04:15	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 04:15	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 04:15	CJG	A
1,4-Dichlorobenzene	2.5		ug/L	1.0	0.27	SW846 8260B		4/20/18 04:15	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:15	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 04:15	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 04:15	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 04:15	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 04:15	CJG	A
Acetone	3.6J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 04:15	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 04:15	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:15	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:15	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 04:15	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 04:15	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 04:15	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 04:15	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:15	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 04:15	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 04:15	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629001** Date Collected: 4/11/2018 15:00 Matrix: Water

Sample ID: **MRC-MW130A-D** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 04:15	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:15	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 04:15	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:15	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 04:15	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 04:15	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 04:15	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 04:15	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 04:15	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 04:15	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 04:15	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 04:15	CJG	A
Methyl t-Butyl Ether	3.1		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 04:15	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 04:15	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 04:15	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 04:15	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 04:15	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 04:15	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 04:15	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 04:15	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 04:15	CJG	A
cis-1,2-Dichloroethene	3.3		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:15	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:15	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 04:15	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 04:15	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 04:15	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:15	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:15	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:15	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 04:15	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 04:15	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 04:15	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629001** Date Collected: 4/11/2018 15:00 Matrix: Water
Sample ID: **MRC-MW130A-D** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.37J	J	ug/L	1.0	0.26	SW846 8260B			4/20/18 04:15	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 04:15	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/20/18 04:15	CJG	A
4-Bromofluorobenzene (S)	94.3		%	79 - 114		SW846 8260B			4/20/18 04:15	CJG	A
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/20/18 04:15	CJG	A
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/20/18 04:15	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.056J	J	ug/L	0.10	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	73.3		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
Fluoranthene-d10 (S)	98		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 06:21	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 09:30	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Beryllium, Total	0.0054		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Cobalt, Total	0.025		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 15:43	AXC	E2
Nickel, Total	0.037		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
Zinc, Total	0.065		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:55	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629001** Date Collected: 4/11/2018 15:00 Matrix: Water

Sample ID: **MRC-MW130A-D** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 18:53	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629002** Date Collected: 4/11/2018 14:55 Matrix: Water

Sample ID: **MRC-MW130A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 04:38	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 04:38	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 04:38	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 04:38	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 04:38	CJG	A
1,2,3-Trichlorobenzene	14.6		ug/L	2.0	0.93	SW846 8260B		4/20/18 04:38	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 04:38	CJG	A
1,2,4-Trichlorobenzene	80.5		ug/L	2.0	0.82	SW846 8260B		4/20/18 04:38	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 04:38	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 04:38	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 04:38	CJG	A
1,2-Dichlorobenzene	1.0		ug/L	1.0	0.38	SW846 8260B		4/20/18 04:38	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:38	CJG	A
1,2-Dichloroethene, Total	3.3		ug/L	2.0	0.45	SW846 8260B		4/20/18 04:38	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 04:38	CJG	A
1,3-Dichlorobenzene	10.6		ug/L	1.0	0.25	SW846 8260B		4/20/18 04:38	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 04:38	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 04:38	CJG	A
1,4-Dichlorobenzene	2.4		ug/L	1.0	0.27	SW846 8260B		4/20/18 04:38	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:38	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 04:38	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 04:38	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 04:38	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 04:38	CJG	A
Acetone	10.8		ug/L	10.0	3.1	SW846 8260B		4/20/18 04:38	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 04:38	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:38	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:38	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 04:38	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 04:38	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 04:38	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 04:38	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:38	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 04:38	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 04:38	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629002** Date Collected: 4/11/2018 14:55 Matrix: Water

Sample ID: **MRC-MW130A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 04:38	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:38	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 04:38	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:38	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 04:38	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 04:38	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 04:38	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 04:38	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 04:38	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 04:38	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 04:38	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 04:38	CJG	A
Methyl t-Butyl Ether	3.2		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 04:38	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 04:38	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 04:38	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 04:38	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 04:38	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 04:38	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 04:38	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 04:38	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 04:38	CJG	A
cis-1,2-Dichloroethene	3.3		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:38	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:38	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 04:38	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 04:38	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 04:38	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:38	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 04:38	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 04:38	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 04:38	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 04:38	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 04:38	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629002** Date Collected: 4/11/2018 14:55 Matrix: Water
Sample ID: **MRC-MW130A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 04:38	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 04:38	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/20/18 04:38	CJG	A
4-Bromofluorobenzene (S)	94.8		%	79 - 114		SW846 8260B			4/20/18 04:38	CJG	A
Dibromofluoromethane (S)	108		%	78 - 116		SW846 8260B			4/20/18 04:38	CJG	A
Toluene-d8 (S)	99.8		%	76 - 127		SW846 8260B			4/20/18 04:38	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.048J	J	ug/L	0.10	0.020	8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	67.2		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
Fluoranthene-d10 (S)	92.4		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 05:55	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/21/18 09:38	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Beryllium, Total	0.0054		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Chromium, Total	0.0015J	J	mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Cobalt, Total	0.025		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 15:44	AXC	E2
Nickel, Total	0.036		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
Zinc, Total	0.066		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 17:59	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629002** Date Collected: 4/11/2018 14:55 Matrix: Water
Sample ID: **MRC-MW130A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/26/18 17:21	SUB	G

Vanessa N. Badman
Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629003** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-1** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 01:36	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 01:36	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 01:36	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 01:36	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 01:36	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 01:36	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 01:36	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 01:36	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 01:36	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 01:36	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 01:36	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 01:36	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:36	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 01:36	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 01:36	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 01:36	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 01:36	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 01:36	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 01:36	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:36	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 01:36	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 01:36	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 01:36	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 01:36	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 01:36	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 01:36	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:36	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:36	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 01:36	CJG	A
Bromoform	0.43J	J	ug/L	1.0	0.40	SW846 8260B		4/20/18 01:36	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 01:36	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 01:36	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:36	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 01:36	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 01:36	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629003** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-1** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 01:36	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:36	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 01:36	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:36	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 01:36	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 01:36	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 01:36	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 01:36	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 01:36	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 01:36	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 01:36	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 01:36	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 01:36	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 01:36	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 01:36	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 01:36	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 01:36	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 01:36	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 01:36	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 01:36	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 01:36	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:36	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:36	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 01:36	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 01:36	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 01:36	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:36	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:36	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:36	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 01:36	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 01:36	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 01:36	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629003** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-1** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 01:36	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 01:36	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/20/18 01:36	CJG	A
4-Bromofluorobenzene (S)	98.4		%	79 - 114		SW846 8260B			4/20/18 01:36	CJG	A
Dibromofluoromethane (S)	105		%	78 - 116		SW846 8260B			4/20/18 01:36	CJG	A
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/20/18 01:36	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629004** Date Collected: 4/11/2018 15:23 Matrix: Water

Sample ID: **MRC-MW130B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:01	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:01	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:01	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:01	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 05:01	CJG	A
1,2,3-Trichlorobenzene	3.7		ug/L	2.0	0.93	SW846 8260B		4/20/18 05:01	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:01	CJG	A
1,2,4-Trichlorobenzene	11.3		ug/L	2.0	0.82	SW846 8260B		4/20/18 05:01	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:01	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 05:01	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:01	CJG	A
1,2-Dichlorobenzene	2.1		ug/L	1.0	0.38	SW846 8260B		4/20/18 05:01	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:01	CJG	A
1,2-Dichloroethene, Total	1.3J	J	ug/L	2.0	0.45	SW846 8260B		4/20/18 05:01	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:01	CJG	A
1,3-Dichlorobenzene	1.5		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:01	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:01	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 05:01	CJG	A
1,4-Dichlorobenzene	10.6		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:01	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:01	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 05:01	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 05:01	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 05:01	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 05:01	CJG	A
Acetone	9.4J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 05:01	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:01	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:01	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:01	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:01	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 05:01	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 05:01	CJG	A
Carbon Disulfide	2.8		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:01	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:01	CJG	A
Chlorobenzene	1.2		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:01	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:01	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629004** Date Collected: 4/11/2018 15:23 Matrix: Water

Sample ID: **MRC-MW130B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 05:01	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:01	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 05:01	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:01	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:01	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:01	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:01	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:01	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 05:01	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:01	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 05:01	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:01	CJG	A
Methyl t-Butyl Ether	0.96J	J	ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:01	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 05:01	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:01	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:01	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:01	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 05:01	CJG	A
Trichloroethene	0.91J	J	ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:01	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 05:01	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:01	CJG	A
cis-1,2-Dichloroethene	1.3		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:01	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:01	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 05:01	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:01	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:01	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:01	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:01	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:01	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 05:01	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 05:01	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 05:01	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629004** Date Collected: 4/11/2018 15:23 Matrix: Water
Sample ID: **MRC-MW130B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 05:01	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 05:01	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	113		%	62 - 133		SW846 8260B			4/20/18 05:01	CJG	A
4-Bromofluorobenzene (S)	97.3		%	79 - 114		SW846 8260B			4/20/18 05:01	CJG	A
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/20/18 05:01	CJG	A
Toluene-d8 (S)	99.7		%	76 - 127		SW846 8260B			4/20/18 05:01	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.093J	J	ug/L	0.10	0.019	8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	51.4		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
Fluoranthene-d10 (S)	85.4		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 06:48	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/24/18 05:20	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Chromium, Total	0.0019J	J	mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Cobalt, Total	0.0068		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 15:45	AXC	E2
Nickel, Total	0.0022J	J	mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
Zinc, Total	0.014		mg/L	0.0056	0.0019	SW846 6020A	4/17/18 11:06	DXC	4/17/18 18:03	MO	E1
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629004** Date Collected: 4/11/2018 15:23 Matrix: Water

Sample ID: **MRC-MW130B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 19:51	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629005** Date Collected: 4/11/2018 15:23 Matrix: Water

Sample ID: **MRC-MW111B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:24	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:24	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:24	CJG	A
1,1,2-Trichloroethane	1.0		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:24	CJG	A
1,1-Dichloroethane	63.5		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:24	CJG	A
1,1-Dichloroethene	261	12,13,14	ug/L	10.0	2.9	SW846 8260B		4/21/18 07:18	CJG	C
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 05:24	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:24	CJG	A
1,2,4-Trichlorobenzene	0.96J	J	ug/L	2.0	0.82	SW846 8260B		4/20/18 05:24	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:24	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 05:24	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:24	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 05:24	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:24	CJG	A
1,2-Dichloroethene, Total	61.8		ug/L	2.0	0.45	SW846 8260B		4/20/18 05:24	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:24	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:24	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:24	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 05:24	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:24	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:24	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 05:24	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 05:24	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 05:24	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 05:24	CJG	A
Acetone	8.6J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 05:24	CJG	A
Benzene	3.5		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:24	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:24	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:24	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:24	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 05:24	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 05:24	CJG	A
Carbon Disulfide	ND	3,4	ug/L	1.0	0.23	SW846 8260B		4/20/18 05:24	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:24	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:24	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629005** Date Collected: 4/11/2018 15:23 Matrix: Water

Sample ID: **MRC-MW111B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:24	CJG	A
Chloroethane	2.0		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:24	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 05:24	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:24	CJG	A
Cyclohexane	ND	7,8	ug/L	1.0	0.29	SW846 8260B		4/20/18 05:24	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:24	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:24	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:24	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:24	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:24	CJG	A
Freon 113	ND	1,2	ug/L	1.0	0.26	SW846 8260B		4/20/18 05:24	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 05:24	CJG	A
Isopropylbenzene	0.28J	J	ug/L	1.0	0.22	SW846 8260B		4/20/18 05:24	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 05:24	CJG	A
Methyl cyclohexane	ND	10,9	ug/L	1.0	0.30	SW846 8260B		4/20/18 05:24	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:24	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:24	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 05:24	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:24	CJG	A
Tetrachloroethene	2.7		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:24	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:24	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 05:24	CJG	A
Trichloroethene	571		ug/L	10.0	3.3	SW846 8260B		4/21/18 07:18	CJG	C
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:24	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 05:24	CJG	A
Vinyl Chloride	2.3		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:24	CJG	A
cis-1,2-Dichloroethene	61.8		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:24	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:24	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 05:24	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:24	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:24	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:24	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:24	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:24	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:24	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:24	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 05:24	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 05:24	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629005** Date Collected: 4/11/2018 15:23 Matrix: Water

Sample ID: **MRC-MW111B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/20/18 05:24	CJG	A
trans-1,2-Dichloroethene	ND	5,6	ug/L	1.0	0.26	SW846 8260B			4/20/18 05:24	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 05:24	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	113		%	62 - 133		SW846 8260B			4/20/18 05:24	CJG	A
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/21/18 07:18	CJG	C
4-Bromofluorobenzene (S)	99.2		%	79 - 114		SW846 8260B			4/20/18 05:24	CJG	A
4-Bromofluorobenzene (S)	97		%	79 - 114		SW846 8260B			4/21/18 07:18	CJG	C
Dibromofluoromethane (S)	112		%	78 - 116		SW846 8260B			4/21/18 07:18	CJG	C
Dibromofluoromethane (S)	103		%	78 - 116		SW846 8260B			4/20/18 05:24	CJG	A
Toluene-d8 (S)	98.7		%	76 - 127		SW846 8260B			4/20/18 05:24	CJG	A
Toluene-d8 (S)	100		%	76 - 127		SW846 8260B			4/21/18 07:18	CJG	C
SEMIVOLATILE SIM											
1,4-Dioxane	88.5		ug/L	10.1	1.9	8270 SIM	4/17/18 14:30	TXC	4/24/18 02:08	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 07:16	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 07:16	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 07:16	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 07:16	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 07:16	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	67		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 07:16	GEC	C
2-Methylnapthalene-d10 (S)	0		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/24/18 02:08	GEC	C
Fluoranthene-d10 (S)	103		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 07:16	GEC	C
Fluoranthene-d10 (S)	249		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/24/18 02:08	GEC	C

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629006** Date Collected: 4/12/2018 11:20 Matrix: Water

Sample ID: **MRC-MW96B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:28	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 01:28	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:28	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:28	CJG	A
1,1-Dichloroethene	ND	17,18	ug/L	1.0	0.29	SW846 8260B		4/24/18 01:28	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 01:28	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:28	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 01:28	CJG	A
1,2,4-Trimethylbenzene	15.6		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:28	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 01:28	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:28	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 01:28	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:28	CJG	A
1,2-Dichloroethene, Total	14.3		ug/L	2.0	0.45	SW846 8260B		4/24/18 01:28	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:28	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:28	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:28	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 01:28	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:28	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:28	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 01:28	CJG	A
2-Chloroethylvinyl ether	ND	5,6	ug/L	2.0	0.38	SW846 8260B		4/24/18 01:28	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 01:28	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 01:28	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/24/18 01:28	CJG	A
Benzene	527		ug/L	10.0	2.3	SW846 8260B		4/24/18 17:21	DD	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:28	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:28	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:28	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 01:28	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 01:28	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:28	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:28	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:28	CJG	A

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629006** Date Collected: 4/12/2018 11:20 Matrix: Water

Sample ID: **MRC-MW96B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:28	CJG	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
Chloroform	0.37J	J	ug/L	1.0	0.21	SW846 8260B		4/24/18 01:28	CJG	A
Chloromethane	1.3		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:28	CJG	A
Cyclohexane	8.8	3,4	ug/L	1.0	0.29	SW846 8260B		4/24/18 01:28	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:28	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:28	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:28	CJG	A
Ethylbenzene	6.1		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:28	CJG	A
Freon 113	ND	19,20	ug/L	1.0	0.26	SW846 8260B		4/24/18 01:28	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 01:28	CJG	A
Isopropylbenzene	11.2	10	ug/L	1.0	0.22	SW846 8260B		4/24/18 01:28	CJG	A
Methyl acetate	ND	15,16	ug/L	2.0	0.32	SW846 8260B		4/24/18 01:28	CJG	A
Methyl cyclohexane	ND	13,14	ug/L	1.0	0.30	SW846 8260B		4/24/18 01:28	CJG	A
Methyl t-Butyl Ether	29.7		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:28	CJG	A
Naphthalene	23.4	12	ug/L	2.0	0.34	SW846 8260B		4/24/18 01:28	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:28	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:28	CJG	A
Toluene	1.7		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:28	CJG	A
Total Xylenes	114		ug/L	3.0	0.66	SW846 8260B		4/24/18 01:28	CJG	A
Trichloroethene	13.5		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:28	CJG	A
Vinyl Acetate	ND	1,2	ug/L	5.0	1.6	SW846 8260B		4/24/18 01:28	CJG	A
Vinyl Chloride	0.92J	J	ug/L	1.0	0.30	SW846 8260B		4/24/18 01:28	CJG	A
cis-1,2-Dichloroethene	12.6		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:28	CJG	A
cis-1,3-Dichloropropene	ND	7	ug/L	1.0	0.31	SW846 8260B		4/24/18 01:28	CJG	A
mp-Xylene	35.3		ug/L	2.0	0.52	SW846 8260B		4/24/18 01:28	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:28	CJG	A
n-Propylbenzene	4.2		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
o-Chlorotoluene	ND	11	ug/L	1.0	0.26	SW846 8260B		4/24/18 01:28	CJG	A
o-Xylene	78.6	8,9	ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:28	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:28	CJG	A
sec-Butylbenzene	2.0		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:28	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629006** Date Collected: 4/12/2018 11:20 Matrix: Water

Sample ID: **MRC-MW96B** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B			4/24/18 01:28	CJG	A
tert-Butyl Alcohol	3.1J	J	ug/L	10.0	2.2	SW846 8260B			4/24/18 01:28	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/24/18 01:28	CJG	A
trans-1,2-Dichloroethene	1.7		ug/L	1.0	0.26	SW846 8260B			4/24/18 01:28	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 01:28	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	88.4		%	62 - 133		SW846 8260B			4/24/18 17:21	DD	B
1,2-Dichloroethane-d4 (S)	83.3		%	62 - 133		SW846 8260B			4/24/18 01:28	CJG	A
4-Bromofluorobenzene (S)	94.5		%	79 - 114		SW846 8260B			4/24/18 17:21	DD	B
4-Bromofluorobenzene (S)	89.1		%	79 - 114		SW846 8260B			4/24/18 01:28	CJG	A
Dibromofluoromethane (S)	89.5		%	78 - 116		SW846 8260B			4/24/18 17:21	DD	B
Dibromofluoromethane (S)	86.4		%	78 - 116		SW846 8260B			4/24/18 01:28	CJG	A
Toluene-d8 (S)	81.8		%	76 - 127		SW846 8260B			4/24/18 17:21	DD	B
Toluene-d8 (S)	78.6		%	76 - 127		SW846 8260B			4/24/18 01:28	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.50		ug/L	0.099	0.019	8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	58.1		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C
Fluoranthene-d10 (S)	92.3		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/23/18 16:28	DHF	C

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629007** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-2** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 01:58	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 01:58	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 01:58	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 01:58	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 01:58	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 01:58	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 01:58	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 01:58	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 01:58	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 01:58	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 01:58	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 01:58	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:58	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 01:58	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 01:58	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 01:58	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 01:58	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 01:58	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 01:58	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:58	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 01:58	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 01:58	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 01:58	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 01:58	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 01:58	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 01:58	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:58	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:58	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 01:58	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 01:58	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 01:58	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 01:58	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:58	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 01:58	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 01:58	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629007** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-2** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 01:58	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:58	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 01:58	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:58	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 01:58	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 01:58	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 01:58	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 01:58	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 01:58	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 01:58	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 01:58	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 01:58	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 01:58	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 01:58	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 01:58	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 01:58	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 01:58	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 01:58	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 01:58	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 01:58	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 01:58	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:58	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:58	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 01:58	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 01:58	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 01:58	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 01:58	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 01:58	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 01:58	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 01:58	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 01:58	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 01:58	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629007** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-2** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 01:58	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 01:58	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	115		%	62 - 133		SW846 8260B			4/20/18 01:58	CJG	A
4-Bromofluorobenzene (S)	97.5		%	79 - 114		SW846 8260B			4/20/18 01:58	CJG	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/20/18 01:58	CJG	A
Toluene-d8 (S)	100		%	76 - 127		SW846 8260B			4/20/18 01:58	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629008** Date Collected: 4/11/2018 15:25 Matrix: Water

Sample ID: **MRC-MW111B-DUP** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:47	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:47	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:47	CJG	A
1,1,2-Trichloroethane	1.2		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:47	CJG	A
1,1-Dichloroethane	65.2		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:47	CJG	A
1,1-Dichloroethene	253	1	ug/L	10.0	2.9	SW846 8260B		4/21/18 06:55	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 05:47	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:47	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 05:47	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:47	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 05:47	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:47	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 05:47	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:47	CJG	A
1,2-Dichloroethene, Total	62.8		ug/L	2.0	0.45	SW846 8260B		4/20/18 05:47	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:47	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:47	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:47	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 05:47	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:47	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:47	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 05:47	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 05:47	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 05:47	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 05:47	CJG	A
Acetone	3.7J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 05:47	CJG	A
Benzene	3.9		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:47	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:47	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:47	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:47	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 05:47	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 05:47	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:47	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:47	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:47	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:47	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629008** Date Collected: 4/11/2018 15:25 Matrix: Water

Sample ID: **MRC-MW111B-DUP** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	2.2		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:47	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 05:47	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:47	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 05:47	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:47	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:47	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:47	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:47	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:47	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:47	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 05:47	CJG	A
Isopropylbenzene	0.27J	J	ug/L	1.0	0.22	SW846 8260B		4/20/18 05:47	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 05:47	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:47	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:47	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:47	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 05:47	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:47	CJG	A
Tetrachloroethene	3.0		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:47	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:47	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 05:47	CJG	A
Trichloroethene	541		ug/L	10.0	3.3	SW846 8260B		4/21/18 06:55	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:47	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 05:47	CJG	A
Vinyl Chloride	2.5		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:47	CJG	A
cis-1,2-Dichloroethene	62.8		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:47	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:47	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 05:47	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:47	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:47	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:47	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:47	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:47	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:47	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:47	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 05:47	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 05:47	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 05:47	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629008** Date Collected: 4/11/2018 15:25 Matrix: Water

Sample ID: **MRC-MW111B-DUP** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 05:47	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 05:47	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/20/18 05:47	CJG	A
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/21/18 06:55	CJG	B
4-Bromofluorobenzene (S)	97.5		%	79 - 114		SW846 8260B			4/21/18 06:55	CJG	B
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/20/18 05:47	CJG	A
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/21/18 06:55	CJG	B
Dibromofluoromethane (S)	106		%	78 - 116		SW846 8260B			4/20/18 05:47	CJG	A
Toluene-d8 (S)	102		%	76 - 127		SW846 8260B			4/20/18 05:47	CJG	A
Toluene-d8 (S)	100		%	76 - 127		SW846 8260B			4/21/18 06:55	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	37.9		ug/L	5.2	0.99	8270 SIM	4/17/18 14:30	TXC	4/20/18 09:29	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 08:36	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 08:36	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 08:36	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 08:36	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 08:36	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52.1		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 08:36	GEC	C
2-Methylnapthalene-d10 (S)	0	2	%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 09:29	GEC	C
Fluoranthene-d10 (S)	88.5		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 08:36	GEC	C
Fluoranthene-d10 (S)	167	3	%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 09:29	GEC	C

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629009** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-3** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 02:21	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 02:21	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 02:21	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 02:21	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 02:21	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 02:21	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 02:21	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 02:21	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:21	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 02:21	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 02:21	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 02:21	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:21	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 02:21	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:21	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:21	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:21	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 02:21	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:21	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:21	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 02:21	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 02:21	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 02:21	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 02:21	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 02:21	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:21	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:21	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:21	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:21	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 02:21	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 02:21	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:21	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:21	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 02:21	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 02:21	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629009** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-3** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 02:21	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:21	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 02:21	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:21	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:21	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 02:21	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 02:21	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 02:21	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 02:21	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 02:21	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 02:21	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 02:21	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 02:21	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 02:21	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:21	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 02:21	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:21	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 02:21	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:21	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 02:21	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 02:21	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:21	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:21	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 02:21	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 02:21	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 02:21	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:21	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:21	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:21	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 02:21	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 02:21	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 02:21	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629009** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-3** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 02:21	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 02:21	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	113		%	62 - 133		SW846 8260B			4/20/18 02:21	CJG	A
4-Bromofluorobenzene (S)	99.3		%	79 - 114		SW846 8260B			4/20/18 02:21	CJG	A
Dibromofluoromethane (S)	108		%	78 - 116		SW846 8260B			4/20/18 02:21	CJG	A
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/20/18 02:21	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629010** Date Collected: 4/11/2018 18:25 Matrix: Water

Sample ID: **MRC-MW38A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:05	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:05	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:05	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:05	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:05	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 00:05	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:05	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 00:05	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:05	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 00:05	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:05	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 00:05	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:05	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/21/18 00:05	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:05	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:05	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:05	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 00:05	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:05	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:05	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 00:05	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 00:05	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 00:05	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 00:05	CJG	B
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/21/18 00:05	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:05	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:05	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:05	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:05	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 00:05	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 00:05	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:05	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:05	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:05	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:05	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629010** Date Collected: 4/11/2018 18:25 Matrix: Water

Sample ID: **MRC-MW38A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
Chloroform	9.6		ug/L	1.0	0.21	SW846 8260B		4/21/18 00:05	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:05	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:05	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:05	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:05	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:05	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:05	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:05	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 00:05	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:05	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 00:05	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:05	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:05	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 00:05	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:05	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:05	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:05	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 00:05	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:05	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 00:05	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:05	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:05	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:05	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 00:05	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:05	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:05	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:05	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:05	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:05	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 00:05	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 00:05	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 00:05	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629010** Date Collected: 4/11/2018 18:25 Matrix: Water

Sample ID: **MRC-MW38A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/21/18 00:05	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 00:05	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/21/18 00:05	CJG	B
4-Bromofluorobenzene (S)	98.8		%	79 - 114		SW846 8260B			4/21/18 00:05	CJG	B
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/21/18 00:05	CJG	B
Toluene-d8 (S)	103		%	76 - 127		SW846 8260B			4/21/18 00:05	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629011** Date Collected: 4/11/2018 13:10 Matrix: Water

Sample ID: **MRC-MW29A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:27	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:27	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:27	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
1,1-Dichloroethane	4.4		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:27	CJG	B
1,1-Dichloroethene	3.0	1	ug/L	1.0	0.29	SW846 8260B		4/21/18 00:27	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 00:27	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:27	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 00:27	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:27	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 00:27	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:27	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 00:27	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:27	CJG	B
1,2-Dichloroethene, Total	4.3		ug/L	2.0	0.45	SW846 8260B		4/21/18 00:27	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:27	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:27	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:27	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 00:27	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:27	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:27	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 00:27	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 00:27	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 00:27	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 00:27	CJG	B
Acetone	8.0J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 00:27	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:27	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:27	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:27	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:27	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 00:27	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 00:27	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:27	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:27	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:27	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:27	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629011** Date Collected: 4/11/2018 13:10 Matrix: Water

Sample ID: **MRC-MW29A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 00:27	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:27	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:27	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:27	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:27	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:27	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:27	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:27	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 00:27	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:27	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 00:27	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:27	CJG	B
Methyl t-Butyl Ether	3.9		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:27	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 00:27	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:27	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:27	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:27	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 00:27	CJG	B
Trichloroethene	10.6		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:27	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 00:27	CJG	B
Vinyl Chloride	0.70J	J	ug/L	1.0	0.30	SW846 8260B		4/21/18 00:27	CJG	B
cis-1,2-Dichloroethene	4.3		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:27	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:27	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 00:27	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:27	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:27	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:27	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:27	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:27	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 00:27	CJG	B
tert-Butyl Alcohol	5.4J	J	ug/L	10.0	2.2	SW846 8260B		4/21/18 00:27	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 00:27	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629011** Date Collected: 4/11/2018 13:10 Matrix: Water

Sample ID: **MRC-MW29A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:27	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:27	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B		4/21/18 00:27	CJG	B
4-Bromofluorobenzene (S)	98.5		%	79 - 114		SW846 8260B		4/21/18 00:27	CJG	B
Dibromofluoromethane (S)	109		%	78 - 116		SW846 8260B		4/21/18 00:27	CJG	B
Toluene-d8 (S)	100		%	76 - 127		SW846 8260B		4/21/18 00:27	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629012** Date Collected: 4/11/2018 15:35 Matrix: Water

Sample ID: **MRC-MW58A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 06:55	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 06:55	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 06:55	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 06:55	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 06:55	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 06:55	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 06:55	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 06:55	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 06:55	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 06:55	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 06:55	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 06:55	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 06:55	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 06:55	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 06:55	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 06:55	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 06:55	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 06:55	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 06:55	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 06:55	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 06:55	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 06:55	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 06:55	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 06:55	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 06:55	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 06:55	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 06:55	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 06:55	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 06:55	CJG	A
Bromoform	0.70J	J	ug/L	1.0	0.40	SW846 8260B		4/20/18 06:55	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 06:55	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 06:55	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 06:55	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 06:55	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 06:55	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629012** Date Collected: 4/11/2018 15:35 Matrix: Water

Sample ID: **MRC-MW58A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 06:55	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 06:55	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 06:55	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 06:55	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 06:55	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 06:55	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 06:55	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 06:55	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 06:55	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 06:55	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 06:55	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 06:55	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 06:55	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 06:55	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 06:55	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 06:55	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 06:55	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 06:55	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 06:55	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 06:55	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 06:55	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 06:55	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 06:55	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 06:55	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 06:55	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 06:55	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 06:55	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 06:55	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 06:55	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 06:55	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 06:55	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 06:55	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629012** Date Collected: 4/11/2018 15:35 Matrix: Water

Sample ID: **MRC-MW58A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 06:55	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 06:55	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	116		%	62 - 133		SW846 8260B			4/20/18 06:55	CJG	A
4-Bromofluorobenzene (S)	98		%	79 - 114		SW846 8260B			4/20/18 06:55	CJG	A
Dibromofluoromethane (S)	108		%	78 - 116		SW846 8260B			4/20/18 06:55	CJG	A
Toluene-d8 (S)	99.7		%	76 - 127		SW846 8260B			4/20/18 06:55	CJG	A

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629013** Date Collected: 4/11/2018 16:55 Matrix: Water

Sample ID: **MRC-MW18A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:50	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:50	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:50	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
1,1-Dichloroethane	0.52J	J	ug/L	1.0	0.28	SW846 8260B		4/21/18 00:50	CJG	B
1,1-Dichloroethene	2.6	1	ug/L	1.0	0.29	SW846 8260B		4/21/18 00:50	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 00:50	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:50	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 00:50	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:50	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 00:50	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:50	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 00:50	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:50	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/21/18 00:50	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:50	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:50	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:50	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 00:50	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:50	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:50	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 00:50	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 00:50	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 00:50	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 00:50	CJG	B
Acetone	10.1		ug/L	10.0	3.1	SW846 8260B		4/21/18 00:50	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:50	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:50	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:50	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:50	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 00:50	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 00:50	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:50	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:50	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:50	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:50	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629013** Date Collected: 4/11/2018 16:55 Matrix: Water

Sample ID: **MRC-MW18A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 00:50	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:50	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:50	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:50	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:50	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:50	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:50	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:50	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 00:50	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:50	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 00:50	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:50	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:50	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 00:50	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:50	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:50	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:50	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 00:50	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:50	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 00:50	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:50	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:50	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:50	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 00:50	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:50	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:50	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:50	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:50	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:50	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 00:50	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 00:50	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 00:50	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629013** Date Collected: 4/11/2018 16:55 Matrix: Water

Sample ID: **MRC-MW18A** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:50	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:50	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B		4/21/18 00:50	CJG	B
4-Bromofluorobenzene (S)	98.5		%	79 - 114		SW846 8260B		4/21/18 00:50	CJG	B
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B		4/21/18 00:50	CJG	B
Toluene-d8 (S)	98.7		%	76 - 127		SW846 8260B		4/21/18 00:50	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629014** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-4** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 02:44	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 02:44	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 02:44	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 02:44	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 02:44	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 02:44	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 02:44	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 02:44	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:44	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 02:44	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 02:44	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 02:44	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:44	CJG	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 02:44	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:44	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:44	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:44	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 02:44	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:44	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:44	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 02:44	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 02:44	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 02:44	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 02:44	CJG	A
Acetone	10J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 02:44	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:44	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:44	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:44	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:44	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 02:44	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 02:44	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:44	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:44	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 02:44	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 02:44	CJG	A

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629014** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-4** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 02:44	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:44	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 02:44	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:44	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:44	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 02:44	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 02:44	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 02:44	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 02:44	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 02:44	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 02:44	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 02:44	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 02:44	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 02:44	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:44	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 02:44	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:44	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 02:44	CJG	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:44	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 02:44	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 02:44	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:44	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:44	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 02:44	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 02:44	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 02:44	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:44	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:44	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:44	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 02:44	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 02:44	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 02:44	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629014** Date Collected: 4/12/2018 21:10 Matrix: Water

Sample ID: **TB-041218-4** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 02:44	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 02:44	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	115		%	62 - 133		SW846 8260B			4/20/18 02:44	CJG	A
4-Bromofluorobenzene (S)	98.8		%	79 - 114		SW846 8260B			4/20/18 02:44	CJG	A
Dibromofluoromethane (S)	107		%	78 - 116		SW846 8260B			4/20/18 02:44	CJG	A
Toluene-d8 (S)	99.4		%	76 - 127		SW846 8260B			4/20/18 02:44	CJG	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629015** Date Collected: 4/11/2018 11:20 Matrix: Water

Sample ID: **MRC-MW96B-DUP** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 13:23	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 13:23	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 13:23	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 13:23	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 13:23	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 13:23	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 13:23	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 13:23	DD	A
1,2,4-Trimethylbenzene	15.8		ug/L	1.0	0.25	SW846 8260B		4/20/18 13:23	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 13:23	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 13:23	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 13:23	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:23	DD	A
1,2-Dichloroethene, Total	13.2		ug/L	2.0	0.45	SW846 8260B		4/20/18 13:23	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 13:23	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 13:23	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 13:23	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 13:23	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 13:23	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:23	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 13:23	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 13:23	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 13:23	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 13:23	DD	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 13:23	DD	A
Benzene	580		ug/L	10.0	2.3	SW846 8260B		4/23/18 15:14	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:23	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:23	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 13:23	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 13:23	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 13:23	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 13:23	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:23	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 13:23	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 13:23	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629015** Date Collected: 4/11/2018 11:20 Matrix: Water

Sample ID: **MRC-MW96B-DUP** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 13:23	DD	A
Chloromethane	1.1		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:23	DD	A
Cyclohexane	8.5		ug/L	1.0	0.29	SW846 8260B		4/20/18 13:23	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:23	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 13:23	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 13:23	DD	A
Ethylbenzene	6.2		ug/L	1.0	0.34	SW846 8260B		4/20/18 13:23	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 13:23	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 13:23	DD	A
Isopropylbenzene	11.2		ug/L	1.0	0.22	SW846 8260B		4/20/18 13:23	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 13:23	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 13:23	DD	A
Methyl t-Butyl Ether	27.8		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 13:23	DD	A
Naphthalene	27.9		ug/L	2.0	0.34	SW846 8260B		4/20/18 13:23	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 13:23	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 13:23	DD	A
Toluene	1.7		ug/L	1.0	0.23	SW846 8260B		4/20/18 13:23	DD	A
Total Xylenes	112		ug/L	3.0	0.66	SW846 8260B		4/20/18 13:23	DD	A
Trichloroethene	13.1		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 13:23	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 13:23	DD	A
Vinyl Chloride	0.88J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 13:23	DD	A
cis-1,2-Dichloroethene	11.6		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:23	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:23	DD	A
mp-Xylene	35.5		ug/L	2.0	0.52	SW846 8260B		4/20/18 13:23	DD	A
n-Butylbenzene	1.9J	J	ug/L	2.0	0.60	SW846 8260B		4/20/18 13:23	DD	A
n-Propylbenzene	4.3		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 13:23	DD	A
o-Xylene	76.9		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:23	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:23	DD	A
sec-Butylbenzene	2.0		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:23	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 13:23	DD	A
tert-Butyl Alcohol	3.2J	J	ug/L	10.0	2.2	SW846 8260B		4/20/18 13:23	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 13:23	DD	A

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ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

Lab ID: **2308629015** Date Collected: 4/11/2018 11:20 Matrix: Water

Sample ID: **MRC-MW96B-DUP** Date Received: 4/12/2018 21:10

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.6		ug/L	1.0	0.26	SW846 8260B			4/20/18 13:23	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 13:23	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/23/18 15:14	TMP	A
1,2-Dichloroethane-d4 (S)	78.2		%	62 - 133		SW846 8260B			4/20/18 13:23	DD	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/23/18 15:14	TMP	A
4-Bromofluorobenzene (S)	111		%	79 - 114		SW846 8260B			4/20/18 13:23	DD	A
Dibromofluoromethane (S)	86.4		%	78 - 116		SW846 8260B			4/20/18 13:23	DD	A
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/23/18 15:14	TMP	A
Toluene-d8 (S)	86.8		%	76 - 127		SW846 8260B			4/20/18 13:23	DD	A
Toluene-d8 (S)	100		%	76 - 127		SW846 8260B			4/23/18 15:14	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.43		ug/L	0.096	0.018	8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	79.9		%	29 - 112		8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C
Fluoranthene-d10 (S)	94.2		%	45 - 130		8270 SIM	4/17/18 14:30	TXC	4/20/18 04:35	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2308629005	1	MRC-MW111B	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 175 and the control limits were 50 to 130.				
2308629005	2	MRC-MW111B	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 180 and the control limits were 50 to 130.				
2308629005	3	MRC-MW111B	SW846 8260B	Carbon Disulfide
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 141 and the control limits were 57 to 131.				
2308629005	4	MRC-MW111B	SW846 8260B	Carbon Disulfide
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 137 and the control limits were 57 to 131.				
2308629005	5	MRC-MW111B	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 129 and the control limits were 71 to 122.				
2308629005	6	MRC-MW111B	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 127 and the control limits were 71 to 122.				
2308629005	7	MRC-MW111B	SW846 8260B	Cyclohexane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 152 and the control limits were 66 to 130.				
2308629005	8	MRC-MW111B	SW846 8260B	Cyclohexane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 150 and the control limits were 66 to 130.				
2308629005	9	MRC-MW111B	SW846 8260B	Methyl cyclohexane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 152 and the control limits were 70 to 130.				
2308629005	10	MRC-MW111B	SW846 8260B	Methyl cyclohexane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 159 and the control limits were 70 to 130.				
2308629005	12	MRC-MW111B	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 130 and the control limits were 63 to 128.				
2308629005	13	MRC-MW111B	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 139 and the control limits were 63 to 128.				
2308629005	14	MRC-MW111B	SW846 8260B	1,1-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 132 and the control limits were 63 to 128.				
2308629006	1	MRC-MW96B	SW846 8260B	Vinyl Acetate
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 48.4 and the control limits were 58 to 136.				

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

2308629006	2	MRC-MW96B	SW846 8260B	Vinyl Acetate

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 47.7 and the control limits were 58 to 136.

2308629006	3	MRC-MW96B	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 131 and the control limits were 66 to 130.

2308629006	4	MRC-MW96B	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 134 and the control limits were 66 to 130.

2308629006	5	MRC-MW96B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .6 and the control limits were 1 to 150.

2308629006	6	MRC-MW96B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .64 and the control limits were 1 to 150.

2308629006	7	MRC-MW96B	SW846 8260B	cis-1,3-Dichloropropene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 80.6 and the control limits were 81 to 121.

2308629006	8	MRC-MW96B	SW846 8260B	o-Xylene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte o-Xylene. The % Recovery was reported as 53.2 and the control limits were 79 to 124.

2308629006	9	MRC-MW96B	SW846 8260B	o-Xylene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte o-Xylene. The % Recovery was reported as 68.2 and the control limits were 79 to 124.

2308629006	10	MRC-MW96B	SW846 8260B	Isopropylbenzene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Isopropylbenzene. The % Recovery was reported as 130 and the control limits were 73 to 129.

2308629006	11	MRC-MW96B	SW846 8260B	o-Chlorotoluene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte o-Chlorotoluene. The % Recovery was reported as 128 and the control limits were 78 to 126.

2308629006	12	MRC-MW96B	SW846 8260B	Naphthalene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 157 and the control limits were 56 to 134.

2308629006	13	MRC-MW96B	SW846 8260B	Methyl cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 146 and the control limits were 70 to 130.

2308629006	14	MRC-MW96B	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 148 and the control limits were 70 to 130.

2308629006	15	MRC-MW96B	SW846 8260B	Methyl acetate

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl acetate. The % Recovery was reported as 61.4 and the control limits were 70 to 130.

2308629006	16	MRC-MW96B	SW846 8260B	Methyl acetate

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl acetate. The % Recovery was reported as 64.1 and the control limits were 70 to 130.

ANALYTICAL RESULTS

Workorder: 2308629 LMC MRC 04/11/18

2308629006	17	MRC-MW96B	SW846 8260B	1,1-Dichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 133 and the control limits were 63 to 128.

2308629006	18	MRC-MW96B	SW846 8260B	1,1-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 131 and the control limits were 63 to 128.

2308629006	19	MRC-MW96B	SW846 8260B	Freon 113

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 136 and the control limits were 50 to 130.

2308629006	20	MRC-MW96B	SW846 8260B	Freon 113

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 138 and the control limits were 50 to 130.

2308629008	1	MRC-MW111B-DUP	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 130 and the control limits were 63 to 128.

2308629008	2	MRC-MW111B-DUP	8270 SIM	2-Methylnapthalene-d10

The surrogate 2-Methylnapthalene-d10 for method 8270 SIM was outside of control limits. The % Recovery was reported as 0 and the control limits were 29 to 112. This result was reported at a dilution of 50.

2308629008	3	MRC-MW111B-DUP	8270 SIM	Fluoranthene-d10

The surrogate Fluoranthene-d10 for method 8270 SIM was outside of control limits. The % Recovery was reported as 167 and the control limits were 45 to 130. This result was reported at a dilution of 50.

2308629011	1	MRC-MW29A	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 130 and the control limits were 63 to 128.

2308629013	1	MRC-MW18A	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 130 and the control limits were 63 to 128.

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: EXTR/51783 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308629001, 2308629002, 2308629004, 2308629005, 2308629008, 2308629015

METHOD BLANK: 2724694

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	79.3	%	29 - 112
Fluoranthene-d10 (S)	98.5	%	45 - 130

LABORATORY CONTROL SAMPLE: 2724695

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	47.3	ug/L	1	0.47	22 - 75
2-Methylnapthalene-d10 (S)	78.1	%			29 - 112
Fluoranthene-d10 (S)	92.4	%			45 - 130

MATRIX SPIKE: 2724696 DUPLICATE: 2724697 ORIGINAL: 2308629005

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	88.4541	ug/L	.99	45.9115	45.17	NC	NC	22 - 75	1.63	
2-Methylnapthalene-d10 (S)	61.3	%				61.3	55.7	29 - 112		
Fluoranthene-d10 (S)	90.7	%				90.7	95.2	45 - 130		

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QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: EXTR/51819 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308629006

METHOD BLANK: 2725743

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	0.021J	ug/L	0.10
2-Methylnapthalene-d10 (S)	66.1	%	29 - 112
Fluoranthene-d10 (S)	109	%	45 - 130

LABORATORY CONTROL SAMPLE: 2725744

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	52.1	ug/L	1	0.52	22 - 75
2-Methylnapthalene-d10 (S)	74.2	%			29 - 112
Fluoranthene-d10 (S)	96.7	%			45 - 130

MATRIX SPIKE: 2725745 DUPLICATE: 2725746 ORIGINAL: 2308629006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	.50424	ug/L	1	.9301	.96633	42.4	47.1	22 - 75	3.82	
2-Methylnapthalene-d10 (S)	58.1	%				58.1	60.2	29 - 112		
Fluoranthene-d10 (S)	99.4	%				99.4	84.7	45 - 130		

MATRIX SPIKE: 2725747 DUPLICATE: 2725748 ORIGINAL: 2308943013

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	118.198	ug/L	.99	60.2628	64.29	NC	NC	22 - 75	6.47	
2-Methylnapthalene-d10 (S)	78.5	%				78.5	80.4	29 - 112		
Fluoranthene-d10 (S)	95.6	%				95.6	97.1	45 - 130		

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QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

MATRIX SPIKE: 2725749 DUPLICATE: 2725750 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	.25549	ug/L	1	.68546	.67613	41.3	40.4	22 - 75	1.37	
2-Methylnapthalene-d10 (S)	71.5	%				71.5	70.7	29 - 112		
Fluoranthene-d10 (S)	92.6	%				92.6	92.3	45 - 130		

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: MDIG/71233 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2308629001, 2308629002, 2308629004

METHOD BLANK: 2724473

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	ND	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2724474

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	97	mg/L	.22	0.22	80 - 120
Arsenic, Total	89.4	mg/L	.22	0.20	80 - 120
Beryllium, Total	89.1	mg/L	.22	0.20	80 - 120
Cadmium, Total	93.3	mg/L	.22	0.21	80 - 120
Chromium, Total	98.8	mg/L	.22	0.22	80 - 120
Cobalt, Total	99.9	mg/L	.22	0.22	80 - 120
Copper, Total	98.5	mg/L	.22	0.22	80 - 120
Lead, Total	103	mg/L	.22	0.23	80 - 120
Nickel, Total	97.5	mg/L	.22	0.22	80 - 120
Selenium, Total	81.2	mg/L	.22	0.18	80 - 120
Silver, Total	92.3	mg/L	.11	0.10	80 - 120
Thallium, Total	102	mg/L	.22	0.23	80 - 120
Zinc, Total	83.1	mg/L	.22	0.18	80 - 120

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QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

MATRIX SPIKE: 2724475 DUPLICATE: 2724476 ORIGINAL: 2308289001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Antimony, Total	.00009	mg/L	.22	.21764	.21663	97.9	97.4	75 - 125	.46	20
Arsenic, Total	.00015	mg/L	.22	.19483	.20072	87.6	90.3	75 - 125	2.98	20
Beryllium, Total	.00005	mg/L	.22	.19047	.1862	85.7	83.8	75 - 125	2.27	20
Cadmium, Total	.00005	mg/L	.22	.20462	.20354	92.1	91.6	75 - 125	.53	20
Chromium, Total	.00103	mg/L	.22	.21298	.20943	95.4	93.8	75 - 125	1.68	20
Cobalt, Total	.00006	mg/L	.22	.21439	.21078	96.4	94.8	75 - 125	1.7	20
Copper, Total	.00251	mg/L	.22	.21244	.20945	94.5	93.1	75 - 125	1.42	20
Lead, Total	.00023	mg/L	.22	.22939	.22857	103	103	75 - 125	.36	20
Nickel, Total	.00075	mg/L	.22	.20581	.2017	92.3	90.4	75 - 125	2.02	20
Selenium, Total	.0001	mg/L	.22	.17995	.17657	80.9	79.4	75 - 125	1.9	20
Silver, Total	.00025	mg/L	.11	.09988	.09855	89.7	88.5	75 - 125	1.34	20
Thallium, Total	.00006	mg/L	.22	.22787	.22835	103	103	75 - 125	.21	20
Zinc, Total	.00467	mg/L	.22	.18244	.17814	80	78.1	75 - 125	2.39	20

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QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: MDIG/71347 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2308629001, 2308629002, 2308629004

METHOD BLANK: 2728343

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2728344

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	96.5	mg/L	.002	0.0019	85 - 115

MATRIX SPIKE: 2728345 DUPLICATE: 2728346 ORIGINAL: 2309699001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	.0001	mg/L	.005	.00863	.00861	171*	170*	70 - 130	.23	20

MATRIX SPIKE: 2728347 DUPLICATE: 2728348 ORIGINAL: 2308629004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00499	.00499	99.8	99.8	70 - 130	0	20

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: VOMS/46586 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308629001, 2308629002, 2308629003, 2308629004, 2308629005, 2308629007, 2308629008, 2308629009, 2308629010, 2308629011, 2308629012, 2308629013, 2308629014

METHOD BLANK: 2726321

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	113	%	62 - 133
4-Bromofluorobenzene (S)	99.1	%	79 - 114
Dibromofluoromethane (S)	106	%	78 - 116
Toluene-d8 (S)	99.6	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

LABORATORY CONTROL SAMPLE: 2726322

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	103	ug/L	20	20.7	78 - 121
1,1,1-Trichloroethane	109	ug/L	20	21.7	66 - 130
1,1,2,2-Tetrachloroethane	93.7	ug/L	20	18.7	74 - 135
1,1,2-Trichloroethane	94.8	ug/L	20	19.0	82 - 126
1,1-Dichloroethane	108	ug/L	20	21.6	78 - 124
1,1-Dichloroethene	129*	ug/L	20	25.7	63 - 128
1,2,3-Trichlorobenzene	80.2	ug/L	20	16.0	61 - 126
1,2,3-Trichloropropane	93.1	ug/L	20	18.6	75 - 132
1,2,4-Trichlorobenzene	89.3	ug/L	20	17.9	67 - 123
1,2,4-Trimethylbenzene	110	ug/L	20	22.1	76 - 125
1,2-Dibromo-3-chloropropane	90.6	ug/L	20	18.1	59 - 133
1,2-Dibromoethane	96.1	ug/L	20	19.2	80 - 124
1,2-Dichlorobenzene	97.5	ug/L	20	19.5	82 - 118
1,2-Dichloroethane	101	ug/L	20	20.3	70 - 133
1,2-Dichloroethene, Total	112	ug/L	40	44.9	78 - 125
1,2-Dichloropropane	101	ug/L	20	20.3	81 - 127
1,3-Dichlorobenzene	98	ug/L	20	19.6	81 - 118
1,3-Dichloropropane	99.3	ug/L	20	19.9	82 - 126
1,3-Dichloropropene, Total	105	ug/L	40	42.0	80 - 123
1,4-Dichlorobenzene	97.5	ug/L	20	19.5	81 - 116
2,2-Dichloropropane	125	ug/L	20	24.9	64 - 129
2-Butanone	94.8	ug/L	100	94.8	50 - 152
2-Chloroethylvinyl ether	89.1	ug/L	20	17.8	1 - 150
2-Hexanone	107	ug/L	100	107	65 - 154
4-Methyl-2-Pentanone(MIBK)	107	ug/L	100	107	71 - 146
Acetone	119	ug/L	100	119	40 - 151
Benzene	110	ug/L	20	22.0	80 - 124
Bromobenzene	101	ug/L	20	20.3	81 - 119
Bromochloromethane	104	ug/L	20	20.7	73 - 117
Bromodichloromethane	98.2	ug/L	20	19.6	79 - 126
Bromoform	91.2	ug/L	20	18.2	70 - 123
Bromomethane	114	ug/L	20	22.9	45 - 148
Carbon Disulfide	130	ug/L	20	26.0	57 - 131
Carbon Tetrachloride	112	ug/L	20	22.3	62 - 132
Chlorobenzene	97.4	ug/L	20	19.5	85 - 117
Chlorodibromomethane	97.1	ug/L	20	19.4	77 - 122
Chloroethane	93	ug/L	20	18.6	51 - 142
Chloroform	103	ug/L	20	20.5	78 - 122
Chloromethane	94.6	ug/L	20	18.9	38 - 156
Cyclohexane	143*	ug/L	20	28.5	66 - 130
Dibromomethane	97.1	ug/L	20	19.4	81 - 125

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Dichlorodifluoromethane	78.1	ug/L	20	15.6	17 - 166
Diisopropyl ether	111	ug/L	20	22.3	74 - 131
Ethyl tert-butyl ether	105	ug/L	20	20.9	75 - 123
Ethylbenzene	106	ug/L	20	21.2	80 - 124
Freon 113	157*	ug/L	20	31.5	50 - 130
Hexachlorobutadiene	103	ug/L	20	20.7	55 - 128
Isopropylbenzene	114	ug/L	20	22.7	73 - 129
Methyl acetate	92.8	ug/L	20	18.6	70 - 130
Methyl cyclohexane	115	ug/L	20	23.0	70 - 130
Methyl t-Butyl Ether	97.9	ug/L	20	19.6	69 - 115
Methylene Chloride	108	ug/L	20	21.6	76 - 121
Naphthalene	78.3	ug/L	20	15.7	56 - 134
Styrene	109	ug/L	20	21.9	79 - 123
Tetrachloroethene	102	ug/L	20	20.5	72 - 124
Toluene	108	ug/L	20	21.6	80 - 125
Total Xylenes	108	ug/L	60	64.7	79 - 125
Trichloroethene	103	ug/L	20	20.6	77 - 124
Trichlorofluoromethane	96.6	ug/L	20	19.3	38 - 123
Vinyl Acetate	98.8	ug/L	20	19.8	58 - 136
Vinyl Chloride	92	ug/L	20	18.4	27 - 138
cis-1,2-Dichloroethene	105	ug/L	20	21.0	78 - 125
cis-1,3-Dichloropropene	104	ug/L	20	20.8	81 - 121
mp-Xylene	110	ug/L	40	43.9	79 - 125
n-Butylbenzene	90.9	ug/L	20	18.2	71 - 130
n-Propylbenzene	109	ug/L	20	21.8	74 - 122
o-Chlorotoluene	107	ug/L	20	21.4	78 - 126
o-Xylene	104	ug/L	20	20.8	79 - 124
p-Chlorotoluene	108	ug/L	20	21.5	78 - 125
p-Isopropyltoluene	95	ug/L	20	19.0	72 - 123
sec-Butylbenzene	115	ug/L	20	23.0	72 - 127
tert-Amyl methyl ether	92.2	ug/L	20	18.4	75 - 121
tert-Butyl Alcohol	104	ug/L	100	104	17 - 168
tert-Butylbenzene	107	ug/L	20	21.4	72 - 124
trans-1,2-Dichloroethene	120	ug/L	20	23.9	71 - 122
trans-1,3-Dichloropropene	106	ug/L	20	21.2	78 - 126
1,2-Dichloroethane-d4 (S)	104	%			62 - 133
4-Bromofluorobenzene (S)	95.1	%			79 - 114
Dibromofluoromethane (S)	102	%			78 - 116
Toluene-d8 (S)	95.6	%			76 - 127

MATRIX SPIKE: 2726445 DUPLICATE: 2726446 ORIGINAL: 2308629005

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	20.9675	21.2985	105	106	78 - 121	1.57	16
1,1,1-Trichloroethane	0	ug/L	20	24.1723	23.8695	121	119	66 - 130	1.26	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	19.4549	19.3839	97.3	96.9	74 - 135	.37	16
1,1,2-Trichloroethane	1.0443	ug/L	20	20.4107	20.7171	96.8	98.4	82 - 126	1.49	15
1,1-Dichloroethane	63.5005	ug/L	20	84.8435	86.2059	107	114	78 - 124	1.59	15
1,2,3-Trichlorobenzene	0	ug/L	20	15.5193	16.5201	77.6	82.6	61 - 126	6.25	36
1,2,3-Trichloropropane	0	ug/L	20	18.9295	19.1738	94.6	95.9	75 - 132	1.28	19
1,2,4-Trichlorobenzene	.9619	ug/L	20	17.7701	18.6183	84	88.3	67 - 123	4.66	22
1,2,4-Trimethylbenzene	0	ug/L	20	23.0548	23.2805	115	116	76 - 125	.97	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	18.8335	18.6498	94.2	93.2	59 - 133	.98	26
1,2-Dibromoethane	0	ug/L	20	19.4259	19.8427	97.1	99.2	80 - 124	2.12	19
1,2-Dichlorobenzene	0	ug/L	20	20.0403	20.4813	100	102	82 - 118	2.18	15
1,2-Dichloroethane	0	ug/L	20	22.3076	22.3016	112	112	70 - 133	.03	19
1,2-Dichloroethene, Total	61.8168	ug/L	40	109.296	110.801	119	122	78 - 125	1.37	40
1,2-Dichloropropane	0	ug/L	20	21.8408	21.0178	109	105	81 - 127	3.84	15
1,3-Dichlorobenzene	0	ug/L	20	20.3246	20.6455	102	103	81 - 118	1.57	16
1,3-Dichloropropane	0	ug/L	20	20.0647	20.0844	100	100	82 - 126	.1	15
1,3-Dichloropropene, Total	0	ug/L	40	41.1623	41.5251	103	104	80 - 123	.88	16
1,4-Dichlorobenzene	0	ug/L	20	20.2216	20.4018	101	102	81 - 116	.89	15
2,2-Dichloropropane	0	ug/L	20	22.2459	21.6169	111	108	64 - 129	2.87	18
2-Butanone	0	ug/L	100	91.8122	88.4585	91.8	88.5	50 - 152	3.72	16
2-Hexanone	0	ug/L	100	105.132	104.544	105	105	65 - 154	.56	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	103.816	103.786	104	104	71 - 146	.03	16
Acetone	8.59993	ug/L	100	113.286	119.414	105	111	40 - 151	5.27	40
Benzene	3.51499	ug/L	20	26.8605	26.5915	117	115	80 - 124	1.01	26
Bromobenzene	0	ug/L	20	20.9228	21.4128	105	107	81 - 119	2.31	17
Bromochloromethane	0	ug/L	20	21.883	21.8853	109	109	73 - 117	.01	19
Bromodichloromethane	0	ug/L	20	20.8034	20.4108	104	102	79 - 126	1.91	16
Bromoform	0	ug/L	20	19.0331	18.7118	95.2	93.6	70 - 123	1.7	16
Bromomethane	0	ug/L	20	22.8164	23.3688	114	117	45 - 148	2.39	26
Carbon Disulfide	0	ug/L	20	28.2943	27.4268	141*	137*	57 - 131	3.11	28
Carbon Tetrachloride	0	ug/L	20	23.4104	23.2626	117	116	62 - 132	.63	17
Chlorobenzene	0	ug/L	20	19.8799	20.1467	99.4	101	85 - 117	1.33	15
Chlorodibromomethane	0	ug/L	20	19.2798	19.8686	96.4	99.3	77 - 122	3.01	15
Chloroethane	2.04131	ug/L	20	23.5823	23.8894	108	109	51 - 142	1.29	24
Chloroform	0	ug/L	20	21.8971	21.4955	109	107	78 - 122	1.85	16
Chloromethane	0	ug/L	20	22.7667	22.3954	114	112	38 - 156	1.64	27
Cyclohexane	0	ug/L	20	30.3197	30.0347	152*	150*	66 - 130	.94	20
Dibromomethane	0	ug/L	20	20.302	20.3135	102	102	81 - 125	.06	16
Dichlorodifluoromethane	0	ug/L	20	19.1955	19.3428	96	96.7	17 - 166	.76	24
Diisopropyl ether	0	ug/L	20	23.2368	23.2756	116	116	74 - 131	.17	15
Ethyl tert-butyl ether	0	ug/L	20	22.3871	21.5967	112	108	75 - 123	3.59	16
Ethylbenzene	0	ug/L	20	21.8491	21.8896	109	109	80 - 124	.19	19
Freon 113	0	ug/L	20	35.0226	36.0618	175*	180*	50 - 130	2.92	26
Hexachlorobutadiene	0	ug/L	20	20.1132	21.0876	101	105	55 - 128	4.73	35
Isopropylbenzene	.28194	ug/L	20	24.2002	24.1725	120	119	73 - 129	.11	18

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Methyl acetate	0	ug/L	20	15.5325	14.9168	77.7	74.6	70 - 130	4.04	18
Methyl cyclohexane	0	ug/L	20	30.3381	31.8052	152*	159*	70 - 130	4.72	18
Methyl t-Butyl Ether	0	ug/L	20	19.8294	20.3707	99.1	102	69 - 115	2.69	20
Methylene Chloride	0	ug/L	20	22.0442	22.0228	110	110	76 - 121	.1	17
Naphthalene	0	ug/L	20	15.0261	16.1847	75.1	80.9	56 - 134	7.42	40
Styrene	0	ug/L	20	22.9179	23.1675	115	116	79 - 123	1.08	16
Tetrachloroethene	2.72576	ug/L	20	23.5829	23.9356	104	106	72 - 124	1.48	38
Toluene	0	ug/L	20	22.3954	22.3053	112	112	80 - 125	.4	20
Total Xylenes	0	ug/L	60	66.2288	66.8004	110	111	79 - 125	.86	35
Trichlorofluoromethane	0	ug/L	20	21.2364	21.636	106	108	38 - 123	1.86	23
Vinyl Acetate	0	ug/L	20	15.8728	15.1875	79.4	75.9	58 - 136	4.41	17
Vinyl Chloride	2.2853	ug/L	20	22.8216	23.2863	103	105	27 - 138	2.02	40
cis-1,2-Dichloroethene	61.8168	ug/L	20	83.3972	85.3377	108	118	78 - 125	2.3	21
cis-1,3-Dichloropropene	0	ug/L	20	20.3734	20.2904	102	101	81 - 121	.41	16
mp-Xylene	0	ug/L	40	44.8162	45.2141	112	113	79 - 125	.88	21
n-Butylbenzene	0	ug/L	20	18.6872	18.8616	93.4	94.3	71 - 130	.93	20
n-Propylbenzene	0	ug/L	20	22.7836	23.1285	114	116	74 - 122	1.5	20
o-Chlorotoluene	0	ug/L	20	22.4455	22.4021	112	112	78 - 126	.19	17
o-Xylene	0	ug/L	20	21.4126	21.5862	107	108	79 - 124	.81	19
p-Chlorotoluene	0	ug/L	20	22.6285	22.3714	113	112	78 - 125	1.14	16
p-Isopropyltoluene	0	ug/L	20	19.2671	19.6548	96.3	98.3	72 - 123	1.99	17
sec-Butylbenzene	0	ug/L	20	24.0282	24.1646	120	121	72 - 127	.57	17
tert-Amyl methyl ether	0	ug/L	20	18.7396	18.9526	93.7	94.8	75 - 121	1.13	40
tert-Butyl Alcohol	0	ug/L	100	111.503	111.437	112	111	17 - 168	.06	40
tert-Butylbenzene	0	ug/L	20	21.8634	22.8169	109	114	72 - 124	4.27	17
trans-1,2-Dichloroethene	0	ug/L	20	25.8992	25.4632	129*	127*	71 - 122	1.7	22
trans-1,3-Dichloropropene	0	ug/L	20	20.7888	21.2348	104	106	78 - 126	2.12	18
1,2-Dichloroethane-d4 (S)	112	%				112	111	62 - 133		
4-Bromofluorobenzene (S)	96.2	%				96.2	96.5	79 - 114		
Dibromofluoromethane (S)	103	%				103	102	78 - 116		
Toluene-d8 (S)	96.9	%				96.9	98.2	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: VOMS/46587 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308629015

METHOD BLANK: 2726611

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	0.24J	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	79.4	%	62 - 133
4-Bromofluorobenzene (S)	111	%	79 - 114
Dibromofluoromethane (S)	86.5	%	78 - 116
Toluene-d8 (S)	85.8	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

LABORATORY CONTROL SAMPLE: 2726612

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	109	ug/L	20	21.9	78 - 121
1,1,1-Trichloroethane	108	ug/L	20	21.7	66 - 130
1,1,2,2-Tetrachloroethane	104	ug/L	20	20.7	74 - 135
1,1,2-Trichloroethane	109	ug/L	20	21.7	82 - 126
1,1-Dichloroethane	104	ug/L	20	20.8	78 - 124
1,1-Dichloroethene	115	ug/L	20	22.9	63 - 128
1,2,3-Trichlorobenzene	112	ug/L	20	22.5	61 - 126
1,2,3-Trichloropropane	104	ug/L	20	20.9	75 - 132
1,2,4-Trichlorobenzene	94	ug/L	20	18.8	67 - 123
1,2,4-Trimethylbenzene	103	ug/L	20	20.6	76 - 125
1,2-Dibromo-3-chloropropane	82.2	ug/L	20	16.4	59 - 133
1,2-Dibromoethane	110	ug/L	20	22.0	80 - 124
1,2-Dichlorobenzene	104	ug/L	20	20.9	82 - 118
1,2-Dichloroethane	95.8	ug/L	20	19.2	70 - 133
1,2-Dichloroethene, Total	105	ug/L	40	42.2	78 - 125
1,2-Dichloropropane	106	ug/L	20	21.1	81 - 127
1,3-Dichlorobenzene	109	ug/L	20	21.7	81 - 118
1,3-Dichloropropane	104	ug/L	20	20.8	82 - 126
1,3-Dichloropropene, Total	92.4	ug/L	40	37.0	80 - 123
1,4-Dichlorobenzene	104	ug/L	20	20.9	81 - 116
2,2-Dichloropropane	108	ug/L	20	21.6	64 - 129
2-Butanone	97.4	ug/L	100	97.4	50 - 152
2-Chloroethylvinyl ether	64.4	ug/L	20	12.9	1 - 150
2-Hexanone	79.6	ug/L	100	79.6	65 - 154
4-Methyl-2-Pentanone(MIBK)	87	ug/L	100	87.0	71 - 146
Acetone	93.5	ug/L	100	93.5	40 - 151
Bromobenzene	115	ug/L	20	23.0	81 - 119
Bromochloromethane	101	ug/L	20	20.2	73 - 117
Bromodichloromethane	95.4	ug/L	20	19.1	79 - 126
Bromoform	93.3	ug/L	20	18.7	70 - 123
Bromomethane	69.3	ug/L	20	13.9	45 - 148
Carbon Disulfide	103	ug/L	20	20.6	57 - 131
Carbon Tetrachloride	113	ug/L	20	22.6	62 - 132
Chlorobenzene	105	ug/L	20	21.1	85 - 117
Chlorodibromomethane	96.4	ug/L	20	19.3	77 - 122
Chloroethane	67.7	ug/L	20	13.5	51 - 142
Chloroform	100	ug/L	20	20.1	78 - 122
Chloromethane	95	ug/L	20	19.0	38 - 156
Cyclohexane	124	ug/L	20	24.8	66 - 130
Dibromomethane	95.3	ug/L	20	19.1	81 - 125
Dichlorodifluoromethane	76.5	ug/L	20	15.3	17 - 166

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Diisopropyl ether	93.6	ug/L	20	18.7	74 - 131
Ethyl tert-butyl ether	86.7	ug/L	20	17.3	75 - 123
Ethylbenzene	112	ug/L	20	22.5	80 - 124
Freon 113	124	ug/L	20	24.8	50 - 130
Hexachlorobutadiene	111	ug/L	20	22.2	55 - 128
Isopropylbenzene	122	ug/L	20	24.5	73 - 129
Methyl acetate	88.4	ug/L	20	17.7	70 - 130
Methyl cyclohexane	126	ug/L	20	25.3	70 - 130
Methyl t-Butyl Ether	95.9	ug/L	20	19.2	69 - 115
Methylene Chloride	101	ug/L	20	20.2	76 - 121
Naphthalene	133	ug/L	20	26.7	56 - 134
Styrene	103	ug/L	20	20.5	79 - 123
Tetrachloroethene	111	ug/L	20	22.3	72 - 124
Toluene	120	ug/L	20	24.0	80 - 125
Total Xylenes	109	ug/L	60	65.7	79 - 125
Trichloroethene	98	ug/L	20	19.6	77 - 124
Trichlorofluoromethane	67.5	ug/L	20	13.5	38 - 123
Vinyl Acetate	83.5	ug/L	20	16.7	58 - 136
Vinyl Chloride	74.4	ug/L	20	14.9	27 - 138
cis-1,2-Dichloroethene	104	ug/L	20	20.8	78 - 125
cis-1,3-Dichloropropene	88.7	ug/L	20	17.7	81 - 121
mp-Xylene	115	ug/L	40	46.1	79 - 125
n-Butylbenzene	95.8	ug/L	20	19.2	71 - 130
n-Propylbenzene	106	ug/L	20	21.1	74 - 122
o-Chlorotoluene	117	ug/L	20	23.4	78 - 126
o-Xylene	97.9	ug/L	20	19.6	79 - 124
p-Chlorotoluene	118	ug/L	20	23.6	78 - 125
p-Isopropyltoluene	102	ug/L	20	20.4	72 - 123
sec-Butylbenzene	103	ug/L	20	20.6	72 - 127
tert-Amyl methyl ether	83.6	ug/L	20	16.7	75 - 121
tert-Butyl Alcohol	63.8	ug/L	100	63.8	17 - 168
tert-Butylbenzene	108	ug/L	20	21.5	72 - 124
trans-1,2-Dichloroethene	107	ug/L	20	21.3	71 - 122
trans-1,3-Dichloropropene	96.1	ug/L	20	19.2	78 - 126
1,2-Dichloroethane-d4 (S)	78.6	%			62 - 133
4-Bromofluorobenzene (S)	110	%			79 - 114
Dibromofluoromethane (S)	89.7	%			78 - 116
Toluene-d8 (S)	85.1	%			76 - 127

MATRIX SPIKE: 2726827 DUPLICATE: 2726828 ORIGINAL: 2308943013

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,1,1,2-Tetrachloroethane	0	ug/L	20	22.4051	22.7581	112	114	78 - 121	1.56	16

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

1,1,1-Trichloroethane	13.8474	ug/L	20	37.6962	37.3649	119	118	66 - 130	.88	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.4502	20.6411	102	103	74 - 135	.93	16
1,1,2-Trichloroethane	1.14195	ug/L	20	22.5478	23.0395	107	109	82 - 126	2.16	15
1,1-Dichloroethane	85.1953	ug/L	20	106.082	106.186	NC	NC	78 - 124	.1	15
1,2,3-Trichlorobenzene	0	ug/L	20	20.4475	22.8946	102	114	61 - 126	11.3	36
1,2,3-Trichloropropane	0	ug/L	20	20.7711	20.6776	104	103	75 - 132	.45	19
1,2,4-Trichlorobenzene	0	ug/L	20	16.7577	17.336	83.8	86.7	67 - 123	3.39	22
1,2,4-Trimethylbenzene	0	ug/L	20	20.4208	20.9407	102	105	76 - 125	2.51	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	14.659	15.4059	73.3	77	59 - 133	4.97	26
1,2-Dibromoethane	0	ug/L	20	21.6043	22.2925	108	111	80 - 124	3.14	19
1,2-Dichlorobenzene	0	ug/L	20	21.1664	21.5995	106	108	82 - 118	2.03	15
1,2-Dichloroethane	0	ug/L	20	20.4332	21.1886	102	106	70 - 133	3.63	19
1,2-Dichloroethene, Total	23.6567	ug/L	40	67.2957	68.5931	109	112	78 - 125	1.91	40
1,2-Dichloropropane	0	ug/L	20	21.3561	22.0714	107	110	81 - 127	3.29	15
1,3-Dichlorobenzene	0	ug/L	20	21.7397	22.0731	109	110	81 - 118	1.52	16
1,3-Dichloropropane	0	ug/L	20	21.0922	21.3523	105	107	82 - 126	1.23	15
1,3-Dichloropropene, Total	0	ug/L	40	35.287	35.7383	88.2	89.3	80 - 123	1.27	16
1,4-Dichlorobenzene	0	ug/L	20	21.0149	21.1387	105	106	81 - 116	.59	15
2,2-Dichloropropane	0	ug/L	20	18.4642	19.0334	92.3	95.2	64 - 129	3.04	18
2-Butanone	0	ug/L	100	90.4006	96.0238	90.4	96	50 - 152	6.03	16
2-Chloroethylvinyl ether	0	ug/L	20	.12777	.28052	.64*	1.4	1 - 150	74.8	40
2-Hexanone	0	ug/L	100	75.1825	76.8934	75.2	76.9	65 - 154	2.25	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	84.3293	85.465	84.3	85.5	71 - 146	1.34	16
Acetone	5.10058	ug/L	100	87.2858	81.8947	82.2	76.8	40 - 151	6.37	40
Bromobenzene	0	ug/L	20	22.8155	23.0703	114	115	81 - 119	1.11	17
Bromochloromethane	0	ug/L	20	20.6494	20.3477	103	102	73 - 117	1.47	19
Bromodichloromethane	0	ug/L	20	20.4146	20.4142	102	102	79 - 126	.002	16
Bromoform	0	ug/L	20	16.8819	17.261	84.4	86.3	70 - 123	2.22	16
Bromomethane	0	ug/L	20	14.3318	14.2654	71.7	71.3	45 - 148	.46	26
Carbon Disulfide	0	ug/L	20	22.334	22.3899	112	112	57 - 131	.25	28
Carbon Tetrachloride	0	ug/L	20	24.5482	24.8291	123	124	62 - 132	1.14	17
Chlorobenzene	0	ug/L	20	21.6164	21.8233	108	109	85 - 117	.95	15
Chlorodibromomethane	0	ug/L	20	18.9379	18.8731	94.7	94.4	77 - 122	.34	15
Chloroethane	21.9991	ug/L	20	35.7047	35.1932	68.5	66	51 - 142	1.44	24
Chloroform	.44628	ug/L	20	21.0117	21.3127	103	104	78 - 122	1.42	16
Chloromethane	0	ug/L	20	21.4431	21.9508	107	110	38 - 156	2.34	27
Cyclohexane	0	ug/L	20	26.6365	27.1669	133*	136*	66 - 130	1.97	20
Dibromomethane	0	ug/L	20	19.408	19.7454	97	98.7	81 - 125	1.72	16
Dichlorodifluoromethane	0	ug/L	20	17.5345	17.9876	87.7	89.9	17 - 166	2.55	24
Diisopropyl ether	0	ug/L	20	18.788	19.4391	93.9	97.2	74 - 131	3.41	15
Ethyl tert-butyl ether	0	ug/L	20	17.1558	17.7845	85.8	88.9	75 - 123	3.6	16
Ethylbenzene	0	ug/L	20	22.8972	23.2	114	116	80 - 124	1.31	19
Freon 113	0	ug/L	20	28.8803	30.2766	144*	151*	50 - 130	4.72	26
Hexachlorobutadiene	0	ug/L	20	21.493	22.878	107	114	55 - 128	6.24	35
Isopropylbenzene	0	ug/L	20	25.3081	26.5838	127	133*	73 - 129	4.92	18
Methyl acetate	0	ug/L	20	14.6566	14.7587	73.3	73.8	70 - 130	.69	18

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Methyl cyclohexane	0	ug/L	20	30.8241	31.5427	154*	158*	70 - 130	2.3	18
Methyl t-Butyl Ether	0	ug/L	20	18.9781	19.4079	94.9	97	69 - 115	2.24	20
Methylene Chloride	4.2257	ug/L	20	26.2428	26.8285	110	113	76 - 121	2.21	17
Naphthalene	0	ug/L	20	23.0207	25.0544	115	125	56 - 134	8.46	40
Styrene	0	ug/L	20	21.088	21.0193	105	105	79 - 123	.33	16
Tetrachloroethene	5.38335	ug/L	20	27.2058	29.011	109	118	72 - 124	6.42	38
Toluene	0	ug/L	20	24.2959	24.7551	121	124	80 - 125	1.87	20
Total Xylenes	0	ug/L	60	66.3075	67.6559	111	113	79 - 125	2.01	35
Trichlorofluoromethane	0	ug/L	20	16.2098	16.6738	81	83.4	38 - 123	2.82	23
Vinyl Acetate	0	ug/L	20	12.6216	13.4409	63.1	67.2	58 - 136	6.29	17
Vinyl Chloride	.94081	ug/L	20	17.6634	18.3177	83.6	86.9	27 - 138	3.64	40
cis-1,2-Dichloroethene	23.6567	ug/L	20	44.1396	45.1033	102	107	78 - 125	2.16	21
cis-1,3-Dichloropropene	0	ug/L	20	16.9836	17.2385	84.9	86.2	81 - 121	1.49	16
mp-Xylene	0	ug/L	40	46.778	47.5563	117	119	79 - 125	1.65	21
n-Butylbenzene	0	ug/L	20	18.1969	19.2589	91	96.3	71 - 130	5.67	20
n-Propylbenzene	0	ug/L	20	22.2511	22.099	111	110	74 - 122	.69	20
o-Chlorotoluene	0	ug/L	20	23.8425	24.1929	119	121	78 - 126	1.46	17
o-Xylene	0	ug/L	20	19.5295	20.0996	97.6	100	79 - 124	2.88	19
p-Chlorotoluene	0	ug/L	20	23.6331	24.181	118	121	78 - 125	2.29	16
p-Isopropyltoluene	0	ug/L	20	20.1029	20.6804	101	103	72 - 123	2.83	17
sec-Butylbenzene	0	ug/L	20	20.7984	21.561	104	108	72 - 127	3.6	17
tert-Amyl methyl ether	0	ug/L	20	16.0082	17.3703	80	86.9	75 - 121	8.16	40
tert-Butyl Alcohol	0	ug/L	100	51.1776	49.3087	51.2	49.3	17 - 168	3.72	40
tert-Butylbenzene	0	ug/L	20	21.4138	22.01	107	110	72 - 124	2.75	17
trans-1,2-Dichloroethene	0	ug/L	20	23.156	23.4897	116	117	71 - 122	1.43	22
trans-1,3-Dichloropropene	0	ug/L	20	18.3033	18.4998	91.5	92.5	78 - 126	1.07	18
1,2-Dichloroethane-d4 (S)	82.1	%				82.1	81.4	62 - 133		
4-Bromofluorobenzene (S)	111	%				111	110	79 - 114		
Dibromofluoromethane (S)	91.1	%				91.1	90.8	78 - 116		
Toluene-d8 (S)	84.5	%				84.5	83.5	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: VOMS/46595 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308629005, 2308629008, 2308629010, 2308629011, 2308629013

METHOD BLANK: 2726960

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	112	%	62 - 133
4-Bromofluorobenzene (S)	97	%	79 - 114
Dibromofluoromethane (S)	109	%	78 - 116
Toluene-d8 (S)	99.2	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

LABORATORY CONTROL SAMPLE: 2726961

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	104	ug/L	20	20.8	78 - 121
1,1,1-Trichloroethane	107	ug/L	20	21.3	66 - 130
1,1,2,2-Tetrachloroethane	90.8	ug/L	20	18.2	74 - 135
1,1,2-Trichloroethane	95.3	ug/L	20	19.1	82 - 126
1,1-Dichloroethane	106	ug/L	20	21.2	78 - 124
1,1-Dichloroethene	130*	ug/L	20	26.0	63 - 128
1,2,3-Trichlorobenzene	72.9	ug/L	20	14.6	61 - 126
1,2,3-Trichloropropane	93	ug/L	20	18.6	75 - 132
1,2,4-Trichlorobenzene	86.6	ug/L	20	17.3	67 - 123
1,2,4-Trimethylbenzene	110	ug/L	20	22.0	76 - 125
1,2-Dibromo-3-chloropropane	85.1	ug/L	20	17.0	59 - 133
1,2-Dibromoethane	96.9	ug/L	20	19.4	80 - 124
1,2-Dichlorobenzene	96.9	ug/L	20	19.4	82 - 118
1,2-Dichloroethane	101	ug/L	20	20.1	70 - 133
1,2-Dichloroethene, Total	112	ug/L	40	44.7	78 - 125
1,2-Dichloropropane	98.9	ug/L	20	19.8	81 - 127
1,3-Dichlorobenzene	99.2	ug/L	20	19.8	81 - 118
1,3-Dichloropropane	96.7	ug/L	20	19.3	82 - 126
1,3-Dichloropropene, Total	104	ug/L	40	41.6	80 - 123
1,4-Dichlorobenzene	98.7	ug/L	20	19.7	81 - 116
2,2-Dichloropropane	127	ug/L	20	25.5	64 - 129
2-Butanone	93.7	ug/L	100	93.7	50 - 152
2-Chloroethylvinyl ether	85.1	ug/L	20	17.0	1 - 150
2-Hexanone	99.1	ug/L	100	99.1	65 - 154
4-Methyl-2-Pentanone(MIBK)	97.8	ug/L	100	97.8	71 - 146
Acetone	121	ug/L	100	121	40 - 151
Benzene	108	ug/L	20	21.7	80 - 124
Bromobenzene	102	ug/L	20	20.3	81 - 119
Bromochloromethane	105	ug/L	20	21.1	73 - 117
Bromodichloromethane	97.5	ug/L	20	19.5	79 - 126
Bromoform	92.2	ug/L	20	18.4	70 - 123
Bromomethane	126	ug/L	20	25.2	45 - 148
Carbon Disulfide	130	ug/L	20	26.1	57 - 131
Carbon Tetrachloride	111	ug/L	20	22.1	62 - 132
Chlorobenzene	98.1	ug/L	20	19.6	85 - 117
Chlorodibromomethane	99.1	ug/L	20	19.8	77 - 122
Chloroethane	99.9	ug/L	20	20.0	51 - 142
Chloroform	105	ug/L	20	21.0	78 - 122
Chloromethane	101	ug/L	20	20.1	38 - 156
Cyclohexane	141*	ug/L	20	28.1	66 - 130
Dibromomethane	98.4	ug/L	20	19.7	81 - 125

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Dichlorodifluoromethane	86.9	ug/L	20	17.4	17 - 166
Diisopropyl ether	110	ug/L	20	22.0	74 - 131
Ethyl tert-butyl ether	104	ug/L	20	20.9	75 - 123
Ethylbenzene	104	ug/L	20	20.9	80 - 124
Freon 113	161*	ug/L	20	32.2	50 - 130
Hexachlorobutadiene	101	ug/L	20	20.3	55 - 128
Isopropylbenzene	111	ug/L	20	22.2	73 - 129
Methyl acetate	96.3	ug/L	20	19.3	70 - 130
Methyl cyclohexane	112	ug/L	20	22.5	70 - 130
Methyl t-Butyl Ether	101	ug/L	20	20.2	69 - 115
Methylene Chloride	108	ug/L	20	21.7	76 - 121
Naphthalene	70.5	ug/L	20	14.1	56 - 134
Styrene	109	ug/L	20	21.8	79 - 123
Tetrachloroethene	101	ug/L	20	20.3	72 - 124
Toluene	106	ug/L	20	21.3	80 - 125
Total Xylenes	106	ug/L	60	63.8	79 - 125
Trichloroethene	101	ug/L	20	20.1	77 - 124
Trichlorofluoromethane	102	ug/L	20	20.3	38 - 123
Vinyl Acetate	99.5	ug/L	20	19.9	58 - 136
Vinyl Chloride	94.2	ug/L	20	18.8	27 - 138
cis-1,2-Dichloroethene	105	ug/L	20	20.9	78 - 125
cis-1,3-Dichloropropene	103	ug/L	20	20.5	81 - 121
mp-Xylene	108	ug/L	40	43.2	79 - 125
n-Butylbenzene	90.4	ug/L	20	18.1	71 - 130
n-Propylbenzene	107	ug/L	20	21.4	74 - 122
o-Chlorotoluene	105	ug/L	20	21.0	78 - 126
o-Xylene	103	ug/L	20	20.6	79 - 124
p-Chlorotoluene	106	ug/L	20	21.2	78 - 125
p-Isopropyltoluene	92.7	ug/L	20	18.5	72 - 123
sec-Butylbenzene	114	ug/L	20	22.8	72 - 127
tert-Amyl methyl ether	99.1	ug/L	20	19.8	75 - 121
tert-Butyl Alcohol	101	ug/L	100	101	17 - 168
tert-Butylbenzene	105	ug/L	20	20.9	72 - 124
trans-1,2-Dichloroethene	119	ug/L	20	23.8	71 - 122
trans-1,3-Dichloropropene	105	ug/L	20	21.0	78 - 126
1,2-Dichloroethane-d4 (S)	103	%			62 - 133
4-Bromofluorobenzene (S)	95.8	%			79 - 114
Dibromofluoromethane (S)	101	%			78 - 116
Toluene-d8 (S)	95.7	%			76 - 127

MATRIX SPIKE: 2727753 DUPLICATE: 2727754 ORIGINAL: 2308629005

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

1,1,1,2-Tetrachloroethane	0	ug/L	200	212.973	211.753	106	106	78 - 121	.57	16
1,1,1-Trichloroethane	0	ug/L	200	237.064	234.19	119	117	66 - 130	1.22	20
1,1,2,2-Tetrachloroethane	0	ug/L	200	180.055	186.063	90	93	74 - 135	3.28	16
1,1,2-Trichloroethane	0	ug/L	200	190.465	191.452	95.2	95.7	82 - 126	.52	15
1,1-Dichloroethane	58.976	ug/L	200	284.218	280.902	113	111	78 - 124	1.17	15
1,1-Dichloroethene	260.663	ug/L	200	538.112	524.648	139*	132*	63 - 128	2.53	21
1,2,3-Trichlorobenzene	0	ug/L	200	137.788	160.933	68.9	80.5	61 - 126	15.5	36
1,2,3-Trichloropropane	0	ug/L	200	182.046	190.166	91	95.1	75 - 132	4.36	19
1,2,4-Trichlorobenzene	0	ug/L	200	163.512	180.543	81.8	90.3	67 - 123	9.9	22
1,2,4-Trimethylbenzene	0	ug/L	200	224.799	233.134	112	117	76 - 125	3.64	24
1,2-Dibromo-3-chloropropane	0	ug/L	200	164.718	182.591	82.4	91.3	59 - 133	10.3	26
1,2-Dibromoethane	0	ug/L	200	187.871	193.773	93.9	96.9	80 - 124	3.09	19
1,2-Dichlorobenzene	0	ug/L	200	195.96	201.559	98	101	82 - 118	2.82	15
1,2-Dichloroethane	0	ug/L	200	204.128	203.304	102	102	70 - 133	.4	19
1,2-Dichloroethene, Total	52.0992	ug/L	400	519	509.006	117	114	78 - 125	1.94	40
1,2-Dichloropropane	0	ug/L	200	204.283	207.355	102	104	81 - 127	1.49	15
1,3-Dichlorobenzene	0	ug/L	200	200.632	202.376	100	101	81 - 118	.87	16
1,3-Dichloropropane	0	ug/L	200	193.937	194.822	97	97.4	82 - 126	.46	15
1,3-Dichloropropene, Total	0	ug/L	400	400.634	396.905	100	99.2	80 - 123	.94	16
1,4-Dichlorobenzene	0	ug/L	200	200.489	199.402	100	99.7	81 - 116	.54	15
2,2-Dichloropropane	0	ug/L	200	218.392	216.558	109	108	64 - 129	.84	18
2-Butanone	0	ug/L	1000	775.481	901.572	77.5	90.2	50 - 152	15	16
2-Chloroethylvinyl ether	0	ug/L	200	.62923	1.28959	.31*	.64*	1 - 150	68.8	40
2-Hexanone	0	ug/L	1000	917.791	1000.73	91.8	100	65 - 154	8.65	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	1000	968.792	993.955	96.9	99.4	71 - 146	2.56	16
Acetone	0	ug/L	1000	949.895	1060.35	95	106	40 - 151	11	40
Benzene	3.31321	ug/L	200	232.142	231.056	114	114	80 - 124	.47	26
Bromobenzene	0	ug/L	200	207.524	208.085	104	104	81 - 119	.27	17
Bromochloromethane	0	ug/L	200	216.923	218.963	108	109	73 - 117	.94	19
Bromodichloromethane	0	ug/L	200	206.299	198.85	103	99.4	79 - 126	3.68	16
Bromoform	0	ug/L	200	182.09	187.071	91	93.5	70 - 123	2.7	16
Bromomethane	0	ug/L	200	208.906	209.549	104	105	45 - 148	.31	26
Carbon Disulfide	0	ug/L	200	289.392	277.434	145*	139*	57 - 131	4.22	28
Carbon Tetrachloride	0	ug/L	200	239.233	242.212	120	121	62 - 132	1.24	17
Chlorobenzene	0	ug/L	200	203.363	200.243	102	100	85 - 117	1.55	15
Chlorodibromomethane	0	ug/L	200	195.991	195.223	98	97.6	77 - 122	.39	15
Chloroethane	0	ug/L	200	201.954	206.58	101	103	51 - 142	2.26	24
Chloroform	0	ug/L	200	220.347	217.112	110	109	78 - 122	1.48	16
Chloromethane	0	ug/L	200	232.281	226.111	116	113	38 - 156	2.69	27
Cyclohexane	0	ug/L	200	296.548	305.012	148*	153*	66 - 130	2.81	20
Dibromomethane	0	ug/L	200	200.37	198.845	100	99.4	81 - 125	.76	16
Dichlorodifluoromethane	0	ug/L	200	184.205	191.782	92.1	95.9	17 - 166	4.03	24
Diisopropyl ether	0	ug/L	200	217.996	218.724	109	109	74 - 131	.33	15
Ethyl tert-butyl ether	0	ug/L	200	207.541	207.022	104	104	75 - 123	.25	16
Ethylbenzene	0	ug/L	200	219.69	223.643	110	112	80 - 124	1.78	19
Freon 113	0	ug/L	200	332.748	339.066	166*	170*	50 - 130	1.88	26

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Hexachlorobutadiene	0	ug/L	200	220.801	216.131	110	108	55 - 128	2.14	35
Isopropylbenzene	0	ug/L	200	228.191	238.166	114	119	73 - 129	4.28	18
Methyl acetate	0	ug/L	200	160.872	180.199	80.4	90.1	70 - 130	11.3	18
Methyl cyclohexane	0	ug/L	200	237.362	249.194	119	125	70 - 130	4.86	18
Methyl t-Butyl Ether	0	ug/L	200	194.269	199.036	97.1	99.5	69 - 115	2.42	20
Methylene Chloride	0	ug/L	200	222.267	218.92	111	109	76 - 121	1.52	17
Naphthalene	0	ug/L	200	126.38	150.111	63.2	75.1	56 - 134	17.2	40
Styrene	0	ug/L	200	223.029	224.481	112	112	79 - 123	.65	16
Tetrachloroethene	0	ug/L	200	213.361	216.719	107	108	72 - 124	1.56	38
Toluene	0	ug/L	200	218.511	221.586	109	111	80 - 125	1.4	20
Total Xylenes	0	ug/L	600	664.131	667.518	111	111	79 - 125	.51	35
Trichloroethene	570.834	ug/L	200	780.136	774.076	105	102	77 - 124	.78	18
Trichlorofluoromethane	0	ug/L	200	215.282	214.591	108	107	38 - 123	.32	23
Vinyl Acetate	0	ug/L	200	202.412	193.27	101	96.6	58 - 136	4.62	17
Vinyl Chloride	0	ug/L	200	223.691	226.464	112	113	27 - 138	1.23	40
cis-1,2-Dichloroethene	52.0992	ug/L	200	271.843	265.695	110	107	78 - 125	2.29	21
cis-1,3-Dichloropropene	0	ug/L	200	196.93	195.92	98.5	98	81 - 121	.51	16
mp-Xylene	0	ug/L	400	450.273	453.197	113	113	79 - 125	.65	21
n-Butylbenzene	0	ug/L	200	180.322	195.52	90.2	97.8	71 - 130	8.09	20
n-Propylbenzene	0	ug/L	200	224.213	233.522	112	117	74 - 122	4.07	20
o-Chlorotoluene	0	ug/L	200	215.06	219.078	108	110	78 - 126	1.85	17
o-Xylene	0	ug/L	200	213.857	214.321	107	107	79 - 124	.22	19
p-Chlorotoluene	0	ug/L	200	216.528	218.411	108	109	78 - 125	.87	16
p-Isopropyltoluene	0	ug/L	200	193.007	202.741	96.5	101	72 - 123	4.92	17
sec-Butylbenzene	0	ug/L	200	233.018	250.089	117	125	72 - 127	7.07	17
tert-Amyl methyl ether	0	ug/L	200	182.18	181.851	91.1	90.9	75 - 121	.18	40
tert-Butyl Alcohol	0	ug/L	1000	745.359	989.115	74.5	98.9	17 - 168	28.1	40
tert-Butylbenzene	0	ug/L	200	219.302	226.676	110	113	72 - 124	3.31	17
trans-1,2-Dichloroethene	0	ug/L	200	247.157	243.312	124*	122	71 - 122	1.57	22
trans-1,3-Dichloropropene	0	ug/L	200	203.705	200.986	102	100	78 - 126	1.34	18
1,2-Dichloroethane-d4 (S)	111	%				111	109	62 - 133		
4-Bromofluorobenzene (S)	97.3	%				97.3	96.3	79 - 114		
Dibromofluoromethane (S)	104	%				104	103	78 - 116		
Toluene-d8 (S)	97.5	%				97.5	97.1	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: VOMS/46602 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308629015

METHOD BLANK: 2727495

Parameter	Blank Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Chloroform	0.34J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	113	%	62 - 133
4-Bromofluorobenzene (S)	98.6	%	79 - 114
Dibromofluoromethane (S)	110	%	78 - 116
Toluene-d8 (S)	99.8	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

LABORATORY CONTROL SAMPLE: 2727496

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Benzene	110	ug/L	20	22.0	80 - 124
1,1,1,2-Tetrachloroethane	107	ug/L	20	21.4	78 - 121
1,1,1-Trichloroethane	112	ug/L	20	22.4	66 - 130
1,1,2,2-Tetrachloroethane	93	ug/L	20	18.6	74 - 135
1,1,2-Trichloroethane	93.5	ug/L	20	18.7	82 - 126
1,1-Dichloroethane	108	ug/L	20	21.6	78 - 124
1,1-Dichloroethene	136*	ug/L	20	27.3	63 - 128
1,2,3-Trichlorobenzene	71.7	ug/L	20	14.3	61 - 126
1,2,3-Trichloropropane	89.5	ug/L	20	17.9	75 - 132
1,2,4-Trichlorobenzene	83.6	ug/L	20	16.7	67 - 123
1,2,4-Trimethylbenzene	110	ug/L	20	21.9	76 - 125
1,2-Dibromo-3-chloropropane	87.6	ug/L	20	17.5	59 - 133
1,2-Dibromoethane	96.4	ug/L	20	19.3	80 - 124
1,2-Dichlorobenzene	97	ug/L	20	19.4	82 - 118
1,2-Dichloroethane	100	ug/L	20	20.1	70 - 133
1,2-Dichloroethene, Total	111	ug/L	40	44.3	78 - 125
1,2-Dichloropropane	101	ug/L	20	20.1	81 - 127
1,3-Dichlorobenzene	97.7	ug/L	20	19.5	81 - 118
1,3-Dichloropropane	96.9	ug/L	20	19.4	82 - 126
1,3-Dichloropropene, Total	102	ug/L	40	40.9	80 - 123
1,4-Dichlorobenzene	98.3	ug/L	20	19.7	81 - 116
2,2-Dichloropropane	120	ug/L	20	24.0	64 - 129
2-Butanone	83.9	ug/L	100	83.9	50 - 152
2-Chloroethylvinyl ether	83.3	ug/L	20	16.7	1 - 150
2-Hexanone	98.8	ug/L	100	98.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	100	ug/L	100	100	71 - 146
Acetone	101	ug/L	100	101	40 - 151
Bromobenzene	101	ug/L	20	20.2	81 - 119
Bromochloromethane	106	ug/L	20	21.2	73 - 117
Bromodichloromethane	99.8	ug/L	20	20.0	79 - 126
Bromoform	93.5	ug/L	20	18.7	70 - 123
Bromomethane	94.7	ug/L	20	18.9	45 - 148
Carbon Disulfide	135*	ug/L	20	27.1	57 - 131
Carbon Tetrachloride	113	ug/L	20	22.7	62 - 132
Chlorobenzene	98.8	ug/L	20	19.8	85 - 117
Chlorodibromomethane	97.3	ug/L	20	19.5	77 - 122
Chloroethane	88.5	ug/L	20	17.7	51 - 142
Chloroform	105	ug/L	20	21.0	78 - 122
Chloromethane	107	ug/L	20	21.4	38 - 156
Cyclohexane	143*	ug/L	20	28.5	66 - 130
Dibromomethane	97.9	ug/L	20	19.6	81 - 125

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Dichlorodifluoromethane	82	ug/L	20	16.4	17 - 166
Diisopropyl ether	105	ug/L	20	21.1	74 - 131
Ethyl tert-butyl ether	100	ug/L	20	20.1	75 - 123
Ethylbenzene	109	ug/L	20	21.8	80 - 124
Freon 113	165*	ug/L	20	33.0	50 - 130
Hexachlorobutadiene	96.8	ug/L	20	19.4	55 - 128
Isopropylbenzene	112	ug/L	20	22.4	73 - 129
Methyl acetate	89.3	ug/L	20	17.9	70 - 130
Methyl cyclohexane	112	ug/L	20	22.4	70 - 130
Methyl t-Butyl Ether	96.5	ug/L	20	19.3	69 - 115
Methylene Chloride	110	ug/L	20	22.0	76 - 121
Naphthalene	66.7	ug/L	20	13.3	56 - 134
Styrene	110	ug/L	20	21.9	79 - 123
Tetrachloroethene	104	ug/L	20	20.8	72 - 124
Toluene	107	ug/L	20	21.5	80 - 125
Total Xylenes	108	ug/L	60	64.7	79 - 125
Trichloroethene	105	ug/L	20	20.9	77 - 124
Trichlorofluoromethane	94.3	ug/L	20	18.9	38 - 123
Vinyl Acetate	96.6	ug/L	20	19.3	58 - 136
Vinyl Chloride	91.9	ug/L	20	18.4	27 - 138
cis-1,2-Dichloroethene	104	ug/L	20	20.7	78 - 125
cis-1,3-Dichloropropene	99.8	ug/L	20	20.0	81 - 121
mp-Xylene	110	ug/L	40	44.2	79 - 125
n-Butylbenzene	90.3	ug/L	20	18.1	71 - 130
n-Propylbenzene	109	ug/L	20	21.7	74 - 122
o-Chlorotoluene	105	ug/L	20	21.1	78 - 126
o-Xylene	103	ug/L	20	20.5	79 - 124
p-Chlorotoluene	107	ug/L	20	21.4	78 - 125
p-Isopropyltoluene	95	ug/L	20	19.0	72 - 123
sec-Butylbenzene	114	ug/L	20	22.8	72 - 127
tert-Amyl methyl ether	91.6	ug/L	20	18.3	75 - 121
tert-Butyl Alcohol	88.1	ug/L	100	88.1	17 - 168
tert-Butylbenzene	106	ug/L	20	21.3	72 - 124
trans-1,2-Dichloroethene	118	ug/L	20	23.6	71 - 122
trans-1,3-Dichloropropene	105	ug/L	20	21.0	78 - 126
1,2-Dichloroethane-d4 (S)	109	%			62 - 133
4-Bromofluorobenzene (S)	97.5	%			79 - 114
Dibromofluoromethane (S)	104	%			78 - 116
Toluene-d8 (S)	97.7	%			76 - 127

MATRIX SPIKE: 2727655 DUPLICATE: 2727656 ORIGINAL: 2309944001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Benzene	0	ug/L	20	22.7293	22.2252	114	111	80 - 124	2.24	26
1,2,4-Trimethylbenzene	0	ug/L	20	22.2742	22.8505	111	114	76 - 125	2.55	24
Ethylbenzene	0	ug/L	20	22.2426	21.8137	111	109	80 - 124	1.95	19
Isopropylbenzene	0	ug/L	20	22.8317	23.2472	114	116	73 - 129	1.8	18
Naphthalene	0	ug/L	20	14.862	14.501	74.3	72.5	56 - 134	2.46	40
Toluene	0	ug/L	20	22.2119	21.7963	111	109	80 - 125	1.89	20
Total Xylenes	0	ug/L	60	66.7075	65.773	111	110	79 - 125	1.41	35
n-Butylbenzene	0	ug/L	20	18.4527	19.4593	92.3	97.3	71 - 130	5.31	20
n-Propylbenzene	0	ug/L	20	22.2138	22.6597	111	113	74 - 122	1.99	20
p-Isopropyltoluene	0	ug/L	20	19.2923	20.1046	96.5	101	72 - 123	4.12	17
sec-Butylbenzene	0	ug/L	20	23.2477	24.5386	116	123	72 - 127	5.4	17
1,2-Dichloroethane-d4 (S)	106	%				106	108	62 - 133		
4-Bromofluorobenzene (S)	94.7	%				94.7	96	79 - 114		
Dibromofluoromethane (S)	104	%				104	104	78 - 116		
Toluene-d8 (S)	96.9	%				96.9	96.7	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: VOMS/46611 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308629006

METHOD BLANK: 2727879

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	0.44J	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	87.2	%	62 - 133
4-Bromofluorobenzene (S)	90.8	%	79 - 114
Dibromofluoromethane (S)	88.5	%	78 - 116
Toluene-d8 (S)	78.6	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

LABORATORY CONTROL SAMPLE: 2727880

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	115	ug/L	20	23.1	78 - 121
1,1,1-Trichloroethane	113	ug/L	20	22.6	66 - 130
1,1,2,2-Tetrachloroethane	105	ug/L	20	21.1	74 - 135
1,1,2-Trichloroethane	109	ug/L	20	21.9	82 - 126
1,1-Dichloroethane	108	ug/L	20	21.7	78 - 124
1,1-Dichloroethene	121	ug/L	20	24.3	63 - 128
1,2,3-Trichlorobenzene	90.6	ug/L	20	18.1	61 - 126
1,2,3-Trichloropropane	104	ug/L	20	20.9	75 - 132
1,2,4-Trichlorobenzene	80.3	ug/L	20	16.1	67 - 123
1,2,4-Trimethylbenzene	104	ug/L	20	20.7	76 - 125
1,2-Dibromo-3-chloropropane	78.3	ug/L	20	15.7	59 - 133
1,2-Dibromoethane	110	ug/L	20	22.1	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.3	82 - 118
1,2-Dichloroethane	100	ug/L	20	20.1	70 - 133
1,2-Dichloroethene, Total	110	ug/L	40	44.2	78 - 125
1,2-Dichloropropane	111	ug/L	20	22.3	81 - 127
1,3-Dichlorobenzene	111	ug/L	20	22.1	81 - 118
1,3-Dichloropropane	106	ug/L	20	21.2	82 - 126
1,3-Dichloropropene, Total	94.2	ug/L	40	37.7	80 - 123
1,4-Dichlorobenzene	105	ug/L	20	21.0	81 - 116
2,2-Dichloropropane	109	ug/L	20	21.8	64 - 129
2-Butanone	100	ug/L	100	100	50 - 152
2-Chloroethylvinyl ether	62	ug/L	20	12.4	1 - 150
2-Hexanone	78.1	ug/L	100	78.1	65 - 154
4-Methyl-2-Pentanone(MIBK)	85.1	ug/L	100	85.1	71 - 146
Acetone	96.5	ug/L	100	96.5	40 - 151
Bromobenzene	116	ug/L	20	23.2	81 - 119
Bromochloromethane	105	ug/L	20	21.1	73 - 117
Bromodichloromethane	106	ug/L	20	21.1	79 - 126
Bromoform	101	ug/L	20	20.2	70 - 123
Bromomethane	66.8	ug/L	20	13.4	45 - 148
Carbon Disulfide	113	ug/L	20	22.6	57 - 131
Carbon Tetrachloride	119	ug/L	20	23.8	62 - 132
Chlorobenzene	106	ug/L	20	21.1	85 - 117
Chlorodibromomethane	102	ug/L	20	20.3	77 - 122
Chloroethane	69.3	ug/L	20	13.9	51 - 142
Chloroform	105	ug/L	20	21.0	78 - 122
Chloromethane	91.5	ug/L	20	18.3	38 - 156
Cyclohexane	128	ug/L	20	25.5	66 - 130
Dibromomethane	97.6	ug/L	20	19.5	81 - 125
Dichlorodifluoromethane	69.3	ug/L	20	13.9	17 - 166

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Diisopropyl ether	97.8	ug/L	20	19.6	74 - 131
Ethyl tert-butyl ether	88.6	ug/L	20	17.7	75 - 123
Ethylbenzene	112	ug/L	20	22.4	80 - 124
Freon 113	129	ug/L	20	25.8	50 - 130
Hexachlorobutadiene	106	ug/L	20	21.3	55 - 128
Isopropylbenzene	123	ug/L	20	24.6	73 - 129
Methyl acetate	85.6	ug/L	20	17.1	70 - 130
Methyl cyclohexane	128	ug/L	20	25.6	70 - 130
Methyl t-Butyl Ether	99.2	ug/L	20	19.8	69 - 115
Methylene Chloride	102	ug/L	20	20.4	76 - 121
Naphthalene	108	ug/L	20	21.6	56 - 134
Styrene	107	ug/L	20	21.4	79 - 123
Tetrachloroethene	111	ug/L	20	22.2	72 - 124
Toluene	120	ug/L	20	23.9	80 - 125
Total Xylenes	108	ug/L	60	65.0	79 - 125
Trichloroethene	103	ug/L	20	20.7	77 - 124
Trichlorofluoromethane	72.7	ug/L	20	14.5	38 - 123
Vinyl Acetate	85	ug/L	20	17.0	58 - 136
Vinyl Chloride	70.7	ug/L	20	14.1	27 - 138
cis-1,2-Dichloroethene	107	ug/L	20	21.4	78 - 125
cis-1,3-Dichloropropene	90.7	ug/L	20	18.1	81 - 121
mp-Xylene	114	ug/L	40	45.8	79 - 125
n-Butylbenzene	91.4	ug/L	20	18.3	71 - 130
n-Propylbenzene	108	ug/L	20	21.5	74 - 122
o-Chlorotoluene	120	ug/L	20	24.1	78 - 126
o-Xylene	96.1	ug/L	20	19.2	79 - 124
p-Chlorotoluene	121	ug/L	20	24.1	78 - 125
p-Isopropyltoluene	101	ug/L	20	20.2	72 - 123
sec-Butylbenzene	104	ug/L	20	20.7	72 - 127
tert-Amyl methyl ether	83.7	ug/L	20	16.7	75 - 121
tert-Butyl Alcohol	55.9	ug/L	100	55.9	17 - 168
tert-Butylbenzene	107	ug/L	20	21.4	72 - 124
trans-1,2-Dichloroethene	114	ug/L	20	22.7	71 - 122
trans-1,3-Dichloropropene	97.8	ug/L	20	19.6	78 - 126
1,2-Dichloroethane-d4 (S)	84.3	%			62 - 133
4-Bromofluorobenzene (S)	90.5	%			79 - 114
Dibromofluoromethane (S)	89	%			78 - 116
Toluene-d8 (S)	77.9	%			76 - 127

MATRIX SPIKE: 2727622 DUPLICATE: 2727623 ORIGINAL: 2308629006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,1,1,2-Tetrachloroethane	0	ug/L	20	22.1955	22.707	111	114	78 - 121	2.28	16

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

1,1,1-Trichloroethane	0	ug/L	20	24.1067	24.1901	121	121	66 - 130	.35	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.9887	21.502	105	108	74 - 135	2.42	16
1,1,2-Trichloroethane	0	ug/L	20	21.71	21.5148	109	108	82 - 126	.9	15
1,1-Dichloroethane	0	ug/L	20	23.292	23.5056	116	118	78 - 124	.91	15
1,1-Dichloroethene	0	ug/L	20	26.6178	26.1575	133*	131*	63 - 128	1.74	21
1,2,3-Trichlorobenzene	0	ug/L	20	21.3237	24.1033	107	121	61 - 126	12.2	36
1,2,3-Trichloropropane	0	ug/L	20	21.0952	21.5304	105	108	75 - 132	2.04	19
1,2,4-Trichlorobenzene	0	ug/L	20	18.0616	20.079	90.3	100	67 - 123	10.6	22
1,2,4-Trimethylbenzene	15.629	ug/L	20	36.2968	37.5561	103	110	76 - 125	3.41	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	16.8739	16.9044	84.4	84.5	59 - 133	.18	26
1,2-Dibromoethane	0	ug/L	20	21.69	21.9366	108	110	80 - 124	1.13	19
1,2-Dichlorobenzene	0	ug/L	20	20.7222	21.6028	104	108	82 - 118	4.16	15
1,2-Dichloroethane	0	ug/L	20	21.2353	20.7969	106	104	70 - 133	2.09	19
1,2-Dichloroethene, Total	14.3188	ug/L	40	60.1091	60.8391	114	116	78 - 125	1.21	40
1,2-Dichloropropane	0	ug/L	20	23.0247	23.1979	115	116	81 - 127	.75	15
1,3-Dichlorobenzene	0	ug/L	20	21.1411	22.0607	106	110	81 - 118	4.26	16
1,3-Dichloropropane	0	ug/L	20	21.1432	21.2272	106	106	82 - 126	.4	15
1,3-Dichloropropene, Total	0	ug/L	40	33.6265	34.0867	84.1	85.2	80 - 123	1.36	16
1,4-Dichlorobenzene	0	ug/L	20	20.6627	21.0459	103	105	81 - 116	1.84	15
2,2-Dichloropropane	0	ug/L	20	14.0862	14.3484	70.4	71.7	64 - 129	1.84	18
2-Butanone	0	ug/L	100	96.4038	105.729	96.4	106	50 - 152	9.23	16
2-Chloroethylvinyl ether	0	ug/L	20	.11935	.12859	.6*	.64*	1 - 150	7.45	40
2-Hexanone	0	ug/L	100	80.4616	83.5989	80.5	83.6	65 - 154	3.82	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	88.8476	91.8266	88.8	91.8	71 - 146	3.3	16
Acetone	0	ug/L	100	93.9599	100.144	94	100	40 - 151	6.37	40
Bromobenzene	0	ug/L	20	22.5872	22.8865	113	114	81 - 119	1.32	17
Bromochloromethane	0	ug/L	20	21.7744	20.9778	109	105	73 - 117	3.73	19
Bromodichloromethane	0	ug/L	20	21.5268	20.7288	108	104	79 - 126	3.78	16
Bromoform	0	ug/L	20	18.5277	18.5458	92.6	92.7	70 - 123	.1	16
Bromomethane	0	ug/L	20	12.8099	13.3348	64	66.7	45 - 148	4.02	26
Carbon Disulfide	0	ug/L	20	23.8943	22.9483	119	115	57 - 131	4.04	28
Carbon Tetrachloride	0	ug/L	20	25.31	25.0923	127	125	62 - 132	.86	17
Chlorobenzene	0	ug/L	20	20.8248	21.319	104	107	85 - 117	2.35	15
Chlorodibromomethane	0	ug/L	20	19.7779	19.4443	98.9	97.2	77 - 122	1.7	15
Chloroethane	0	ug/L	20	13.9039	14.6316	69.5	73.2	51 - 142	5.1	24
Chloroform	.37026	ug/L	20	22.3342	22.3718	110	110	78 - 122	.17	16
Chloromethane	1.26068	ug/L	20	20.9725	21.8635	98.6	103	38 - 156	4.16	27
Cyclohexane	8.8178	ug/L	20	34.9867	35.6546	131*	134*	66 - 130	1.89	20
Dibromomethane	0	ug/L	20	20.2919	20.2551	101	101	81 - 125	.18	16
Dichlorodifluoromethane	0	ug/L	20	15.7106	16.0306	78.6	80.2	17 - 166	2.02	24
Diisopropyl ether	0	ug/L	20	20.2762	20.5164	101	103	74 - 131	1.18	15
Ethyl tert-butyl ether	0	ug/L	20	18.2502	18.7592	91.3	93.8	75 - 123	2.75	16
Ethylbenzene	6.0773	ug/L	20	28.5938	29.4462	113	117	80 - 124	2.94	19
Freon 113	0	ug/L	20	27.263	27.5573	136*	138*	50 - 130	1.07	26
Hexachlorobutadiene	0	ug/L	20	20.6391	22.9042	103	115	55 - 128	10.4	35
Isopropylbenzene	11.1766	ug/L	20	35.7663	37.2257	123	130*	73 - 129	4	18

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Methyl acetate	0	ug/L	20	12.2745	12.8225	61.4*	64.1*	70 - 130	4.37	18
Methyl cyclohexane	0	ug/L	20	29.117	29.6168	146*	148*	70 - 130	1.7	18
Methyl t-Butyl Ether	29.6781	ug/L	20	49.8624	51.1522	101	107	69 - 115	2.55	20
Methylene Chloride	0	ug/L	20	22.4118	21.6977	112	108	76 - 121	3.24	17
Naphthalene	23.404	ug/L	20	48.4418	54.8853	125	157*	56 - 134	12.5	40
Styrene	0	ug/L	20	21.038	21.4251	105	107	79 - 123	1.82	16
Tetrachloroethene	0	ug/L	20	21.7738	22.2692	109	111	72 - 124	2.25	38
Toluene	1.71447	ug/L	20	25.442	25.7584	119	120	80 - 125	1.24	20
Total Xylenes	113.91	ug/L	60	168.552	173.445	91.1	99.2	79 - 125	2.86	35
Trichloroethene	13.4704	ug/L	20	34.4984	34.6671	105	106	77 - 124	.49	18
Trichlorofluoromethane	0	ug/L	20	15.8692	15.9677	79.3	79.8	38 - 123	.62	23
Vinyl Acetate	0	ug/L	20	9.67071	9.54253	48.4*	47.7*	58 - 136	1.33	17
Vinyl Chloride	.92015	ug/L	20	16.3006	16.905	76.9	79.9	27 - 138	3.64	40
cis-1,2-Dichloroethene	12.6131	ug/L	20	34.1736	34.8331	108	111	78 - 125	1.91	21
cis-1,3-Dichloropropene	0	ug/L	20	16.1237	16.2429	80.6*	81.2	81 - 121	.74	16
mp-Xylene	35.3356	ug/L	40	79.3458	81.2391	110	115	79 - 125	2.36	21
n-Butylbenzene	0	ug/L	20	20.4145	22.0657	102	110	71 - 130	7.77	20
n-Propylbenzene	4.23045	ug/L	20	25.8004	26.5139	108	111	74 - 122	2.73	20
o-Chlorotoluene	0	ug/L	20	24.7385	25.6196	124	128*	78 - 126	3.5	17
o-Xylene	78.5745	ug/L	20	89.2057	92.2061	53.2*	68.2*	79 - 124	3.31	19
p-Chlorotoluene	0	ug/L	20	23.2389	24.06	116	120	78 - 125	3.47	16
p-Isopropyltoluene	0	ug/L	20	21.1345	22.6161	106	113	72 - 123	6.77	17
sec-Butylbenzene	2.00562	ug/L	20	22.828	24.0955	104	110	72 - 127	5.4	17
tert-Amyl methyl ether	0	ug/L	20	18.1431	18.0811	90.7	90.4	75 - 121	.34	40
tert-Butyl Alcohol	3.06043	ug/L	100	61.848	69.1997	58.8	66.1	17 - 168	11.2	40
tert-Butylbenzene	0	ug/L	20	21.2971	22.4446	106	112	72 - 124	5.25	17
trans-1,2-Dichloroethene	1.70566	ug/L	20	25.9356	26.0059	121	122	71 - 122	.27	22
trans-1,3-Dichloropropene	0	ug/L	20	17.5028	17.8438	87.5	89.2	78 - 126	1.93	18
1,2-Dichloroethane-d4 (S)	78.6	%				78.6	83.3	62 - 133		
4-Bromofluorobenzene (S)	86.2	%				86.2	86.3	79 - 114		
Dibromofluoromethane (S)	90.6	%				90.6	88	78 - 116		
Toluene-d8 (S)	75	%				75*	76.2	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: VOMS/46617 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308629006

METHOD BLANK: 2728421

Parameter	Blank Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.3	%	62 - 133
4-Bromofluorobenzene (S)	93.7	%	79 - 114
Dibromofluoromethane (S)	90.4	%	78 - 116
Toluene-d8 (S)	80.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

LABORATORY CONTROL SAMPLE: 2728422

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Benzene	106	ug/L	20	21.2	80 - 124
1,1,1,2-Tetrachloroethane	110	ug/L	20	22.0	78 - 121
1,1,1-Trichloroethane	115	ug/L	20	23.0	66 - 130
1,1,2,2-Tetrachloroethane	105	ug/L	20	21.1	74 - 135
1,1,2-Trichloroethane	108	ug/L	20	21.6	82 - 126
1,1-Dichloroethane	112	ug/L	20	22.4	78 - 124
1,1-Dichloroethene	124	ug/L	20	24.8	63 - 128
1,2,3-Trichlorobenzene	87.7	ug/L	20	17.5	61 - 126
1,2,3-Trichloropropane	105	ug/L	20	21.0	75 - 132
1,2,4-Trichlorobenzene	74.7	ug/L	20	14.9	67 - 123
1,2,4-Trimethylbenzene	102	ug/L	20	20.5	76 - 125
1,2-Dibromo-3-chloropropane	74.6	ug/L	20	14.9	59 - 133
1,2-Dibromoethane	107	ug/L	20	21.5	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.2	82 - 118
1,2-Dichloroethane	104	ug/L	20	20.7	70 - 133
1,2-Dichloroethene, Total	113	ug/L	40	45.2	78 - 125
1,2-Dichloropropane	113	ug/L	20	22.6	81 - 127
1,3-Dichlorobenzene	107	ug/L	20	21.3	81 - 118
1,3-Dichloropropane	107	ug/L	20	21.3	82 - 126
1,3-Dichloropropene, Total	88.7	ug/L	40	35.5	80 - 123
1,4-Dichlorobenzene	103	ug/L	20	20.5	81 - 116
2,2-Dichloropropane	83.3	ug/L	20	16.7	64 - 129
2-Butanone	98.5	ug/L	100	98.5	50 - 152
2-Chloroethylvinyl ether	61	ug/L	20	12.2	1 - 150
2-Hexanone	78.4	ug/L	100	78.4	65 - 154
4-Methyl-2-Pentanone(MIBK)	87.3	ug/L	100	87.3	71 - 146
Acetone	87.9	ug/L	100	87.9	40 - 151
Bromobenzene	114	ug/L	20	22.8	81 - 119
Bromochloromethane	106	ug/L	20	21.2	73 - 117
Bromodichloromethane	105	ug/L	20	21.1	79 - 126
Bromoform	87.9	ug/L	20	17.6	70 - 123
Bromomethane	70.6	ug/L	20	14.1	45 - 148
Carbon Disulfide	109	ug/L	20	21.8	57 - 131
Carbon Tetrachloride	120	ug/L	20	24.0	62 - 132
Chlorobenzene	103	ug/L	20	20.7	85 - 117
Chlorodibromomethane	95.8	ug/L	20	19.2	77 - 122
Chloroethane	69.7	ug/L	20	13.9	51 - 142
Chloroform	109	ug/L	20	21.8	78 - 122
Chloromethane	91.4	ug/L	20	18.3	38 - 156
Cyclohexane	130	ug/L	20	25.9	66 - 130
Dibromomethane	101	ug/L	20	20.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Dichlorodifluoromethane	68.6	ug/L	20	13.7	17 - 166
Diisopropyl ether	101	ug/L	20	20.3	74 - 131
Ethyl tert-butyl ether	91.3	ug/L	20	18.3	75 - 123
Ethylbenzene	110	ug/L	20	22.0	80 - 124
Freon 113	129	ug/L	20	25.9	50 - 130
Hexachlorobutadiene	100	ug/L	20	20.0	55 - 128
Isopropylbenzene	122	ug/L	20	24.3	73 - 129
Methyl acetate	94.8	ug/L	20	19.0	70 - 130
Methyl cyclohexane	120	ug/L	20	24.1	70 - 130
Methyl t-Butyl Ether	102	ug/L	20	20.4	69 - 115
Methylene Chloride	106	ug/L	20	21.2	76 - 121
Naphthalene	104	ug/L	20	20.8	56 - 134
Styrene	104	ug/L	20	20.8	79 - 123
Tetrachloroethene	112	ug/L	20	22.4	72 - 124
Toluene	118	ug/L	20	23.5	80 - 125
Total Xylenes	106	ug/L	60	63.7	79 - 125
Trichloroethene	103	ug/L	20	20.6	77 - 124
Trichlorofluoromethane	72.7	ug/L	20	14.5	38 - 123
Vinyl Acetate	78.9	ug/L	20	15.8	58 - 136
Vinyl Chloride	71.3	ug/L	20	14.3	27 - 138
cis-1,2-Dichloroethene	108	ug/L	20	21.6	78 - 125
cis-1,3-Dichloropropene	85.2	ug/L	20	17.0	81 - 121
mp-Xylene	113	ug/L	40	45.0	79 - 125
n-Butylbenzene	86.4	ug/L	20	17.3	71 - 130
n-Propylbenzene	105	ug/L	20	21.0	74 - 122
o-Chlorotoluene	118	ug/L	20	23.7	78 - 126
o-Xylene	93.4	ug/L	20	18.7	79 - 124
p-Chlorotoluene	118	ug/L	20	23.5	78 - 125
p-Isopropyltoluene	96.9	ug/L	20	19.4	72 - 123
sec-Butylbenzene	102	ug/L	20	20.3	72 - 127
tert-Amyl methyl ether	87.4	ug/L	20	17.5	75 - 121
tert-Butyl Alcohol	47.6	ug/L	100	47.6	17 - 168
tert-Butylbenzene	102	ug/L	20	20.5	72 - 124
trans-1,2-Dichloroethene	118	ug/L	20	23.6	71 - 122
trans-1,3-Dichloropropene	92.2	ug/L	20	18.4	78 - 126
1,2-Dichloroethane-d4 (S)	82.9	%			62 - 133
4-Bromofluorobenzene (S)	92.7	%			79 - 114
Dibromofluoromethane (S)	93.7	%			78 - 116
Toluene-d8 (S)	80.4	%			76 - 127

MATRIX SPIKE: 2728934 DUPLICATE: 2728935 ORIGINAL: 2308629006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Benzene	526.573	ug/L	200	751.484	745.801	112	110	80 - 124	.76	26
1,1,1,2-Tetrachloroethane	0	ug/L	200	227.214	227.236	114	114	78 - 121	.01	16
1,1,1-Trichloroethane	0	ug/L	200	242.924	240.61	121	120	66 - 130	.96	20
1,1,2,2-Tetrachloroethane	0	ug/L	200	215.429	213.171	108	107	74 - 135	1.05	16
1,1,2-Trichloroethane	0	ug/L	200	217.44	218.916	109	109	82 - 126	.68	15
1,1-Dichloroethane	0	ug/L	200	231.837	229.585	116	115	78 - 124	.98	15
1,1-Dichloroethene	0	ug/L	200	258.616	254.213	129*	127	63 - 128	1.72	21
1,2,3-Trichlorobenzene	0	ug/L	200	196.48	212.093	98.2	106	61 - 126	7.64	36
1,2,3-Trichloropropane	0	ug/L	200	220.249	210.987	110	105	75 - 132	4.3	19
1,2,4-Trichlorobenzene	0	ug/L	200	162.396	181.906	81.2	91	67 - 123	11.3	22
1,2,4-Trimethylbenzene	8.30985	ug/L	200	228.199	240.462	110	116	76 - 125	5.23	24
1,2-Dibromo-3-chloropropane	0	ug/L	200	160.199	163.526	80.1	81.8	59 - 133	2.06	26
1,2-Dibromoethane	0	ug/L	200	214.091	215.077	107	108	80 - 124	.46	19
1,2-Dichlorobenzene	0	ug/L	200	214.611	222.493	107	111	82 - 118	3.61	15
1,2-Dichloroethane	0	ug/L	200	206.828	202.804	103	101	70 - 133	1.96	19
1,2-Dichloroethene, Total	11.0077	ug/L	400	486.346	480.68	119	117	78 - 125	1.17	40
1,2-Dichloropropane	0	ug/L	200	225.074	233.185	113	117	81 - 127	3.54	15
1,3-Dichlorobenzene	0	ug/L	200	222.346	228.485	111	114	81 - 118	2.72	16
1,3-Dichloropropane	0	ug/L	200	210.032	213.18	105	107	82 - 126	1.49	15
1,3-Dichloropropene, Total	0	ug/L	400	362.809	369.596	90.7	92.4	80 - 123	1.85	16
1,4-Dichlorobenzene	0	ug/L	200	213.457	220.415	107	110	81 - 116	3.21	15
2,2-Dichloropropane	0	ug/L	200	213.384	212.184	107	106	64 - 129	.56	18
2-Butanone	0	ug/L	1000	1013.77	958.345	101	95.8	50 - 152	5.62	16
2-Chloroethylvinyl ether	0	ug/L	200	1.22314	.86182	.61*	.43*	1 - 150	34.7	40
2-Hexanone	0	ug/L	1000	787.665	776.266	78.8	77.6	65 - 154	1.46	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	1000	875.069	864.491	87.5	86.4	71 - 146	1.22	16
Acetone	0	ug/L	1000	900.501	849.055	90.1	84.9	40 - 151	5.88	40
Bromobenzene	0	ug/L	200	232.154	234.346	116	117	81 - 119	.94	17
Bromochloromethane	0	ug/L	200	208.37	204.364	104	102	73 - 117	1.94	19
Bromodichloromethane	0	ug/L	200	215.345	213.491	108	107	79 - 126	.86	16
Bromoform	0	ug/L	200	171.995	173.56	86	86.8	70 - 123	.91	16
Bromomethane	0	ug/L	200	139.041	136.539	69.5	68.3	45 - 148	1.82	26
Carbon Disulfide	0	ug/L	200	226.82	218.34	113	109	57 - 131	3.81	28
Carbon Tetrachloride	0	ug/L	200	253.045	253.625	127	127	62 - 132	.23	17
Chlorobenzene	0	ug/L	200	211.484	215.408	106	108	85 - 117	1.84	15
Chlorodibromomethane	0	ug/L	200	184.507	192.981	92.3	96.5	77 - 122	4.49	15
Chloroethane	0	ug/L	200	153.658	151.074	76.8	75.5	51 - 142	1.7	24
Chloroform	4.36504	ug/L	200	221.843	223.206	109	109	78 - 122	.61	16
Chloromethane	0	ug/L	200	210.817	207.81	105	104	38 - 156	1.44	27
Cyclohexane	6.92514	ug/L	200	275.874	281.448	134*	137*	66 - 130	2	20
Dibromomethane	0	ug/L	200	204.557	203.09	102	102	81 - 125	.72	16
Dichlorodifluoromethane	0	ug/L	200	166.091	165.2	83	82.6	17 - 166	.54	24
Diisopropyl ether	0	ug/L	200	200.587	201.359	100	101	74 - 131	.38	15
Ethyl tert-butyl ether	0	ug/L	200	178.742	179.56	89.4	89.8	75 - 123	.46	16
Ethylbenzene	4.90095	ug/L	200	231.96	241.086	114	118	80 - 124	3.86	19
Freon 113	0	ug/L	200	267.536	268.063	134*	134*	50 - 130	.2	26

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

Hexachlorobutadiene	0	ug/L	200	227.952	225.087	114	113	55 - 128	1.26	35
Isopropylbenzene	7.8548	ug/L	200	265.349	276.009	129	134*	73 - 129	3.94	18
Methyl acetate	0	ug/L	200	184.323	177.989	92.2	89	70 - 130	3.5	18
Methyl cyclohexane	0	ug/L	200	262.023	275.72	131*	138*	70 - 130	5.09	18
Methyl t-Butyl Ether	24.9342	ug/L	200	226.37	227.109	101	101	69 - 115	.33	20
Methylene Chloride	0	ug/L	200	215.417	211.711	108	106	76 - 121	1.74	17
Naphthalene	0	ug/L	200	249.004	262.176	125	131	56 - 134	5.15	40
Styrene	0	ug/L	200	216.868	218.222	108	109	79 - 123	.62	16
Tetrachloroethene	0	ug/L	200	223.019	229.641	112	115	72 - 124	2.93	38
Toluene	0	ug/L	200	240.535	244.727	120	122	80 - 125	1.73	20
Total Xylenes	74.6573	ug/L	600	744.727	769.777	112	116	79 - 125	3.31	35
Trichloroethene	14.7491	ug/L	200	229.05	224.567	107	105	77 - 124	1.98	18
Trichlorofluoromethane	0	ug/L	200	167.007	165.226	83.5	82.6	38 - 123	1.07	23
Vinyl Acetate	0	ug/L	200	165.038	162.618	82.5	81.3	58 - 136	1.48	17
Vinyl Chloride	0	ug/L	200	163.096	163.185	81.5	81.6	27 - 138	.05	40
cis-1,2-Dichloroethene	11.0077	ug/L	200	240.345	236.848	115	113	78 - 125	1.47	21
cis-1,3-Dichloropropene	0	ug/L	200	171.664	175.712	85.8	87.9	81 - 121	2.33	16
mp-Xylene	23.2991	ug/L	400	491.393	505.957	117	121	79 - 125	2.92	21
n-Butylbenzene	0	ug/L	200	197.128	208.904	98.6	104	71 - 130	5.8	20
n-Propylbenzene	0	ug/L	200	226.673	242.556	113	121	74 - 122	6.77	20
o-Chlorotoluene	0	ug/L	200	247.008	254.613	124	127*	78 - 126	3.03	17
o-Xylene	51.3581	ug/L	200	253.334	263.821	101	106	79 - 124	4.06	19
p-Chlorotoluene	0	ug/L	200	244.327	248.621	122	124	78 - 125	1.74	16
p-Isopropyltoluene	0	ug/L	200	207.307	219.636	104	110	72 - 123	5.78	17
sec-Butylbenzene	0	ug/L	200	222.009	231.639	111	116	72 - 127	4.25	17
tert-Amyl methyl ether	0	ug/L	200	176.85	179.059	88.4	89.5	75 - 121	1.24	40
tert-Butyl Alcohol	0	ug/L	1000	549.856	491.124	55	49.1	17 - 168	11.3	40
tert-Butylbenzene	0	ug/L	200	218.449	233.33	109	117	72 - 124	6.59	17
trans-1,2-Dichloroethene	0	ug/L	200	246.001	243.832	123*	122	71 - 122	.89	22
trans-1,3-Dichloropropene	0	ug/L	200	191.145	193.884	95.6	96.9	78 - 126	1.42	18
1,2-Dichloroethane-d4 (S)	91.3	%				91.3	90.9	62 - 133		
4-Bromofluorobenzene (S)	92	%				92	92.9	79 - 114		
Dibromofluoromethane (S)	95.3	%				95.3	94.4	78 - 116		
Toluene-d8 (S)	79.9	%				79.9	81	76 - 127		

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: WETC/203322 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2308629001, 2308629002

LABORATORY CONTROL SAMPLE: 2727069

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	101	ug/L	10	10.1	90 - 110

METHOD BLANK: 2727073

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308629 LMC MRC 04/11/18

QC Batch: WETC/203412 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2308629004

METHOD BLANK: 2728054

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

LABORATORY CONTROL SAMPLE: 2728057

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	109	ug/L	10	10.9	90 - 110

MATRIX SPIKE: 2728058 DUPLICATE: 2728059 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	0	ug/L	5	4.804	4.726	96.1	94.5	90 - 110	1.64	20

METHOD BLANK: 2728061

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2308629 LMC MRC 04/11/18

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2726322	1	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 157 and the control limits were 50 to 130.				
2726322	2	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 143 and the control limits were 66 to 130.				
2726322	3	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.				
2726961	4	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 161 and the control limits were 50 to 130.				
2726961	5	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 141 and the control limits were 66 to 130.				
2726961	6	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 130 and the control limits were 63 to 128.				
2727496	7	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 136 and the control limits were 63 to 128.				
2727496	8	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 165 and the control limits were 50 to 130.				
2727496	9	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 143 and the control limits were 66 to 130.				
2727496	10	Lab Control Standard	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 135 and the control limits were 57 to 131.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308629 LMC MRC 04/11/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308629001	MRC-MW130A-D	SW846 3015	MDIG/71233	SW846 6020A	META/61671
2308629002	MRC-MW130A	SW846 3015	MDIG/71233	SW846 6020A	META/61671
2308629004	MRC-MW130B	SW846 3015	MDIG/71233	SW846 6020A	META/61671
2308629001	MRC-MW130A-D	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308629002	MRC-MW130A	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308629004	MRC-MW130B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308629005	MRC-MW111B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308629008	MRC-MW111B-DUP	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308629015	MRC-MW96B-DUP	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30459
2308629005	MRC-MW111B	SW846 3510C	EXTR/51783	8270 SIM	SVMS/30492
2308629006	MRC-MW96B	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308629001	MRC-MW130A-D			SW846 8260B	VOMS/46586
2308629002	MRC-MW130A			SW846 8260B	VOMS/46586
2308629003	TB-041218-1			SW846 8260B	VOMS/46586
2308629004	MRC-MW130B			SW846 8260B	VOMS/46586
2308629005	MRC-MW111B			SW846 8260B	VOMS/46586
2308629007	TB-041218-2			SW846 8260B	VOMS/46586
2308629008	MRC-MW111B-DUP			SW846 8260B	VOMS/46586
2308629009	TB-041218-3			SW846 8260B	VOMS/46586
2308629012	MRC-MW58A			SW846 8260B	VOMS/46586
2308629014	TB-041218-4			SW846 8260B	VOMS/46586
2308629015	MRC-MW96B-DUP			SW846 8260B	VOMS/46587
2308629005	MRC-MW111B			SW846 8260B	VOMS/46595
2308629008	MRC-MW111B-DUP			SW846 8260B	VOMS/46595
2308629010	MRC-MW38A			SW846 8260B	VOMS/46595
2308629011	MRC-MW29A			SW846 8260B	VOMS/46595

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308629 LMC MRC 04/11/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308629013	MRC-MW18A			SW846 8260B	VOMS/46595
2308629001	MRC-MW130A-D			EPA 218.6	WETC/203322
2308629002	MRC-MW130A			EPA 218.6	WETC/203322
2308629015	MRC-MW96B-DUP			SW846 8260B	VOMS/46602
2308629006	MRC-MW96B			SW846 8260B	VOMS/46611
2308629004	MRC-MW130B			EPA 218.6	WETC/203412
2308629001	MRC-MW130A-D	SW846 7470A	MDIG/71347	SW846 7470A	META/61764
2308629002	MRC-MW130A	SW846 7470A	MDIG/71347	SW846 7470A	META/61764
2308629004	MRC-MW130B	SW846 7470A	MDIG/71347	SW846 7470A	META/61764
2308629006	MRC-MW96B			SW846 8260B	VOMS/46617

Monday, April 30, 2018 6:42:59 PM
Page 102 of 126
ALS

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

23086629

Co. Name: AECOM
Contact (Report to): Ravi Pamera & Holly Brown Phone: 301-674-3199
Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Pamera PO#: 45840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] Y ravi.pamera@aecom.com
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs	1,4-Dioxane	TAL Metals	Hex Chromium	PCB Homologs	MEE	MNA	Alkalinity	Ammonia-N	TOC
1 MRC-MW130A-D	dup	4-11-18	1500	G	GW	2	2	1	1	2					
2 MRC-MW130A		4-11-18	1455	G	GW	2	2	1	1	2					
3 TB-041218-1	trip blank	NA	NA	G	WQ	2									
4 MRC-MW130B		4-11-18	1610	G	GW	2	2	1	1	2					
5 MRC-MW111B		4-11-18	1535	G	GW	2	2								
6 MRC-MW96B		4-12-18	1120	G	GW	2	2								
7 TB-041218-2	trip blank	NA	NA	G	WQ	2									
8 MRC-MW111B	MS/MSD	4-11-18	1523	G	GW	~~2~~	~~2~~ 4	~~1~~ 6	~~1~~ → only Received 4				VOC's	/4 Dioxane	

Container Type											
Container Size											
Preservative			HNO3								

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

(completed by Sample Receiving)
Received by: NRB
Cooler Temp: 0C
Therm. ID: 318
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	N	N	N	N	N
3	Y	Y	Y	Y	Y
4					
5					
6					
7					
8					

	Custody seals Present?	(if present) Seals Intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to raquan.tawntzis@aecom.com & holly.brown

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Holly Brown / AECOM	4-12-18	1545	2 Jamaal Tuggle / TAS	4/12	1546
3	4/12	1800	4		
5	4/12/18	2140	6 GW ALS	4/12/18	2110
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ]

EDDs Required? [X] If yes, format type: EQUIS & CSV EARTHSOFT

DOD Criteria Required?

SDWA Forms? yes yes yes yes

State Samples Collected In? MD NJ NY PA Other

GW 4/13/18

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
** Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
*** Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

*MRC-MW96B-DUP not on COC. Added at login. GW 4/13/18

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 2

Courier:

Tracking #:

8620PC#

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? [ ] -Y No.:

***Container Type

***Container Size

Preservative

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane								
1	MRC-MW11B-Dup	dup	4-11-18	1525	G	GW	2	2								
2	TB-041218-3	trip blank	NA	NA	G	WQ	2									
3	MRC-MW96B	MS/MSD	4-12-18	1100	G	GW	6	6	only Received 4 VOC's / 4 Dioxanes.							
4	MRC-MW38A		4-11-18	1825	G	GW	2									DNN 4/13/18
5	MRC-MW29A		4-11-18	1310	G	GW	2		Also received 2x A 1L Dioxane							
6	MRC-MW58A		4-11-18	1535	G	GW	2						2x 40ml VOC.			
7	MRC-MW15A		4-11-18	1655	G	GW	2						Labeled: MRC MW-96B-D			
8	TB-041218-4	trip blank	NA	NA	G	WQ	2						Time 11:20 DNN 4/13/18			

Receipt Information (Completed By Sample Receiving)

Performed by: NRB

Cooler Temp: 0°C

Therm. ID: 318

No. of Coolers:

Notes:

Sample Description/Location	Corrected containers?	Corrected sample volume?	Corrected preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1 MRC-MW11B-Dup	Y	Y	Y	Y	
2 TB-041218-3	N	N	N	N	
3 MRC-MW96B	Y	Y	Y	Y	
4 MRC-MW38A					
5 MRC-MW29A					
6 MRC-MW58A					
7 MRC-MW15A					
8 TB-041218-4					

Custody seals Present? (if present) Seals intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to holly.brown@aecom.com & naoum.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4-12-18	1545	2 [signature] / ALS	4/12	1549
3 [signature]	4/12	18:00	4 [signature]		1600
5 [signature]		2100	6 [signature] ALS	4/12/18	2110
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] new

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS & .CSV Ver 1.0 PWS ID No.

Other

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

April 27, 2018 Service Request No:R1803360

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2308629

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 17, 2018
For your reference, these analyses have been assigned our service request number **R1803360.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2308629
Sample Matrix: Water

Service Request: R1803360
Date Received: 04/17/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Three water samples were received for analysis at ALS Environmental on 04/17/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/24/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
Method 680, 04/26/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Approved by _____ Date 04/27/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2308629 001			Lab ID: R1803360-001			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0080		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.011		0.00059	0.0050	ug/L	680

CLIENT ID: 2308629 002			Lab ID: R1803360-002			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0040	J	0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.010		0.00059	0.0050	ug/L	680

CLIENT ID: 2308629 004			Lab ID: R1803360-003			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Hexachlorobiphenyls, Total	0.0050	J	0.0047	0.010	ug/L	680
Monochlorobiphenyls, Total	0.011		0.00059	0.0050	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803360-001	2308629 001	4/11/2018	1500
R1803360-002	2308629 002	4/11/2018	1455
R1803360-003	2308629 004	4/11/2018	1523

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2308629

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/24/2018 Approved By:

Email? [ ] -Y

Fax? [ ] -Y No.:

Receipt Information (completed by Receiving Lab)

Cooler Temp: ___ Therm ID: ___

No. of Coolers: ___

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ANALYSES/METHOD REQUESTED

Container Type	AN									
Container Size	1 L									
Preservative	None									
*G or C										
**Matrix										
680 (PCB Homologs)										
*Report to the MDL, QC lab report needed, EQUIS EDD.										

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Enter Number of Containers Per Sample or Field Results Below.										Sample/COC Comments
1 2308629 001	4/11/18	1500	G	WT	2	*									
2 2308629 002	4/11/18	1455	G	WT	2	*									Sub to ALS Rochester
3 2308629 004	4/11/18	1523	G	WT	2	*									
4															
5															
6															
7															
8															
9															
10															

ALS Field Services: [ ] Pickup [ ] Labor
[ ] Composite_Sampling [ ] Rental_Equipment
[ ] Other: ___

Project Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ]

PWSID # ___

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- EQUIS EDD

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] ALS	4/11/18	1710	2 [signature]	4/11/18	0920
3			4		
5			6		
7			8		
9			10		

*G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; V

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

R1803360 5

ALS Environmental
UR115: 2308629

R1803360 5
ALS Environmental
UR116: 2308629

Cooler Receipt and Preservation Check Form

Project/Client ARI – MDT Folder Number

Cooler received on 4/17/18 by: @ COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC (CLIENT)
4	Circle: (**Wet Ice**) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/17/18 Time: 0937 ID: (IR#7) IR#9 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	1.8	2.0	1.9	1.7			
Correction Factor (°C)	–	–	–	–			
Corrected Temp (°C)	1.8	2.0	1.9	1.7			
Temp from:Type of bottle	–	–	–	–			
Within 0-6°C?	(Y) N	(Y) N	(Y) N	(Y) N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by @ on 4/17/18 at 0930
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 4/17/18 Time: 1257 by: @

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: MDT

Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: @

PC Secondary Review: MM 4/18/18

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	Spike was diluted out
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client:	ALS Environmental - US	**Service Request:**	R1803360
Project:	UR115: 2308629		

Sample Name:	2308629 001	**Date Collected:**	04/11/18
Lab Code:	R1803360-001	**Date Received:**	04/17/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name:	2308629 002	**Date Collected:**	04/11/18
Lab Code:	R1803360-002	**Date Received:**	04/17/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name:	2308629 004	**Date Collected:**	04/11/18
Lab Code:	R1803360-003	**Date Received:**	04/17/18
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
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Semivolatile Organic Compounds by GC/MS

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Client:	ALS Environmental - US	**Service Request:**	R1803360
Project:	UR115: 2308629	**Date Collected:**	04/11/18 15:00
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308629 001	**Units:**	ug/L
Lab Code:	R1803360-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 18:53	4/17/18	
Dichlorobiphenyls, Total	**0.0080**	0.0050	0.0016	1	04/24/18 18:53	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 18:53	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 18:53	4/17/18	
Monochlorobiphenyls, Total	**0.011**	0.0050	0.00059	1	04/24/18 18:53	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 18:53	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 18:53	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 18:53	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 18:53	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 18:53	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 18:53	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	94	58 - 125	04/24/18 18:53	
4,4'-DDT	116	37 - 166	04/24/18 18:53	

Client:	ALS Environmental - US	**Service Request:**	R1803360
Project:	UR115: 2308629	**Date Collected:**	04/11/18 14:55
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308629 002	**Units:**	ug/L
Lab Code:	R1803360-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/26/18 17:21	4/17/18	
Dichlorobiphenyls, Total	**0.0040 J**	0.0050	0.0016	1	04/26/18 17:21	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/26/18 17:21	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/26/18 17:21	4/17/18	
Monochlorobiphenyls, Total	**0.010**	0.0050	0.00059	1	04/26/18 17:21	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/26/18 17:21	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/26/18 17:21	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/26/18 17:21	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/26/18 17:21	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/26/18 17:21	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/26/18 17:21	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	78	58 - 125	04/26/18 17:21	
4,4'-DDT	96	37 - 166	04/26/18 17:21	

Client:	ALS Environmental - US	**Service Request:**	R1803360
Project:	UR115: 2308629	**Date Collected:**	04/11/18 15:23
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308629 004	**Units:**	ug/L
Lab Code:	R1803360-003	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 19:51	4/17/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 19:51	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 19:51	4/17/18	
Hexachlorobiphenyls, Total	**0.0050 J**	0.010	0.0047	1	04/24/18 19:51	4/17/18	
Monochlorobiphenyls, Total	**0.011**	0.0050	0.00059	1	04/24/18 19:51	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 19:51	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 19:51	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 19:51	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 19:51	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 19:51	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 19:51	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	91	58 - 125	04/24/18 19:51	
4,4'-DDT	107	37 - 166	04/24/18 19:51	

QC Summary Forms

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Semivolatile Organic Compounds by GC/MS

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Client: ALS Environmental - US **Service Request:** R1803360
Project: UR115: 2308629
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2308629 001	R1803360-001	116	94
2308629 002	R1803360-002	96	78
2308629 004	R1803360-003	107	91
Method Blank	RQ1803502-01	111	86
Lab Control Sample	RQ1803502-02	106	86
Duplicate Lab Control Sample	RQ1803502-03	106	88

Client:	ALS Environmental - US	**Service Request:**	R1803360
Project:	UR115: 2308629	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803502-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 15:28	4/17/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 15:28	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 15:28	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 15:28	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/24/18 15:28	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 15:28	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 15:28	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 15:28	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 15:28	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 15:28	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 15:28	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	86	58 - 125	04/24/18 15:28	
4,4'-DDT	111	37 - 166	04/24/18 15:28	

Client: ALS Environmental - US
Project: UR115: 2308629
Sample Matrix: Water

Service Request: R1803360
Date Analyzed: 04/24/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803502-02			Duplicate Lab Control Sample RQ1803502-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.468	1.25	37	0.509	1.25	41	29-162	8	30
Dichlorobiphenyls, Total	680	0.186	0.250	74	0.190	0.250	76	37-139	2	30
Heptachlorobiphenyls, Total	680	0.484	0.750	65	0.492	0.750	66	53-120	2	30
Hexachlorobiphenyls, Total	680	0.373	0.500	75	0.368	0.500	74	11-160	1	30
Monochlorobiphenyls, Total	680	0.159	0.250	63	0.172	0.250	69	34-137	8	30
Octachlorobiphenyls, Total	680	0.439	0.750	59	0.445	0.750	59	57-125	1	30
Pentachlorobiphenyls, Total	680	0.418	0.500	84	0.414	0.500	83	10-180	<1	30
Tetrachlorobiphenyls, Total	680	0.360	0.500	72	0.384	0.500	77	14-153	6	30
Trichlorobiphenyls, Total	680	0.180	0.250	72	0.187	0.250	75	10-173	4	30

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

May 3, 2018

Ms. Victoria Kirkpatrick
AECOM - Germantown
12420 Milestone Center Dr.
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2308943**
Purchase Order:	**95840ACM**	Workorder ID:	**LMC MRC 4/12/18**

Dear Ms. Kirkpatrick:

Enclosed are the analytical results for samples received by the laboratory on Friday, April 13, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Holly Brown , Mr. Ravi Damera , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2308943001	MRC-MW124B-D	Water	4/12/2018 14:00	4/13/2018 22:40	Collected by Client
2308943002	MRC-MW73A	Water	4/12/2018 08:35	4/13/2018 22:40	Collected by Client
2308943003	MRC-MW73B	Water	4/12/2018 09:20	4/13/2018 22:40	Collected by Client
2308943004	MRC-MW124A	Water	4/12/2018 11:10	4/13/2018 22:40	Collected by Client
2308943005	MRC-MW02A	Water	4/12/2018 13:53	4/13/2018 22:40	Collected by Client
2308943006	MRC-MW104A	Water	4/12/2018 16:10	4/13/2018 22:40	Collected by Client
2308943007	MRC-MW104B	Water	4/12/2018 15:25	4/13/2018 22:40	Collected by Client
2308943008	MRC-MW07A	Water	4/12/2018 15:35	4/13/2018 22:40	Collected by Client
2308943009	MRC-MW34C	Water	4/11/2018 16:30	4/13/2018 22:40	Collected by Client
2308943010	MRC-MW38B	Water	4/12/2018 15:20	4/13/2018 22:40	Collected by Client
2308943011	MRC-MW96A	Water	4/12/2018 09:00	4/13/2018 22:40	Collected by Client
2308943012	MRC-MW98B-DUP	Water	4/12/2018 10:10	4/13/2018 22:40	Collected by Client
2308943013	MRC-MW98B	Water	4/12/2018 09:57	4/13/2018 22:40	Collected by Client
2308943014	MRC-MW98A	Water	4/12/2018 08:37	4/13/2018 22:40	Collected by Client
2308943015	MRC-MW111A	Water	4/12/2018 08:07	4/13/2018 22:40	Collected by Client
2308943016	MRC-MW124B	Water	4/12/2018 13:55	4/13/2018 22:40	Collected by Client
2308943017	MRC-MW34A	Water	4/12/2018 16:10	4/13/2018 22:40	Collected by Client
2308943018	MRC-SWMW-1I	Water	4/12/2018 13:05	4/13/2018 22:40	Collected by Client
2308943019	MRC-SWMW-2I	Water	4/12/2018 11:15	4/13/2018 22:40	Collected by Client
2308943020	MRC-SWMW-3I	Water	4/12/2018 08:50	4/13/2018 22:40	Collected by Client
2308943021	MRC-SWMW-3I-D	Water	4/12/2018 08:55	4/13/2018 22:40	Collected by Client
2308943022	MRC-MW93A	Water	4/12/2018 14:05	4/13/2018 22:40	Collected by Client
2308943023	EB-041218-AZ	Water	4/12/2018 17:00	4/13/2018 22:40	Collected by Client
2308943024	MRC-MW119A	Water	4/12/2018 12:10	4/13/2018 22:40	Collected by Client
2308943025	TB-041218-1	Water	4/13/2018 22:40	4/13/2018 22:40	Collected by Client
2308943026	MRC-MW101A	Water	4/13/2018 08:40	4/13/2018 22:40	Collected by Client
2308943027	MRC-MW122A	Water	4/13/2018 08:00	4/13/2018 22:40	Collected by Client
2308943028	MRC-MW74B	Water	4/13/2018 10:22	4/13/2018 22:40	Collected by Client
2308943029	MRC-SEMW-7I	Water	4/13/2018 11:45	4/13/2018 22:40	Collected by Client
2308943030	MRC-MW74A	Water	4/13/2018 09:21	4/13/2018 22:40	Collected by Client
2308943031	MRC-MW74C	Water	4/13/2018 11:45	4/13/2018 22:40	Collected by Client
2308943032	MRC-MW37C	Water	4/13/2018 11:30	4/13/2018 22:40	Collected by Client
2308943033	MRC-MW72B	Water	4/13/2018 09:35	4/13/2018 22:40	Collected by Client
2308943034	MRC-MW37B	Water	4/13/2018 08:45	4/13/2018 22:40	Collected by Client

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2308943035	MRC-SEMW-8I	Water	4/13/2018 12:57	4/13/2018 22:40	Collected by Client
2308943036	MRC-SEMW-9I	Water	4/13/2018 13:45	4/13/2018 22:40	Collected by Client
2308943037	MRC-SEMW-9S	Water	4/13/2018 14:00	4/13/2018 22:40	Collected by Client
2308943038	MRC-MW37A	Water	4/13/2018 13:49	4/13/2018 22:40	Collected by Client
2308943039	MRC-SEMW-8S	Water	4/13/2018 13:40	4/13/2018 22:40	Collected by Client
2308943040	EB-041318-AD	Water	4/13/2018 14:50	4/13/2018 22:40	Collected by Client

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SAMPLE SUMMARY

Workorder: 2308943 LMC MRC 4/12/18

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2308943 LMC MRC 4/12/18

Workorder Comments

Please see attached subcontracting report from ALS Rochester. VNB 4/30/18

Sample Comments

Lab ID: 2308943024 **Sample ID:** MRC-MW119A **Sample Type:** SAMPLE

The sample analyzed for the volatiles analysis contained headspace, which was introduced during the primary run. The method requires that the samples not have headspace in order to prevent the loss of VOC's.

Lab ID: 2308943028 **Sample ID:** MRC-MW74B **Sample Type:** SAMPLE

A positive residual chlorine result was detected in the preservation check for the volatile organics analysis of this sample. This may be due to the presence of residual chlorine or another oxidizing agent.

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943001** Date Collected: 4/12/2018 14:00 Matrix: Water

Sample ID: **MRC-MW124B-D** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 02:23	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 02:23	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 02:23	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 02:23	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 02:23	CJG	A
1,2,3-Trichlorobenzene	14.5		ug/L	2.0	0.93	SW846 8260B		4/20/18 02:23	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 02:23	CJG	A
1,2,4-Trichlorobenzene	65.3		ug/L	2.0	0.82	SW846 8260B		4/20/18 02:23	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:23	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 02:23	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 02:23	CJG	A
1,2-Dichlorobenzene	7.5		ug/L	1.0	0.38	SW846 8260B		4/20/18 02:23	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:23	CJG	A
1,2-Dichloroethene, Total	5.8		ug/L	2.0	0.45	SW846 8260B		4/20/18 02:23	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:23	CJG	A
1,3-Dichlorobenzene	56.0		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:23	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:23	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 02:23	CJG	A
1,4-Dichlorobenzene	37.2		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:23	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:23	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 02:23	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 02:23	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 02:23	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 02:23	CJG	A
Acetone	6.8J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 02:23	CJG	A
Benzene	2.4		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:23	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:23	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:23	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 02:23	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 02:23	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 02:23	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 02:23	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:23	CJG	A
Chlorobenzene	122		ug/L	1.0	0.19	SW846 8260B		4/20/18 02:23	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 02:23	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943001** Date Collected: 4/12/2018 14:00 Matrix: Water

Sample ID: **MRC-MW124B-D** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
Chloroform	0.70J	J	ug/L	1.0	0.21	SW846 8260B		4/20/18 02:23	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:23	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 02:23	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:23	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 02:23	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 02:23	CJG	A
Ethylbenzene	1.0		ug/L	1.0	0.34	SW846 8260B		4/20/18 02:23	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 02:23	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 02:23	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 02:23	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 02:23	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 02:23	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 02:23	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 02:23	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:23	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 02:23	CJG	A
Toluene	0.33J	J	ug/L	1.0	0.23	SW846 8260B		4/20/18 02:23	CJG	A
Total Xylenes	3.3		ug/L	3.0	0.66	SW846 8260B		4/20/18 02:23	CJG	A
Trichloroethene	1.4		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 02:23	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 02:23	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 02:23	CJG	A
cis-1,2-Dichloroethene	5.8		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:23	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:23	CJG	A
mp-Xylene	2.3		ug/L	2.0	0.52	SW846 8260B		4/20/18 02:23	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 02:23	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 02:23	CJG	A
o-Xylene	1.0		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:23	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 02:23	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 02:23	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 02:23	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 02:23	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 02:23	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943001** Date Collected: 4/12/2018 14:00 Matrix: Water
Sample ID: **MRC-MW124B-D** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 02:23	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 02:23	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.3		%	62 - 133		SW846 8260B			4/20/18 02:23	CJG	A
4-Bromofluorobenzene (S)	103		%	79 - 114		SW846 8260B			4/20/18 02:23	CJG	A
Dibromofluoromethane (S)	88.1		%	78 - 116		SW846 8260B			4/20/18 02:23	CJG	A
Toluene-d8 (S)	84.5		%	76 - 127		SW846 8260B			4/20/18 02:23	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.20		ug/L	0.10	0.020	8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	62.2		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
Fluoranthene-d10 (S)	90.6		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/23/18 18:02	DHF	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/24/18 05:28	MBW	F
METALS											
Antimony, Total	0.0016J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Arsenic, Total	0.0020J	J	mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Beryllium, Total	0.00042J	J	mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Chromium, Total	0.00084J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Cobalt, Total	0.0093		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 15:59	AXC	E3
Nickel, Total	0.013		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
Zinc, Total	0.038		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:39	MO	E2
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943001** Date Collected: 4/12/2018 14:00 Matrix: Water

Sample ID: **MRC-MW124B-D** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 22:34	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943002** Date Collected: 4/12/2018 08:35 Matrix: Water

Sample ID: **MRC-MW73A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
METALS											
Antimony, Total	0.0010J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Cobalt, Total	0.0027J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Copper, Total	0.0022J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:00	AXC	A3
Nickel, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2
Zinc, Total	0.015		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:43	MO	A2

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943003** Date Collected: 4/12/2018 09:20 Matrix: Water

Sample ID: **MRC-MW73B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 23:55	CJG	C
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 23:55	CJG	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 23:55	CJG	C
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 23:55	CJG	C
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 23:55	CJG	C
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 23:55	CJG	C
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 23:55	CJG	C
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 23:55	CJG	C
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 23:55	CJG	C
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 23:55	CJG	C
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 23:55	CJG	C
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 23:55	CJG	C
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 23:55	CJG	C
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 23:55	CJG	C
1,2-Dichloroethene, Total	0.91J	J	ug/L	2.0	0.45	SW846 8260B		4/20/18 23:55	CJG	C
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 23:55	CJG	C
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 23:55	CJG	C
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 23:55	CJG	C
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 23:55	CJG	C
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 23:55	CJG	C
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 23:55	CJG	C
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 23:55	CJG	C
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 23:55	CJG	C
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 23:55	CJG	C
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 23:55	CJG	C
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 23:55	CJG	C
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 23:55	CJG	C
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 23:55	CJG	C
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 23:55	CJG	C
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 23:55	CJG	C
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 23:55	CJG	C
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 23:55	CJG	C
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 23:55	CJG	C
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 23:55	CJG	C
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 23:55	CJG	C
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 23:55	CJG	C

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943003** Date Collected: 4/12/2018 09:20 Matrix: Water

Sample ID: **MRC-MW73B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 23:55	CJG	C
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 23:55	CJG	C
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 23:55	CJG	C
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 23:55	CJG	C
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 23:55	CJG	C
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 23:55	CJG	C
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 23:55	CJG	C
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 23:55	CJG	C
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 23:55	CJG	C
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 23:55	CJG	C
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 23:55	CJG	C
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 23:55	CJG	C
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 23:55	CJG	C
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 23:55	CJG	C
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 23:55	CJG	C
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 23:55	CJG	C
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 23:55	CJG	C
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 23:55	CJG	C
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 23:55	CJG	C
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 23:55	CJG	C
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 23:55	CJG	C
Trichloroethene	24.9		ug/L	1.0	0.33	SW846 8260B		4/20/18 02:45	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 23:55	CJG	C
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 23:55	CJG	C
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 23:55	CJG	C
cis-1,2-Dichloroethene	0.91J	J	ug/L	1.0	0.32	SW846 8260B		4/20/18 23:55	CJG	C
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 23:55	CJG	C
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 23:55	CJG	C
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 23:55	CJG	C
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 23:55	CJG	C
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 23:55	CJG	C
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 23:55	CJG	C
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 23:55	CJG	C
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 23:55	CJG	C
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 23:55	CJG	C
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 23:55	CJG	C
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 23:55	CJG	C
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 23:55	CJG	C

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943003** Date Collected: 4/12/2018 09:20 Matrix: Water

Sample ID: **MRC-MW73B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 23:55	CJG	C
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 23:55	CJG	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.5		%	62 - 133		SW846 8260B			4/20/18 02:45	CJG	B
1,2-Dichloroethane-d4 (S)	82.2		%	62 - 133		SW846 8260B			4/20/18 23:55	CJG	C
4-Bromofluorobenzene (S)	111		%	79 - 114		SW846 8260B			4/20/18 02:45	CJG	B
4-Bromofluorobenzene (S)	113		%	79 - 114		SW846 8260B			4/20/18 23:55	CJG	C
Dibromofluoromethane (S)	88.1		%	78 - 116		SW846 8260B			4/20/18 23:55	CJG	C
Dibromofluoromethane (S)	88.9		%	78 - 116		SW846 8260B			4/20/18 02:45	CJG	B
Toluene-d8 (S)	87.5		%	76 - 127		SW846 8260B			4/20/18 02:45	CJG	B
Toluene-d8 (S)	84.6		%	76 - 127		SW846 8260B			4/20/18 23:55	CJG	C
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Beryllium, Total	0.0020		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Chromium, Total	0.00091J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Cobalt, Total	0.015		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Copper, Total	0.0060		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:01	AXC	A3
Nickel, Total	0.020		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2
Zinc, Total	0.037		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:47	MO	A2

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943004** Date Collected: 4/12/2018 11:10 Matrix: Water

Sample ID: **MRC-MW124A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 03:07	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 03:07	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 03:07	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 03:07	CJG	A
1,1-Dichloroethene	ND	3	ug/L	1.0	0.29	SW846 8260B		4/20/18 03:07	CJG	A
1,2,3-Trichlorobenzene	214	39	ug/L	100	46.5	SW846 8260B		4/21/18 03:11	CJG	D
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 03:07	CJG	A
1,2,4-Trichlorobenzene	885		ug/L	100	41.0	SW846 8260B		4/21/18 03:11	CJG	D
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 03:07	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 03:07	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 03:07	CJG	A
1,2-Dichlorobenzene	75.4	14,15	ug/L	1.0	0.38	SW846 8260B		4/20/18 03:07	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 03:07	CJG	A
1,2-Dichloroethene, Total	27.7		ug/L	2.0	0.45	SW846 8260B		4/20/18 03:07	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 03:07	CJG	A
1,3-Dichlorobenzene	263	36,37	ug/L	50.0	12.5	SW846 8260B		4/21/18 03:11	CJG	D
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 03:07	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 03:07	CJG	A
1,4-Dichlorobenzene	238		ug/L	50.0	13.5	SW846 8260B		4/21/18 03:11	CJG	D
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 03:07	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 03:07	CJG	A
2-Chloroethylvinyl ether	ND	10,11	ug/L	2.0	0.38	SW846 8260B		4/20/18 03:07	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 03:07	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 03:07	CJG	A
Acetone	7.8J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 03:07	CJG	A
Benzene	17.1		ug/L	1.0	0.23	SW846 8260B		4/20/18 03:07	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 03:07	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 03:07	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 03:07	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 03:07	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 03:07	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 03:07	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 03:07	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943004** Date Collected: 4/12/2018 11:10 Matrix: Water

Sample ID: **MRC-MW124A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorobenzene	542		ug/L	50.0	9.5	SW846 8260B		4/21/18 03:11	CJG	D
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 03:07	CJG	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 03:07	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 03:07	CJG	A
Cyclohexane	ND	8,9	ug/L	1.0	0.29	SW846 8260B		4/20/18 03:07	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 03:07	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 03:07	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 03:07	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 03:07	CJG	A
Freon 113	ND	4,5	ug/L	1.0	0.26	SW846 8260B		4/20/18 03:07	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 03:07	CJG	A
Isopropylbenzene	ND	13	ug/L	1.0	0.22	SW846 8260B		4/20/18 03:07	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 03:07	CJG	A
Methyl cyclohexane	ND	1,2	ug/L	1.0	0.30	SW846 8260B		4/20/18 03:07	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 03:07	CJG	A
Naphthalene	ND	16,17	ug/L	2.0	0.34	SW846 8260B		4/20/18 03:07	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 03:07	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 03:07	CJG	A
Toluene	0.31J	J,12	ug/L	1.0	0.23	SW846 8260B		4/20/18 03:07	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 03:07	CJG	A
Trichloroethene	5.2		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 03:07	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 03:07	CJG	A
Vinyl Chloride	0.96J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 03:07	CJG	A
cis-1,2-Dichloroethene	26.3	6,7	ug/L	1.0	0.32	SW846 8260B		4/20/18 03:07	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 03:07	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 03:07	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 03:07	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 03:07	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:07	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 03:07	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 03:07	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 03:07	CJG	A

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943004** Date Collected: 4/12/2018 11:10 Matrix: Water

Sample ID: **MRC-MW124A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B			4/20/18 03:07	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/20/18 03:07	CJG	A
trans-1,2-Dichloroethene	1.3		ug/L	1.0	0.26	SW846 8260B			4/20/18 03:07	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 03:07	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	80.2		%	62 - 133		SW846 8260B			4/20/18 03:07	CJG	A
1,2-Dichloroethane-d4 (S)	82.4		%	62 - 133		SW846 8260B			4/21/18 03:11	CJG	D
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260B			4/21/18 03:11	CJG	D
4-Bromofluorobenzene (S)	97.7		%	79 - 114		SW846 8260B			4/20/18 03:07	CJG	A
Dibromofluoromethane (S)	87.1		%	78 - 116		SW846 8260B			4/20/18 03:07	CJG	A
Dibromofluoromethane (S)	86.3		%	78 - 116		SW846 8260B			4/21/18 03:11	CJG	D
Toluene-d8 (S)	83.8		%	76 - 127		SW846 8260B			4/21/18 03:11	CJG	D
Toluene-d8 (S)	82.8		%	76 - 127		SW846 8260B			4/20/18 03:07	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.26		ug/L	0.098	0.019	8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	54.3		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
Fluoranthene-d10 (S)	86.6		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/23/18 18:35	DHF	G
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/24/18 05:37	MBW	P
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Arsenic, Total	0.0023J	J	mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Beryllium, Total	0.0029		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Chromium, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Cobalt, Total	0.031		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:04	AXC	M3
Nickel, Total	0.052		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943004** Date Collected: 4/12/2018 11:10 Matrix: Water

Sample ID: **MRC-MW124A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
Zinc, Total	0.059		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 10:50	MO	M2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/24/18 23:02	SUB	S

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943005** Date Collected: 4/12/2018 13:53 Matrix: Water

Sample ID: **MRC-MW02A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:16	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:16	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:16	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:16	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:16	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:16	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 00:16	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:16	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 00:16	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:16	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 00:16	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:16	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 00:16	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:16	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/21/18 00:16	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:16	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:16	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:16	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 00:16	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:16	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:16	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 00:16	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 00:16	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 00:16	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 00:16	CJG	B
Acetone	6.2J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 00:16	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:16	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:16	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:16	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:16	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 00:16	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 00:16	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:16	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:16	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:16	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:16	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943005** Date Collected: 4/12/2018 13:53 Matrix: Water

Sample ID: **MRC-MW02A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:16	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 00:16	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:16	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:16	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:16	CJG	B
Dichlorodifluoromethane	0.54J	J	ug/L	1.0	0.33	SW846 8260B		4/21/18 00:16	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:16	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:16	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:16	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:16	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 00:16	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:16	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 00:16	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:16	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:16	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:16	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 00:16	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:16	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:16	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:16	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 00:16	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:29	CJG	A
Trichlorofluoromethane	1.9		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:16	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 00:16	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:16	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:16	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:16	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 00:16	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:16	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:16	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:16	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:16	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:16	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:16	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:16	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 00:16	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 00:16	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 00:16	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943005** Date Collected: 4/12/2018 13:53 Matrix: Water

Sample ID: **MRC-MW02A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:16	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:16	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.5		%	62 - 133		SW846 8260B		4/21/18 00:16	CJG	B
1,2-Dichloroethane-d4 (S)	80.9		%	62 - 133		SW846 8260B		4/20/18 03:29	CJG	A
4-Bromofluorobenzene (S)	108		%	79 - 114		SW846 8260B		4/20/18 03:29	CJG	A
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B		4/21/18 00:16	CJG	B
Dibromofluoromethane (S)	86.7		%	78 - 116		SW846 8260B		4/21/18 00:16	CJG	B
Dibromofluoromethane (S)	87.7		%	78 - 116		SW846 8260B		4/20/18 03:29	CJG	A
Toluene-d8 (S)	86.2		%	76 - 127		SW846 8260B		4/20/18 03:29	CJG	A
Toluene-d8 (S)	83.1		%	76 - 127		SW846 8260B		4/21/18 00:16	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943006** Date Collected: 4/12/2018 16:10 Matrix: Water

Sample ID: **MRC-MW104A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:38	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:38	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:38	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:38	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:38	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:38	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 00:38	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:38	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 00:38	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:38	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 00:38	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 00:38	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 00:38	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:38	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/21/18 00:38	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:38	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:38	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:38	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 00:38	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:38	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:38	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 00:38	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 00:38	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 00:38	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 00:38	CJG	B
Acetone	4.5J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 00:38	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:38	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:38	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:38	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 00:38	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 00:38	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 00:38	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:38	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:38	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:38	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:38	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943006** Date Collected: 4/12/2018 16:10 Matrix: Water

Sample ID: **MRC-MW104A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:38	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 00:38	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:38	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 00:38	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:38	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:38	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 00:38	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 00:38	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 00:38	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:38	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 00:38	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 00:38	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 00:38	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:38	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:38	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 00:38	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 00:38	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:38	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 00:38	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 00:38	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 00:38	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 03:51	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 00:38	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 00:38	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 00:38	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:38	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:38	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 00:38	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 00:38	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:38	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 00:38	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:38	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 00:38	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 00:38	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 00:38	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 00:38	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 00:38	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 00:38	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943006** Date Collected: 4/12/2018 16:10 Matrix: Water

Sample ID: **MRC-MW104A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/21/18 00:38	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 00:38	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	80.7		%	62 - 133		SW846 8260B			4/20/18 03:51	CJG	A
1,2-Dichloroethane-d4 (S)	82.2		%	62 - 133		SW846 8260B			4/21/18 00:38	CJG	B
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/21/18 00:38	CJG	B
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/20/18 03:51	CJG	A
Dibromofluoromethane (S)	88		%	78 - 116		SW846 8260B			4/20/18 03:51	CJG	A
Dibromofluoromethane (S)	88.8		%	78 - 116		SW846 8260B			4/21/18 00:38	CJG	B
Toluene-d8 (S)	86.8		%	76 - 127		SW846 8260B			4/20/18 03:51	CJG	A
Toluene-d8 (S)	83.3		%	76 - 127		SW846 8260B			4/21/18 00:38	CJG	B

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943007** Date Collected: 4/12/2018 15:25 Matrix: Water

Sample ID: **MRC-MW104B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 01:00	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 01:00	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 01:00	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:00	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 01:00	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 01:00	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 01:00	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 01:00	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 01:00	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:00	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 01:00	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 01:00	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 01:00	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:00	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/21/18 01:00	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:00	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:00	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:00	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 01:00	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:00	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:00	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 01:00	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 01:00	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 01:00	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 01:00	CJG	B
Acetone	10.2		ug/L	10.0	3.1	SW846 8260B		4/21/18 01:00	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:00	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:00	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:00	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:00	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 01:00	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 01:00	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:00	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:00	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 01:00	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 01:00	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943007** Date Collected: 4/12/2018 15:25 Matrix: Water

Sample ID: **MRC-MW104B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:00	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 01:00	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:00	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 01:00	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:00	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:00	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:00	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 01:00	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 01:00	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 01:00	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 01:00	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 01:00	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 01:00	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 01:00	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:00	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 01:00	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 01:00	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:00	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 01:00	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:00	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 01:00	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:13	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:00	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 01:00	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 01:00	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:00	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:00	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 01:00	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 01:00	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:00	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 01:00	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:00	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:00	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:00	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:00	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 01:00	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 01:00	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 01:00	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943007** Date Collected: 4/12/2018 15:25 Matrix: Water

Sample ID: **MRC-MW104B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/21/18 01:00	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 01:00	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	82.2		%	62 - 133		SW846 8260B			4/20/18 04:13	CJG	A
1,2-Dichloroethane-d4 (S)	83		%	62 - 133		SW846 8260B			4/21/18 01:00	CJG	B
4-Bromofluorobenzene (S)	108		%	79 - 114		SW846 8260B			4/21/18 01:00	CJG	B
4-Bromofluorobenzene (S)	110		%	79 - 114		SW846 8260B			4/20/18 04:13	CJG	A
Dibromofluoromethane (S)	86.7		%	78 - 116		SW846 8260B			4/20/18 04:13	CJG	A
Dibromofluoromethane (S)	88.7		%	78 - 116		SW846 8260B			4/21/18 01:00	CJG	B
Toluene-d8 (S)	83.1		%	76 - 127		SW846 8260B			4/21/18 01:00	CJG	B
Toluene-d8 (S)	86.6		%	76 - 127		SW846 8260B			4/20/18 04:13	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943008** Date Collected: 4/12/2018 15:35 Matrix: Water

Sample ID: **MRC-MW07A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILE SIM											
1,4-Dioxane	1.6		ug/L	0.096	0.018	8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	61.7		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
Fluoranthene-d10 (S)	96.9		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/23/18 20:08	DHF	A
WET CHEMISTRY											
Hexavalent Chromium	0.56		ug/L	0.25	0.047	EPA 218.6			4/24/18 06:02	MBW	C

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943009** Date Collected: 4/11/2018 16:30 Matrix: Water

Sample ID: **MRC-MW34C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 01:21	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 01:21	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 01:21	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:21	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 01:21	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 01:21	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 01:21	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 01:21	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 01:21	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:21	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 01:21	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 01:21	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 01:21	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:21	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/21/18 01:21	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:21	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:21	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:21	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 01:21	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:21	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:21	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 01:21	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 01:21	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 01:21	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 01:21	CJG	B
Acetone	3.4J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 01:21	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:21	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:21	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:21	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:21	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 01:21	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 01:21	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:21	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:21	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 01:21	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 01:21	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943009** Date Collected: 4/11/2018 16:30 Matrix: Water

Sample ID: **MRC-MW34C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:21	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 01:21	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:21	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 01:21	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:21	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:21	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:21	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 01:21	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 01:21	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 01:21	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 01:21	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 01:21	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 01:21	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 01:21	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:21	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 01:21	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 01:21	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:21	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 01:21	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:21	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 01:21	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:34	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:21	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 01:21	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 01:21	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:21	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:21	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 01:21	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 01:21	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:21	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 01:21	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:21	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:21	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:21	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:21	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 01:21	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 01:21	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 01:21	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943009** Date Collected: 4/11/2018 16:30 Matrix: Water

Sample ID: **MRC-MW34C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 01:21	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 01:21	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84.7		%	62 - 133		SW846 8260B		4/21/18 01:21	CJG	B
1,2-Dichloroethane-d4 (S)	80.7		%	62 - 133		SW846 8260B		4/20/18 04:34	CJG	A
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260B		4/20/18 04:34	CJG	A
4-Bromofluorobenzene (S)	113		%	79 - 114		SW846 8260B		4/21/18 01:21	CJG	B
Dibromofluoromethane (S)	84.8		%	78 - 116		SW846 8260B		4/20/18 04:34	CJG	A
Dibromofluoromethane (S)	89.7		%	78 - 116		SW846 8260B		4/21/18 01:21	CJG	B
Toluene-d8 (S)	84.4		%	76 - 127		SW846 8260B		4/21/18 01:21	CJG	B
Toluene-d8 (S)	85.8		%	76 - 127		SW846 8260B		4/20/18 04:34	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943010** Date Collected: 4/12/2018 15:20 Matrix: Water

Sample ID: **MRC-MW38B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 01:43	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 01:43	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 01:43	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:43	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 01:43	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 01:43	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 01:43	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 01:43	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 01:43	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:43	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 01:43	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 01:43	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 01:43	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:43	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/21/18 01:43	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:43	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:43	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:43	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 01:43	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:43	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:43	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 01:43	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 01:43	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 01:43	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 01:43	CJG	B
Acetone	3.5J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 01:43	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:43	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:43	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:43	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 01:43	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 01:43	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 01:43	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:43	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:43	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 01:43	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 01:43	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943010** Date Collected: 4/12/2018 15:20 Matrix: Water

Sample ID: **MRC-MW38B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:43	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 01:43	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:43	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 01:43	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:43	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:43	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 01:43	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 01:43	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 01:43	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 01:43	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 01:43	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 01:43	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 01:43	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 01:43	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:43	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 01:43	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 01:43	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:43	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 01:43	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 01:43	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 01:43	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 04:56	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 01:43	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 01:43	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 01:43	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:43	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:43	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 01:43	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 01:43	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:43	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 01:43	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:43	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 01:43	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 01:43	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 01:43	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 01:43	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 01:43	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 01:43	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943010** Date Collected: 4/12/2018 15:20 Matrix: Water

Sample ID: **MRC-MW38B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/21/18 01:43	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 01:43	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.4		%	62 - 133		SW846 8260B			4/20/18 04:56	CJG	A
1,2-Dichloroethane-d4 (S)	83		%	62 - 133		SW846 8260B			4/21/18 01:43	CJG	B
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/21/18 01:43	CJG	B
4-Bromofluorobenzene (S)	110		%	79 - 114		SW846 8260B			4/20/18 04:56	CJG	A
Dibromofluoromethane (S)	88.6		%	78 - 116		SW846 8260B			4/21/18 01:43	CJG	B
Dibromofluoromethane (S)	86.5		%	78 - 116		SW846 8260B			4/20/18 04:56	CJG	A
Toluene-d8 (S)	84.4		%	76 - 127		SW846 8260B			4/21/18 01:43	CJG	B
Toluene-d8 (S)	85.2		%	76 - 127		SW846 8260B			4/20/18 04:56	CJG	A

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943011** Date Collected: 4/12/2018 09:00 Matrix: Water

Sample ID: **MRC-MW96A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:18	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:18	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:18	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:18	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:18	CJG	A
1,1-Dichloroethene	43.6		ug/L	1.0	0.29	SW846 8260B		4/20/18 05:18	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 05:18	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:18	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 05:18	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:18	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 05:18	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:18	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 05:18	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:18	CJG	A
1,2-Dichloroethene, Total	22500		ug/L	1000	225	SW846 8260B		4/26/18 11:45	DD	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:18	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:18	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:18	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 05:18	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:18	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:18	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 05:18	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 05:18	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 05:18	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 05:18	CJG	A
Acetone	5.5J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 05:18	CJG	A
Benzene	0.63J	J	ug/L	1.0	0.23	SW846 8260B		4/20/18 05:18	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:18	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:18	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:18	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 05:18	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 05:18	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:18	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:18	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:18	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:18	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943011** Date Collected: 4/12/2018 09:00 Matrix: Water

Sample ID: **MRC-MW96A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:18	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 05:18	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:18	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 05:18	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:18	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:18	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:18	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:18	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:18	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:18	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 05:18	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:18	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 05:18	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:18	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:18	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:18	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 05:18	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:18	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:18	CJG	A
Toluene	4.0		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:18	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 05:18	CJG	A
Trichloroethene	2150		ug/L	100	33.0	SW846 8260B		4/21/18 02:49	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:18	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 05:18	CJG	A
Vinyl Chloride	18.2		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:18	CJG	A
cis-1,2-Dichloroethene	22500		ug/L	500	160	SW846 8260B		4/26/18 11:45	DD	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:18	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 05:18	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:18	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:18	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:18	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:18	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:18	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:18	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:18	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 05:18	CJG	A
tert-Butyl Alcohol	2.9J	J	ug/L	10.0	2.2	SW846 8260B		4/20/18 05:18	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 05:18	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943011** Date Collected: 4/12/2018 09:00 Matrix: Water

Sample ID: **MRC-MW96A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	82.5		ug/L	1.0	0.26	SW846 8260B			4/20/18 05:18	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 05:18	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.6		%	62 - 133		SW846 8260B			4/21/18 02:49	CJG	B
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/26/18 11:45	DD	B
1,2-Dichloroethane-d4 (S)	79.2		%	62 - 133		SW846 8260B			4/20/18 05:18	CJG	A
4-Bromofluorobenzene (S)	92.9		%	79 - 114		SW846 8260B			4/26/18 11:45	DD	B
4-Bromofluorobenzene (S)	114		%	79 - 114		SW846 8260B			4/20/18 05:18	CJG	A
4-Bromofluorobenzene (S)	115	1	%	79 - 114		SW846 8260B			4/21/18 02:49	CJG	B
Dibromofluoromethane (S)	87.9		%	78 - 116		SW846 8260B			4/20/18 05:18	CJG	A
Dibromofluoromethane (S)	97.2		%	78 - 116		SW846 8260B			4/26/18 11:45	DD	B
Dibromofluoromethane (S)	88.1		%	78 - 116		SW846 8260B			4/21/18 02:49	CJG	B
Toluene-d8 (S)	84.7		%	76 - 127		SW846 8260B			4/20/18 05:18	CJG	A
Toluene-d8 (S)	85.6		%	76 - 127		SW846 8260B			4/21/18 02:49	CJG	B
Toluene-d8 (S)	80.2		%	76 - 127		SW846 8260B			4/26/18 11:45	DD	B
SEMIVOLATILE SIM											
1,4-Dioxane	4.1		ug/L	0.49	0.094	8270 SIM	4/19/18 08:40	CAC	4/24/18 20:37	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:40	DHF	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:40	DHF	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:40	DHF	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:40	DHF	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 20:40	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	63.6		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 20:37	GEC	C
2-Methylnapthalene-d10 (S)	71.3		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/23/18 20:40	DHF	C
Fluoranthene-d10 (S)	90.3		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 20:37	GEC	C
Fluoranthene-d10 (S)	112		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/23/18 20:40	DHF	C

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943012** Date Collected: 4/12/2018 10:10 Matrix: Water

Sample ID: **MRC-MW98B-DUP** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:40	CJG	A
1,1,1-Trichloroethane	13.5		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:40	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:40	CJG	A
1,1,2-Trichloroethane	1.3		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:40	CJG	A
1,1-Dichloroethane	84.1		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:40	CJG	A
1,1-Dichloroethene	201		ug/L	5.0	1.5	SW846 8260B		4/21/18 02:27	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 05:40	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:40	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 05:40	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:40	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 05:40	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 05:40	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 05:40	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:40	CJG	A
1,2-Dichloroethene, Total	36.3		ug/L	2.0	0.45	SW846 8260B		4/20/18 05:40	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:40	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:40	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:40	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 05:40	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:40	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:40	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 05:40	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 05:40	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 05:40	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 05:40	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 05:40	CJG	A
Benzene	1.9		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:40	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:40	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:40	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 05:40	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 05:40	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 05:40	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:40	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:40	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:40	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:40	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943012** Date Collected: 4/12/2018 10:10 Matrix: Water

Sample ID: **MRC-MW98B-DUP** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	20.7		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:40	CJG	A
Chloroform	0.41J	J	ug/L	1.0	0.21	SW846 8260B		4/20/18 05:40	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:40	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 05:40	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:40	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:40	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 05:40	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 05:40	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 05:40	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:40	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 05:40	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 05:40	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 05:40	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 05:40	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:40	CJG	A
Methylene Chloride	4.8		ug/L	1.0	0.45	SW846 8260B		4/20/18 05:40	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 05:40	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:40	CJG	A
Tetrachloroethene	5.2		ug/L	1.0	0.35	SW846 8260B		4/20/18 05:40	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 05:40	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 05:40	CJG	A
Trichloroethene	424		ug/L	5.0	1.7	SW846 8260B		4/21/18 02:27	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 05:40	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 05:40	CJG	A
Vinyl Chloride	0.86J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 05:40	CJG	A
cis-1,2-Dichloroethene	36.3		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:40	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:40	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 05:40	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 05:40	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:40	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 05:40	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:40	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 05:40	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 05:40	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 05:40	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 05:40	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 05:40	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 05:40	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943012** Date Collected: 4/12/2018 10:10 Matrix: Water

Sample ID: **MRC-MW98B-DUP** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 05:40	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 05:40	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.9		%	62 - 133		SW846 8260B			4/21/18 02:27	CJG	B
1,2-Dichloroethane-d4 (S)	82.5		%	62 - 133		SW846 8260B			4/20/18 05:40	CJG	A
4-Bromofluorobenzene (S)	114		%	79 - 114		SW846 8260B			4/21/18 02:27	CJG	B
4-Bromofluorobenzene (S)	113		%	79 - 114		SW846 8260B			4/20/18 05:40	CJG	A
Dibromofluoromethane (S)	88		%	78 - 116		SW846 8260B			4/21/18 02:27	CJG	B
Dibromofluoromethane (S)	91.1		%	78 - 116		SW846 8260B			4/20/18 05:40	CJG	A
Toluene-d8 (S)	84.6		%	76 - 127		SW846 8260B			4/21/18 02:27	CJG	B
Toluene-d8 (S)	87.2		%	76 - 127		SW846 8260B			4/20/18 05:40	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	96.0		ug/L	4.8	0.91	8270 SIM	4/19/18 08:40	CAC	4/24/18 21:05	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:12	DHF	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:12	DHF	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:12	DHF	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:12	DHF	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:12	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	61.6		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/23/18 21:12	DHF	C
2-Methylnapthalene-d10 (S)	0		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 21:05	GEC	C
Fluoranthene-d10 (S)	322		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 21:05	GEC	C
Fluoranthene-d10 (S)	93.8		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/23/18 21:12	DHF	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943013** Date Collected: 4/12/2018 09:57 Matrix: Water

Sample ID: **MRC-MW98B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 13:01	DD	A
1,1,1-Trichloroethane	13.8		ug/L	1.0	0.22	SW846 8260B		4/20/18 13:01	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 13:01	DD	A
1,1,2-Trichloroethane	1.1		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:01	DD	A
1,1-Dichloroethane	85.2		ug/L	1.0	0.28	SW846 8260B		4/20/18 13:01	DD	A
1,1-Dichloroethene	195		ug/L	10.0	2.9	SW846 8260B		4/23/18 17:44	DD	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 13:01	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 13:01	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 13:01	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 13:01	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 13:01	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 13:01	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 13:01	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:01	DD	A
1,2-Dichloroethene, Total	23.7		ug/L	2.0	0.45	SW846 8260B		4/20/18 13:01	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 13:01	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 13:01	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 13:01	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 13:01	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 13:01	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:01	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 13:01	DD	A
2-Chloroethylvinyl ether	ND	5,6	ug/L	2.0	0.38	SW846 8260B		4/20/18 13:01	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 13:01	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 13:01	DD	A
Acetone	5.1J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 13:01	DD	A
Benzene	1.9		ug/L	1.0	0.23	SW846 8260B		4/20/18 13:01	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:01	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:01	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 13:01	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 13:01	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 13:01	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 13:01	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:01	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 13:01	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 13:01	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943013** Date Collected: 4/12/2018 09:57 Matrix: Water

Sample ID: **MRC-MW98B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	22.0		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:01	DD	A
Chloroform	0.45J	J	ug/L	1.0	0.21	SW846 8260B		4/20/18 13:01	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:01	DD	A
Cyclohexane	ND	3,4	ug/L	1.0	0.29	SW846 8260B		4/20/18 13:01	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:01	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:01	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 13:01	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 13:01	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 13:01	DD	A
Freon 113	ND	1,2	ug/L	1.0	0.26	SW846 8260B		4/20/18 13:01	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 13:01	DD	A
Isopropylbenzene	ND	7	ug/L	1.0	0.22	SW846 8260B		4/20/18 13:01	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 13:01	DD	A
Methyl cyclohexane	ND	8,9	ug/L	1.0	0.30	SW846 8260B		4/20/18 13:01	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:01	DD	A
Methylene Chloride	4.2		ug/L	1.0	0.45	SW846 8260B		4/20/18 13:01	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 13:01	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 13:01	DD	A
Tetrachloroethene	5.4		ug/L	1.0	0.35	SW846 8260B		4/20/18 13:01	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 13:01	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 13:01	DD	A
Trichloroethene	414	14,15	ug/L	10.0	3.3	SW846 8260B		4/23/18 17:44	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 13:01	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 13:01	DD	A
Vinyl Chloride	0.94J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 13:01	DD	A
cis-1,2-Dichloroethene	23.7		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:01	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:01	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 13:01	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 13:01	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:01	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 13:01	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:01	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 13:01	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 13:01	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 13:01	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 13:01	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 13:01	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 13:01	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943013** Date Collected: 4/12/2018 09:57 Matrix: Water

Sample ID: **MRC-MW98B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 13:01	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 13:01	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.7		%	62 - 133		SW846 8260B			4/20/18 13:01	DD	A
1,2-Dichloroethane-d4 (S)	83.1		%	62 - 133		SW846 8260B			4/23/18 17:44	DD	B
4-Bromofluorobenzene (S)	111		%	79 - 114		SW846 8260B			4/20/18 13:01	DD	A
4-Bromofluorobenzene (S)	88.6		%	79 - 114		SW846 8260B			4/23/18 17:44	DD	B
Dibromofluoromethane (S)	89		%	78 - 116		SW846 8260B			4/20/18 13:01	DD	A
Dibromofluoromethane (S)	87.5		%	78 - 116		SW846 8260B			4/23/18 17:44	DD	B
Toluene-d8 (S)	85.5		%	76 - 127		SW846 8260B			4/20/18 13:01	DD	A
Toluene-d8 (S)	76.5		%	76 - 127		SW846 8260B			4/23/18 17:44	DD	B
SEMIVOLATILE SIM											
1,4-Dioxane	118		ug/L	5.1	0.97	8270 SIM	4/19/18 08:40	CAC	4/24/18 21:32	GEC	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:44	DHF	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:44	DHF	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:44	DHF	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:44	DHF	G
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/23/18 21:44	DHF	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	57.7		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/23/18 21:44	DHF	G
2-Methylnapthalene-d10 (S)	0		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 21:32	GEC	G
Fluoranthene-d10 (S)	94.4		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/23/18 21:44	DHF	G
Fluoranthene-d10 (S)	302		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 21:32	GEC	G

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943014** Date Collected: 4/12/2018 08:37 Matrix: Water

Sample ID: **MRC-MW98A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/23/18 23:52	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/23/18 23:52	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/23/18 23:52	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
1,1-Dichloroethane	1.4		ug/L	1.0	0.28	SW846 8260B		4/23/18 23:52	CJG	B
1,1-Dichloroethene	0.65J	J,1	ug/L	1.0	0.29	SW846 8260B		4/23/18 23:52	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/23/18 23:52	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/23/18 23:52	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/23/18 23:52	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/23/18 23:52	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/23/18 23:52	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/23/18 23:52	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/23/18 23:52	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 23:52	CJG	B
1,2-Dichloroethene, Total	0.54J	J	ug/L	2.0	0.45	SW846 8260B		4/23/18 23:52	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/23/18 23:52	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/23/18 23:52	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/23/18 23:52	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/23/18 23:52	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/23/18 23:52	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 23:52	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/23/18 23:52	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/23/18 23:52	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/23/18 23:52	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/23/18 23:52	CJG	B
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/23/18 23:52	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/23/18 23:52	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 23:52	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 23:52	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/23/18 23:52	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/23/18 23:52	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/23/18 23:52	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/23/18 23:52	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 23:52	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/23/18 23:52	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/23/18 23:52	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943014** Date Collected: 4/12/2018 08:37 Matrix: Water

Sample ID: **MRC-MW98A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/23/18 23:52	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 23:52	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/23/18 23:52	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 23:52	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/23/18 23:52	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/23/18 23:52	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/23/18 23:52	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/23/18 23:52	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/23/18 23:52	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/23/18 23:52	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/23/18 23:52	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/23/18 23:52	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/23/18 23:52	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/23/18 23:52	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/23/18 23:52	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/23/18 23:52	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/23/18 23:52	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/23/18 23:52	CJG	B
Trichloroethene	3.5		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/23/18 23:52	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/23/18 23:52	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/23/18 23:52	CJG	B
cis-1,2-Dichloroethene	0.54J	J	ug/L	1.0	0.32	SW846 8260B		4/23/18 23:52	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 23:52	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/23/18 23:52	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/23/18 23:52	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/23/18 23:52	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 23:52	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 23:52	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 23:52	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/23/18 23:52	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/23/18 23:52	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/23/18 23:52	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943014** Date Collected: 4/12/2018 08:37 Matrix: Water

Sample ID: **MRC-MW98A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/23/18 23:52	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/23/18 23:52	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108		%	62 - 133		SW846 8260B			4/23/18 23:52	CJG	B
4-Bromofluorobenzene (S)	101		%	79 - 114		SW846 8260B			4/23/18 23:52	CJG	B
Dibromofluoromethane (S)	112		%	78 - 116		SW846 8260B			4/23/18 23:52	CJG	B
Toluene-d8 (S)	102		%	76 - 127		SW846 8260B			4/23/18 23:52	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	0.98		ug/L	0.10	0.020	8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	53.9		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C
Fluoranthene-d10 (S)	103		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 00:32	DHF	C

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943015** Date Collected: 4/12/2018 08:07 Matrix: Water

Sample ID: **MRC-MW111A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 14:06	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 14:06	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 14:06	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 14:06	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 14:06	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 14:06	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 14:06	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 14:06	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 14:06	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 14:06	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 14:06	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 14:06	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:06	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 14:06	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 14:06	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 14:06	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 14:06	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 14:06	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 14:06	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:06	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 14:06	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 14:06	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 14:06	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 14:06	DD	A
Acetone	10.5		ug/L	10.0	3.1	SW846 8260B		4/20/18 14:06	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 14:06	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:06	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:06	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 14:06	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 14:06	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 14:06	DD	A
Carbon Disulfide	0.30J	J	ug/L	1.0	0.23	SW846 8260B		4/20/18 14:06	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:06	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 14:06	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 14:06	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943015** Date Collected: 4/12/2018 08:07 Matrix: Water

Sample ID: **MRC-MW111A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 14:06	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:06	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 14:06	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:06	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 14:06	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 14:06	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 14:06	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 14:06	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 14:06	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 14:06	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 14:06	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 14:06	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 14:06	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 14:06	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 14:06	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 14:06	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 14:06	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 14:06	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 14:06	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 14:06	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 14:06	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:06	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:06	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 14:06	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 14:06	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 14:06	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:06	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:06	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:06	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 14:06	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 14:06	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 14:06	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943015** Date Collected: 4/12/2018 08:07 Matrix: Water

Sample ID: **MRC-MW111A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 14:06	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 14:06	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	80		%	62 - 133		SW846 8260B			4/20/18 14:06	DD	A
4-Bromofluorobenzene (S)	111		%	79 - 114		SW846 8260B			4/20/18 14:06	DD	A
Dibromofluoromethane (S)	85.2		%	78 - 116		SW846 8260B			4/20/18 14:06	DD	A
Toluene-d8 (S)	84.8		%	76 - 127		SW846 8260B			4/20/18 14:06	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.52		ug/L	0.10	0.020	8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	69.1		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C
Fluoranthene-d10 (S)	111		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 17:03	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943016** Date Collected: 4/12/2018 13:55 Matrix: Water

Sample ID: **MRC-MW124B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 14:28	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 14:28	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 14:28	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 14:28	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 14:28	DD	A
1,2,3-Trichlorobenzene	14.7		ug/L	2.0	0.93	SW846 8260B		4/20/18 14:28	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 14:28	DD	A
1,2,4-Trichlorobenzene	66.0		ug/L	2.0	0.82	SW846 8260B		4/20/18 14:28	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 14:28	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 14:28	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 14:28	DD	A
1,2-Dichlorobenzene	7.7		ug/L	1.0	0.38	SW846 8260B		4/20/18 14:28	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:28	DD	A
1,2-Dichloroethene, Total	6.1		ug/L	2.0	0.45	SW846 8260B		4/20/18 14:28	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 14:28	DD	A
1,3-Dichlorobenzene	57.9		ug/L	1.0	0.25	SW846 8260B		4/20/18 14:28	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 14:28	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 14:28	DD	A
1,4-Dichlorobenzene	38.2		ug/L	1.0	0.27	SW846 8260B		4/20/18 14:28	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:28	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 14:28	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 14:28	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 14:28	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 14:28	DD	A
Acetone	10.8		ug/L	10.0	3.1	SW846 8260B		4/20/18 14:28	DD	A
Benzene	2.5		ug/L	1.0	0.23	SW846 8260B		4/20/18 14:28	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:28	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:28	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 14:28	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 14:28	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 14:28	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 14:28	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:28	DD	A
Chlorobenzene	124		ug/L	1.0	0.19	SW846 8260B		4/20/18 14:28	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 14:28	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943016** Date Collected: 4/12/2018 13:55 Matrix: Water

Sample ID: **MRC-MW124B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
Chloroform	0.75J	J	ug/L	1.0	0.21	SW846 8260B		4/20/18 14:28	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:28	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 14:28	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:28	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 14:28	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 14:28	DD	A
Ethylbenzene	1.1		ug/L	1.0	0.34	SW846 8260B		4/20/18 14:28	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 14:28	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 14:28	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 14:28	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 14:28	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 14:28	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 14:28	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 14:28	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 14:28	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 14:28	DD	A
Toluene	0.32J	J	ug/L	1.0	0.23	SW846 8260B		4/20/18 14:28	DD	A
Total Xylenes	3.4		ug/L	3.0	0.66	SW846 8260B		4/20/18 14:28	DD	A
Trichloroethene	1.5		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 14:28	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 14:28	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 14:28	DD	A
cis-1,2-Dichloroethene	6.1		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:28	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:28	DD	A
mp-Xylene	2.4		ug/L	2.0	0.52	SW846 8260B		4/20/18 14:28	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 14:28	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 14:28	DD	A
o-Xylene	1.0		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 14:28	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 14:28	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 14:28	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 14:28	DD	A
tert-Butyl Alcohol	6.7J	J	ug/L	10.0	2.2	SW846 8260B		4/20/18 14:28	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 14:28	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943016** Date Collected: 4/12/2018 13:55 Matrix: Water
Sample ID: **MRC-MW124B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 14:28	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 14:28	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	79.7		%	62 - 133		SW846 8260B			4/20/18 14:28	DD	A
4-Bromofluorobenzene (S)	104		%	79 - 114		SW846 8260B			4/20/18 14:28	DD	A
Dibromofluoromethane (S)	86.7		%	78 - 116		SW846 8260B			4/20/18 14:28	DD	A
Toluene-d8 (S)	83		%	76 - 127		SW846 8260B			4/20/18 14:28	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.27		ug/L	0.10	0.020	8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	69.1		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
Fluoranthene-d10 (S)	104		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 17:29	GEC	C
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/24/18 06:10	MBW	F
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Arsenic, Total	0.0023J	J	mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Beryllium, Total	0.00045J	J	mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Chromium, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Cobalt, Total	0.0093		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:07	AXC	E3
Nickel, Total	0.012		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
Zinc, Total	0.038		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:02	MO	E2
SUBCONTRACTED ANALYSIS											

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943016** Date Collected: 4/12/2018 13:55 Matrix: Water

Sample ID: **MRC-MW124B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
Subcontracted Analysis	See attached.					Subcontract		4/24/18 23:31	SUB	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943017** Date Collected: 4/12/2018 16:10 Matrix: Water

Sample ID: **MRC-MW34A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:15	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:15	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:15	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:15	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:15	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 00:15	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:15	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 00:15	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:15	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 00:15	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:15	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 00:15	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:15	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 00:15	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:15	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:15	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:15	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 00:15	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:15	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:15	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 00:15	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 00:15	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 00:15	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 00:15	CJG	B
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/24/18 00:15	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:15	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:15	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:15	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:15	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 00:15	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 00:15	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:15	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:15	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:15	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:15	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943017** Date Collected: 4/12/2018 16:10 Matrix: Water

Sample ID: **MRC-MW34A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 00:15	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:15	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:15	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:15	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:15	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:15	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:15	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:15	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 00:15	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:15	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 00:15	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:15	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:15	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 00:15	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:15	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:15	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:15	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 00:15	CJG	B
Trichloroethene	18.4		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:15	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 00:15	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:15	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:15	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:15	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 00:15	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:15	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:15	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:15	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:15	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:15	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 00:15	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 00:15	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 00:15	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943017** Date Collected: 4/12/2018 16:10 Matrix: Water

Sample ID: **MRC-MW34A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 00:15	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 00:15	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/24/18 00:15	CJG	B
4-Bromofluorobenzene (S)	96.9		%	79 - 114		SW846 8260B			4/24/18 00:15	CJG	B
Dibromofluoromethane (S)	109		%	78 - 116		SW846 8260B			4/24/18 00:15	CJG	B
Toluene-d8 (S)	98.9		%	76 - 127		SW846 8260B			4/24/18 00:15	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943018** Date Collected: 4/12/2018 13:05 Matrix: Water

Sample ID: **MRC-SWMW-1I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 15:11	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 15:11	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 15:11	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
1,1-Dichloroethane	3.1		ug/L	1.0	0.28	SW846 8260B		4/20/18 15:11	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 15:11	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 15:11	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 15:11	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 15:11	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:11	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 15:11	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 15:11	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 15:11	DD	A
1,2-Dichloroethane	0.35J	J	ug/L	1.0	0.32	SW846 8260B		4/20/18 15:11	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 15:11	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:11	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:11	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:11	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 15:11	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:11	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:11	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 15:11	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 15:11	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 15:11	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 15:11	DD	A
Acetone	4.3J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 15:11	DD	A
Benzene	3.0		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:11	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:11	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:11	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:11	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 15:11	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 15:11	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:11	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:11	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 15:11	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 15:11	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943018** Date Collected: 4/12/2018 13:05 Matrix: Water

Sample ID: **MRC-SWMW-1I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	1.4		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 15:11	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:11	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 15:11	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:11	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:11	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 15:11	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 15:11	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 15:11	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 15:11	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 15:11	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 15:11	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 15:11	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 15:11	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 15:11	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:11	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 15:11	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:11	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 15:11	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:11	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 15:11	DD	A
Vinyl Chloride	0.68J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 15:11	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:11	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:11	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 15:11	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 15:11	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 15:11	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:11	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:11	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:11	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 15:11	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 15:11	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 15:11	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943018** Date Collected: 4/12/2018 13:05 Matrix: Water

Sample ID: **MRC-SWMW-1I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 15:11	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 15:11	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81		%	62 - 133		SW846 8260B			4/20/18 15:11	DD	A
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/20/18 15:11	DD	A
Dibromofluoromethane (S)	86.5		%	78 - 116		SW846 8260B			4/20/18 15:11	DD	A
Toluene-d8 (S)	86.7		%	76 - 127		SW846 8260B			4/20/18 15:11	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943019** Date Collected: 4/12/2018 11:15 Matrix: Water

Sample ID: **MRC-SWMW-2I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 15:33	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 15:33	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 15:33	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
1,1-Dichloroethane	4.9		ug/L	1.0	0.28	SW846 8260B		4/20/18 15:33	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 15:33	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 15:33	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 15:33	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 15:33	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:33	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 15:33	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 15:33	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 15:33	DD	A
1,2-Dichloroethane	0.54J	J	ug/L	1.0	0.32	SW846 8260B		4/20/18 15:33	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 15:33	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:33	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:33	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:33	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 15:33	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:33	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:33	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 15:33	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 15:33	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 15:33	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 15:33	DD	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 15:33	DD	A
Benzene	10.6		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:33	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:33	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:33	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:33	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 15:33	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 15:33	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:33	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:33	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 15:33	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 15:33	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943019** Date Collected: 4/12/2018 11:15 Matrix: Water

Sample ID: **MRC-SWMW-2I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	5.6		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 15:33	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:33	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 15:33	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:33	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:33	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 15:33	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 15:33	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 15:33	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 15:33	DD	A
Isopropylbenzene	0.26J	J	ug/L	1.0	0.22	SW846 8260B		4/20/18 15:33	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 15:33	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 15:33	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 15:33	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 15:33	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:33	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 15:33	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:33	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 15:33	DD	A
Trichloroethene	0.91J	J	ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:33	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 15:33	DD	A
Vinyl Chloride	0.95J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 15:33	DD	A
cis-1,2-Dichloroethene	0.39J	J	ug/L	1.0	0.32	SW846 8260B		4/20/18 15:33	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:33	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 15:33	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 15:33	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 15:33	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:33	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:33	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:33	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 15:33	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 15:33	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 15:33	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943019** Date Collected: 4/12/2018 11:15 Matrix: Water

Sample ID: **MRC-SWMW-2I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 15:33	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 15:33	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.4		%	62 - 133		SW846 8260B			4/20/18 15:33	DD	A
4-Bromofluorobenzene (S)	113		%	79 - 114		SW846 8260B			4/20/18 15:33	DD	A
Dibromofluoromethane (S)	88.9		%	78 - 116		SW846 8260B			4/20/18 15:33	DD	A
Toluene-d8 (S)	86.2		%	76 - 127		SW846 8260B			4/20/18 15:33	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943020** Date Collected: 4/12/2018 08:50 Matrix: Water

Sample ID: **MRC-SWMW-3I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 01:55	CJG	C
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 01:55	CJG	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 01:55	CJG	C
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
1,1-Dichloroethane	1.1		ug/L	1.0	0.28	SW846 8260B		4/25/18 01:55	CJG	C
1,1-Dichloroethene	0.39J	J	ug/L	1.0	0.29	SW846 8260B		4/25/18 01:55	CJG	C
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/25/18 01:55	CJG	C
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 01:55	CJG	C
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/25/18 01:55	CJG	C
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:55	CJG	C
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/25/18 01:55	CJG	C
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 01:55	CJG	C
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/25/18 01:55	CJG	C
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:55	CJG	C
1,2-Dichloroethene, Total	1.0J	J	ug/L	2.0	0.45	SW846 8260B		4/25/18 01:55	CJG	C
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:55	CJG	C
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:55	CJG	C
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:55	CJG	C
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/25/18 01:55	CJG	C
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:55	CJG	C
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:55	CJG	C
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/25/18 01:55	CJG	C
2-Chloroethylvinyl ether	ND	21,22	ug/L	2.0	0.38	SW846 8260B		4/25/18 01:55	CJG	C
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/25/18 01:55	CJG	C
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/25/18 01:55	CJG	C
Acetone	7.2J	J	ug/L	10.0	3.1	SW846 8260B		4/25/18 01:55	CJG	C
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:55	CJG	C
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:55	CJG	C
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:55	CJG	C
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:55	CJG	C
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/25/18 01:55	CJG	C
Bromomethane	ND	19	ug/L	1.0	0.39	SW846 8260B		4/25/18 01:55	CJG	C
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:55	CJG	C
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:55	CJG	C
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 01:55	CJG	C

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943020** Date Collected: 4/12/2018 08:50 Matrix: Water

Sample ID: **MRC-SWMW-3I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 01:55	CJG	C
Chloroethane	ND	20	ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/25/18 01:55	CJG	C
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:55	CJG	C
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 01:55	CJG	C
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:55	CJG	C
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:55	CJG	C
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 01:55	CJG	C
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 01:55	CJG	C
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 01:55	CJG	C
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/25/18 01:55	CJG	C
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 01:55	CJG	C
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/25/18 01:55	CJG	C
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 01:55	CJG	C
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 01:55	CJG	C
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/25/18 01:55	CJG	C
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:55	CJG	C
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 01:55	CJG	C
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:55	CJG	C
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/25/18 01:55	CJG	C
Trichloroethene	1.1		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:55	CJG	C
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/25/18 01:55	CJG	C
Vinyl Chloride	0.37J	J	ug/L	1.0	0.30	SW846 8260B		4/25/18 01:55	CJG	C
cis-1,2-Dichloroethene	1.0		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:55	CJG	C
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:55	CJG	C
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/25/18 01:55	CJG	C
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 01:55	CJG	C
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 01:55	CJG	C
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:55	CJG	C
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:55	CJG	C
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:55	CJG	C
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/25/18 01:55	CJG	C
tert-Butyl Alcohol	5.6J	J	ug/L	10.0	2.2	SW846 8260B		4/25/18 01:55	CJG	C

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943020** Date Collected: 4/12/2018 08:50 Matrix: Water

Sample ID: **MRC-SWMW-3I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			4/25/18 01:55	CJG	C
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/25/18 01:55	CJG	C
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/25/18 01:55	CJG	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	115		%	62 - 133		SW846 8260B			4/25/18 01:55	CJG	C
4-Bromofluorobenzene (S)	91.1		%	79 - 114		SW846 8260B			4/25/18 01:55	CJG	C
Dibromofluoromethane (S)	97.3		%	78 - 116		SW846 8260B			4/25/18 01:55	CJG	C
Toluene-d8 (S)	94.2		%	76 - 127		SW846 8260B			4/25/18 01:55	CJG	C

Vanessa N. Badman

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943021** Date Collected: 4/12/2018 08:55 Matrix: Water

Sample ID: **MRC-SWMW-3I-D** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 15:55	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 15:55	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 15:55	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
1,1-Dichloroethane	1.1		ug/L	1.0	0.28	SW846 8260B		4/20/18 15:55	DD	A
1,1-Dichloroethene	0.35J	J	ug/L	1.0	0.29	SW846 8260B		4/20/18 15:55	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 15:55	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 15:55	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 15:55	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:55	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 15:55	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 15:55	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 15:55	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:55	DD	A
1,2-Dichloroethene, Total	1.6J	J	ug/L	2.0	0.45	SW846 8260B		4/20/18 15:55	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:55	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:55	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:55	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 15:55	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:55	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:55	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 15:55	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 15:55	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 15:55	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 15:55	DD	A
Acetone	4.2J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 15:55	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:55	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:55	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:55	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 15:55	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 15:55	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 15:55	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:55	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:55	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 15:55	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 15:55	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943021** Date Collected: 4/12/2018 08:55 Matrix: Water

Sample ID: **MRC-SWMW-3I-D** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 15:55	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:55	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 15:55	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:55	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 15:55	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 15:55	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 15:55	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 15:55	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 15:55	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 15:55	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 15:55	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 15:55	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 15:55	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 15:55	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:55	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 15:55	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 15:55	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 15:55	DD	A
Trichloroethene	1.0J	J	ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 15:55	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 15:55	DD	A
Vinyl Chloride	0.33J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 15:55	DD	A
cis-1,2-Dichloroethene	1.2		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:55	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:55	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 15:55	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 15:55	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 15:55	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 15:55	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 15:55	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 15:55	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 15:55	DD	A
tert-Butyl Alcohol	4.0J	J	ug/L	10.0	2.2	SW846 8260B		4/20/18 15:55	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 15:55	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943021** Date Collected: 4/12/2018 08:55 Matrix: Water

Sample ID: **MRC-SWMW-3I-D** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.36J	J	ug/L	1.0	0.26	SW846 8260B			4/20/18 15:55	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 15:55	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.5		%	62 - 133		SW846 8260B			4/20/18 15:55	DD	A
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/20/18 15:55	DD	A
Dibromofluoromethane (S)	88.6		%	78 - 116		SW846 8260B			4/20/18 15:55	DD	A
Toluene-d8 (S)	84.8		%	76 - 127		SW846 8260B			4/20/18 15:55	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943022** Date Collected: 4/12/2018 14:05 Matrix: Water

Sample ID: **MRC-MW93A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 16:17	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 16:17	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 16:17	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 16:17	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 16:17	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 16:17	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 16:17	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 16:17	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 16:17	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 16:17	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 16:17	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 16:17	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:17	DD	A
1,2-Dichloroethene, Total	1.7J	J	ug/L	2.0	0.45	SW846 8260B		4/20/18 16:17	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 16:17	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 16:17	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 16:17	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 16:17	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 16:17	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:17	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 16:17	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 16:17	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 16:17	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 16:17	DD	A
Acetone	3.9J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 16:17	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 16:17	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:17	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:17	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 16:17	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 16:17	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 16:17	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 16:17	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:17	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 16:17	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 16:17	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943022** Date Collected: 4/12/2018 14:05 Matrix: Water

Sample ID: **MRC-MW93A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 16:17	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:17	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 16:17	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:17	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 16:17	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 16:17	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 16:17	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 16:17	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 16:17	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 16:17	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 16:17	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 16:17	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 16:17	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 16:17	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 16:17	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 16:17	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 16:17	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 16:17	DD	A
Trichloroethene	1.9		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 16:17	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 16:17	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 16:17	DD	A
cis-1,2-Dichloroethene	1.7		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:17	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:17	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 16:17	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 16:17	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 16:17	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:17	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:17	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:17	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 16:17	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 16:17	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 16:17	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943022** Date Collected: 4/12/2018 14:05 Matrix: Water

Sample ID: **MRC-MW93A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 16:17	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 16:17	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	82.2		%	62 - 133		SW846 8260B			4/20/18 16:17	DD	A
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/20/18 16:17	DD	A
Dibromofluoromethane (S)	87.6		%	78 - 116		SW846 8260B			4/20/18 16:17	DD	A
Toluene-d8 (S)	85.8		%	76 - 127		SW846 8260B			4/20/18 16:17	DD	A

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943023** Date Collected: 4/12/2018 17:00 Matrix: Water

Sample ID: **EB-041218-AZ** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 16:39	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 16:39	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 16:39	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 16:39	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 16:39	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 16:39	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 16:39	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 16:39	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 16:39	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 16:39	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 16:39	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 16:39	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:39	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 16:39	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 16:39	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 16:39	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 16:39	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 16:39	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 16:39	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:39	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 16:39	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 16:39	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 16:39	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 16:39	DD	A
Acetone	8.6J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 16:39	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 16:39	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:39	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:39	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 16:39	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 16:39	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 16:39	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 16:39	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:39	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 16:39	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 16:39	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943023** Date Collected: 4/12/2018 17:00 Matrix: Water

Sample ID: **EB-041218-AZ** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 16:39	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:39	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 16:39	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:39	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 16:39	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 16:39	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 16:39	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 16:39	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 16:39	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 16:39	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 16:39	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 16:39	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 16:39	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 16:39	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 16:39	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 16:39	DD	A
Toluene	0.25J	J	ug/L	1.0	0.23	SW846 8260B		4/20/18 16:39	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 16:39	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 16:39	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 16:39	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 16:39	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:39	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:39	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 16:39	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 16:39	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 16:39	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 16:39	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 16:39	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 16:39	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 16:39	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 16:39	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 16:39	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943023** Date Collected: 4/12/2018 17:00 Matrix: Water

Sample ID: **EB-041218-AZ** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 16:39	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 16:39	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84.1		%	62 - 133		SW846 8260B			4/20/18 16:39	DD	A
4-Bromofluorobenzene (S)	114		%	79 - 114		SW846 8260B			4/20/18 16:39	DD	A
Dibromofluoromethane (S)	88.8		%	78 - 116		SW846 8260B			4/20/18 16:39	DD	A
Toluene-d8 (S)	85.5		%	76 - 127		SW846 8260B			4/20/18 16:39	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.10	0.019	8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	57.7		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C
Fluoranthene-d10 (S)	106		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 17:56	GEC	C

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943024** Date Collected: 4/12/2018 12:10 Matrix: Water

Sample ID: **MRC-MW119A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:00	DD	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:00	DD	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:00	DD	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:00	DD	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:00	DD	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 17:00	DD	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:00	DD	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 17:00	DD	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:00	DD	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 17:00	DD	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:00	DD	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 17:00	DD	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:00	DD	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 17:00	DD	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:00	DD	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:00	DD	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:00	DD	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 17:00	DD	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:00	DD	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:00	DD	B
2-Butanone	3.4J	J	ug/L	10.0	1.8	SW846 8260B		4/24/18 17:00	DD	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 17:00	DD	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 17:00	DD	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 17:00	DD	B
Acetone	82.4		ug/L	10.0	3.1	SW846 8260B		4/24/18 17:00	DD	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:00	DD	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:00	DD	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:00	DD	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:00	DD	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 17:00	DD	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 17:00	DD	B
Carbon Disulfide	1.2		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:00	DD	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:00	DD	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:00	DD	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:00	DD	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943024** Date Collected: 4/12/2018 12:10 Matrix: Water

Sample ID: **MRC-MW119A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
Chloroform	0.75J	J	ug/L	1.0	0.21	SW846 8260B		4/24/18 17:00	DD	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:00	DD	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:00	DD	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:00	DD	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:00	DD	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:00	DD	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:00	DD	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:00	DD	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 17:00	DD	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:00	DD	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 17:00	DD	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:00	DD	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
Methylene Chloride	4.4		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:00	DD	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 17:00	DD	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:00	DD	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:00	DD	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:00	DD	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 17:00	DD	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:00	DD	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 17:00	DD	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:00	DD	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:00	DD	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:00	DD	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 17:00	DD	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:00	DD	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:00	DD	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:00	DD	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:00	DD	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:00	DD	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 17:00	DD	B
tert-Butyl Alcohol	4.2J	J	ug/L	10.0	2.2	SW846 8260B		4/24/18 17:00	DD	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 17:00	DD	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943024** Date Collected: 4/12/2018 12:10 Matrix: Water

Sample ID: **MRC-MW119A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 17:00	DD	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 17:00	DD	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.5		%	62 - 133		SW846 8260B			4/24/18 17:00	DD	B
4-Bromofluorobenzene (S)	93.5		%	79 - 114		SW846 8260B			4/24/18 17:00	DD	B
Dibromofluoromethane (S)	92.5		%	78 - 116		SW846 8260B			4/24/18 17:00	DD	B
Toluene-d8 (S)	79.7		%	76 - 127		SW846 8260B			4/24/18 17:00	DD	B
WET CHEMISTRY											
Hexavalent Chromium	ND		ug/L	0.25	0.047	EPA 218.6			4/24/18 06:19	MBW	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943025** Date Collected: 4/13/2018 22:40 Matrix: Water

Sample ID: **TB-041218-1** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 17:00	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 17:00	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 17:00	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 17:00	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 17:00	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 17:00	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 17:00	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 17:00	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:00	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 17:00	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 17:00	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 17:00	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:00	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/20/18 17:00	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:00	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:00	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:00	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 17:00	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:00	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:00	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 17:00	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 17:00	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 17:00	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 17:00	DD	A
Acetone	9.2J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 17:00	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:00	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:00	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:00	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:00	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 17:00	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 17:00	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:00	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:00	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 17:00	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 17:00	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943025** Date Collected: 4/13/2018 22:40 Matrix: Water

Sample ID: **TB-041218-1** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/20/18 17:00	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:00	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 17:00	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:00	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:00	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 17:00	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 17:00	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 17:00	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 17:00	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 17:00	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 17:00	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 17:00	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 17:00	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 17:00	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:00	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 17:00	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:00	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 17:00	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:00	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 17:00	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 17:00	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:00	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:00	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 17:00	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 17:00	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 17:00	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:00	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:00	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:00	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 17:00	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 17:00	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 17:00	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943025** Date Collected: 4/13/2018 22:40 Matrix: Water

Sample ID: **TB-041218-1** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/20/18 17:00	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 17:00	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	79.6		%	62 - 133		SW846 8260B			4/20/18 17:00	DD	A
4-Bromofluorobenzene (S)	110		%	79 - 114		SW846 8260B			4/20/18 17:00	DD	A
Dibromofluoromethane (S)	85.8		%	78 - 116		SW846 8260B			4/20/18 17:00	DD	A
Toluene-d8 (S)	83.7		%	76 - 127		SW846 8260B			4/20/18 17:00	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943026** Date Collected: 4/13/2018 08:40 Matrix: Water

Sample ID: **MRC-MW101A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILE SIM											
1,4-Dioxane	1.8		ug/L	0.10	0.019	8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52.8		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A
Fluoranthene-d10 (S)	97.3		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 18:23	GEC	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943027** Date Collected: 4/13/2018 08:00 Matrix: Water

Sample ID: **MRC-MW122A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILE SIM											
1,4-Dioxane	0.27		ug/L	0.14	0.026	8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	57.2		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A
Fluoranthene-d10 (S)	112		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 18:50	GEC	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943028** Date Collected: 4/13/2018 10:22 Matrix: Water

Sample ID: **MRC-MW74B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 17:22	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 17:22	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 17:22	DD	A
1,1,2-Trichloroethane	1.2		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:22	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 17:22	DD	A
1,1-Dichloroethene	6.9		ug/L	1.0	0.29	SW846 8260B		4/20/18 17:22	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 17:22	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 17:22	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 17:22	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:22	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 17:22	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 17:22	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 17:22	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:22	DD	A
1,2-Dichloroethene, Total	846J	J	ug/L	1000	225	SW846 8260B		4/26/18 12:07	DD	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:22	DD	A
1,3-Dichlorobenzene	0.36J	J	ug/L	1.0	0.25	SW846 8260B		4/20/18 17:22	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:22	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 17:22	DD	A
1,4-Dichlorobenzene	1.0		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:22	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:22	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 17:22	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 17:22	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 17:22	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 17:22	DD	A
Acetone	3.9J	J	ug/L	10.0	3.1	SW846 8260B		4/20/18 17:22	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:22	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:22	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:22	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:22	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 17:22	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 17:22	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:22	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:22	DD	A
Chlorobenzene	4.6		ug/L	1.0	0.19	SW846 8260B		4/20/18 17:22	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 17:22	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943028** Date Collected: 4/13/2018 10:22 Matrix: Water

Sample ID: **MRC-MW74B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:22	DD	A
Chloroform	22.7		ug/L	1.0	0.21	SW846 8260B		4/20/18 17:22	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:22	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 17:22	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:22	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:22	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:22	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 17:22	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 17:22	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 17:22	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 17:22	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 17:22	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 17:22	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 17:22	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:22	DD	A
Methylene Chloride	1.7		ug/L	1.0	0.45	SW846 8260B		4/20/18 17:22	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 17:22	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:22	DD	A
Tetrachloroethene	0.39J	J	ug/L	1.0	0.35	SW846 8260B		4/20/18 17:22	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:22	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 17:22	DD	A
Trichloroethene	34300		ug/L	500	165	SW846 8260B		4/26/18 12:07	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:22	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 17:22	DD	A
Vinyl Chloride	1.4		ug/L	1.0	0.30	SW846 8260B		4/20/18 17:22	DD	A
cis-1,2-Dichloroethene	996		ug/L	100	32.0	SW846 8260B		4/23/18 17:01	DD	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:22	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 17:22	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 17:22	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:22	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 17:22	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:22	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:22	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:22	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:22	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 17:22	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 17:22	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 17:22	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943028** Date Collected: 4/13/2018 10:22 Matrix: Water

Sample ID: **MRC-MW74B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	10.4		ug/L	1.0	0.26	SW846 8260B			4/20/18 17:22	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 17:22	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	62 - 133		SW846 8260B			4/26/18 12:07	DD	B
1,2-Dichloroethane-d4 (S)	82.5		%	62 - 133		SW846 8260B			4/20/18 17:22	DD	A
1,2-Dichloroethane-d4 (S)	81.5		%	62 - 133		SW846 8260B			4/23/18 17:01	DD	B
4-Bromofluorobenzene (S)	85.7		%	79 - 114		SW846 8260B			4/23/18 17:01	DD	B
4-Bromofluorobenzene (S)	116	1	%	79 - 114		SW846 8260B			4/20/18 17:22	DD	A
4-Bromofluorobenzene (S)	93.1		%	79 - 114		SW846 8260B			4/26/18 12:07	DD	B
Dibromofluoromethane (S)	92.3		%	78 - 116		SW846 8260B			4/20/18 17:22	DD	A
Dibromofluoromethane (S)	84.9		%	78 - 116		SW846 8260B			4/23/18 17:01	DD	B
Dibromofluoromethane (S)	98.2		%	78 - 116		SW846 8260B			4/26/18 12:07	DD	B
Toluene-d8 (S)	74.9	2	%	76 - 127		SW846 8260B			4/23/18 17:01	DD	B
Toluene-d8 (S)	82.8		%	76 - 127		SW846 8260B			4/26/18 12:07	DD	B
Toluene-d8 (S)	85.1		%	76 - 127		SW846 8260B			4/20/18 17:22	DD	A
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Chromium, Total	0.0013J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Cobalt, Total	0.0092		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Lead, Total	0.00087J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:08	AXC	C3
Nickel, Total	0.012		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
Zinc, Total	0.045		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:05	MO	C2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 17:50	SUB	D

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943028** Date Collected: 4/13/2018 10:22 Matrix: Water
Sample ID: **MRC-MW74B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943029** Date Collected: 4/13/2018 11:45 Matrix: Water

Sample ID: **MRC-SEMW-7I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/20/18 17:44	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 17:44	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 17:44	DD	A
1,1,2-Trichloroethane	0.35J	J	ug/L	1.0	0.33	SW846 8260B		4/20/18 17:44	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 17:44	DD	A
1,1-Dichloroethene	1.2		ug/L	1.0	0.29	SW846 8260B		4/20/18 17:44	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/20/18 17:44	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 17:44	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/20/18 17:44	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:44	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/20/18 17:44	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/20/18 17:44	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/20/18 17:44	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:44	DD	A
1,2-Dichloroethene, Total	126		ug/L	2.0	0.45	SW846 8260B		4/20/18 17:44	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:44	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:44	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:44	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/20/18 17:44	DD	A
1,4-Dichlorobenzene	0.39J	J	ug/L	1.0	0.27	SW846 8260B		4/20/18 17:44	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:44	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/20/18 17:44	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/20/18 17:44	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/20/18 17:44	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/20/18 17:44	DD	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/20/18 17:44	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:44	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:44	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:44	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/20/18 17:44	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/20/18 17:44	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/20/18 17:44	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:44	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:44	DD	A
Chlorobenzene	2.9		ug/L	1.0	0.19	SW846 8260B		4/20/18 17:44	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 17:44	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943029** Date Collected: 4/13/2018 11:45 Matrix: Water

Sample ID: **MRC-SEMW-7I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:44	DD	A
Chloroform	5.6		ug/L	1.0	0.21	SW846 8260B		4/20/18 17:44	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:44	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/20/18 17:44	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:44	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:44	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/20/18 17:44	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/20/18 17:44	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/20/18 17:44	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 17:44	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/20/18 17:44	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/20/18 17:44	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/20/18 17:44	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/20/18 17:44	DD	A
Methyl t-Butyl Ether	2.0		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:44	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/20/18 17:44	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/20/18 17:44	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:44	DD	A
Tetrachloroethene	0.63J	J	ug/L	1.0	0.35	SW846 8260B		4/20/18 17:44	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/20/18 17:44	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/20/18 17:44	DD	A
Trichloroethene	29900		ug/L	500	165	SW846 8260B		4/26/18 12:29	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/20/18 17:44	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/20/18 17:44	DD	A
Vinyl Chloride	0.72J	J	ug/L	1.0	0.30	SW846 8260B		4/20/18 17:44	DD	A
cis-1,2-Dichloroethene	124		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:44	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:44	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/20/18 17:44	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/20/18 17:44	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:44	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/20/18 17:44	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:44	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/20/18 17:44	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/20/18 17:44	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/20/18 17:44	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/20/18 17:44	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/20/18 17:44	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/20/18 17:44	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943029** Date Collected: 4/13/2018 11:45 Matrix: Water

Sample ID: **MRC-SEMW-7I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.5		ug/L	1.0	0.26	SW846 8260B			4/20/18 17:44	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/20/18 17:44	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	82.3		%	62 - 133		SW846 8260B			4/20/18 17:44	DD	A
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			4/26/18 12:29	DD	B
4-Bromofluorobenzene (S)	92		%	79 - 114		SW846 8260B			4/26/18 12:29	DD	B
4-Bromofluorobenzene (S)	115	1	%	79 - 114		SW846 8260B			4/20/18 17:44	DD	A
Dibromofluoromethane (S)	90.6		%	78 - 116		SW846 8260B			4/20/18 17:44	DD	A
Dibromofluoromethane (S)	99.7		%	78 - 116		SW846 8260B			4/26/18 12:29	DD	B
Toluene-d8 (S)	81.8		%	76 - 127		SW846 8260B			4/26/18 12:29	DD	B
Toluene-d8 (S)	85.1		%	76 - 127		SW846 8260B			4/20/18 17:44	DD	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.15		ug/L	0.092	0.018	8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	67.9		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
Fluoranthene-d10 (S)	103		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 19:16	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 18:19	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943030** Date Collected: 4/13/2018 09:21 Matrix: Water

Sample ID: **MRC-MW74A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/23/18 18:28	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/23/18 18:28	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/23/18 18:28	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/23/18 18:28	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/23/18 18:28	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/23/18 18:28	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/23/18 18:28	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/23/18 18:28	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/23/18 18:28	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/23/18 18:28	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/23/18 18:28	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/23/18 18:28	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 18:28	DD	A
1,2-Dichloroethene, Total	2.3		ug/L	2.0	0.45	SW846 8260B		4/23/18 18:28	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/23/18 18:28	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/23/18 18:28	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/23/18 18:28	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/23/18 18:28	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/23/18 18:28	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 18:28	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/23/18 18:28	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/23/18 18:28	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/23/18 18:28	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/23/18 18:28	DD	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/23/18 18:28	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/23/18 18:28	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 18:28	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 18:28	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/23/18 18:28	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/23/18 18:28	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/23/18 18:28	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/23/18 18:28	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 18:28	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/23/18 18:28	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/23/18 18:28	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943030** Date Collected: 4/13/2018 09:21 Matrix: Water

Sample ID: **MRC-MW74A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/23/18 18:28	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 18:28	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/23/18 18:28	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 18:28	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/23/18 18:28	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/23/18 18:28	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/23/18 18:28	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/23/18 18:28	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/23/18 18:28	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/23/18 18:28	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/23/18 18:28	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/23/18 18:28	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/23/18 18:28	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/23/18 18:28	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/23/18 18:28	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/23/18 18:28	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/23/18 18:28	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/23/18 18:28	DD	A
Trichloroethene	59.1		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/23/18 18:28	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/23/18 18:28	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/23/18 18:28	DD	A
cis-1,2-Dichloroethene	2.3		ug/L	1.0	0.32	SW846 8260B		4/23/18 18:28	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 18:28	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/23/18 18:28	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/23/18 18:28	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/23/18 18:28	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/23/18 18:28	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/23/18 18:28	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/23/18 18:28	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/23/18 18:28	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/23/18 18:28	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/23/18 18:28	DD	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943030** Date Collected: 4/13/2018 09:21 Matrix: Water

Sample ID: **MRC-MW74A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/23/18 18:28	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/23/18 18:28	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84.6		%	62 - 133		SW846 8260B			4/23/18 18:28	DD	A
4-Bromofluorobenzene (S)	86.7		%	79 - 114		SW846 8260B			4/23/18 18:28	DD	A
Dibromofluoromethane (S)	87.9		%	78 - 116		SW846 8260B			4/23/18 18:28	DD	A
Toluene-d8 (S)	76.5		%	76 - 127		SW846 8260B			4/23/18 18:28	DD	A
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Chromium, Total	0.0012J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Cobalt, Total	0.0031J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:09	AXC	C3
Nickel, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
Zinc, Total	0.012		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:09	MO	C2
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/25/18 00:58	SUB	D

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943031** Date Collected: 4/13/2018 11:45 Matrix: Water

Sample ID: **MRC-MW74C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:45	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:45	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:45	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:45	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:45	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 00:45	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:45	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 00:45	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:45	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 00:45	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:45	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 00:45	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:45	CJG	B
1,2-Dichloroethene, Total	1.5J	J	ug/L	2.0	0.45	SW846 8260B		4/24/18 00:45	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:45	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:45	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:45	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 00:45	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:45	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:45	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 00:45	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 00:45	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 00:45	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 00:45	CJG	B
Acetone	3.6J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 00:45	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:45	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:45	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:45	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:45	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 00:45	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 00:45	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:45	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:45	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:45	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:45	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943031** Date Collected: 4/13/2018 11:45 Matrix: Water

Sample ID: **MRC-MW74C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 00:45	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:45	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:45	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:45	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:45	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:45	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:45	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:45	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 00:45	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:45	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 00:45	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:45	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:45	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 00:45	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:45	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:45	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:45	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 00:45	CJG	B
Trichloroethene	32.9		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:45	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 00:45	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:45	CJG	B
cis-1,2-Dichloroethene	1.5		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:45	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:45	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 00:45	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:45	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:45	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:45	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:45	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:45	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 00:45	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 00:45	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 00:45	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943031** Date Collected: 4/13/2018 11:45 Matrix: Water

Sample ID: **MRC-MW74C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 00:45	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 00:45	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	85.1		%	62 - 133		SW846 8260B			4/24/18 00:45	CJG	B
4-Bromofluorobenzene (S)	90.9		%	79 - 114		SW846 8260B			4/24/18 00:45	CJG	B
Dibromofluoromethane (S)	88.4		%	78 - 116		SW846 8260B			4/24/18 00:45	CJG	B
Toluene-d8 (S)	77.5		%	76 - 127		SW846 8260B			4/24/18 00:45	CJG	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/25/18 01:27	SUB	C

Vanessa N. Badman

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943032** Date Collected: 4/13/2018 11:30 Matrix: Water

Sample ID: **MRC-MW37C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:01	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 01:01	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:01	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:01	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 01:01	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 01:01	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:01	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 01:01	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:01	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 01:01	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:01	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 01:01	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:01	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 01:01	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:01	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:01	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:01	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 01:01	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:01	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:01	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 01:01	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 01:01	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 01:01	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 01:01	CJG	B
Acetone	7.9J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 01:01	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:01	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:01	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:01	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:01	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 01:01	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 01:01	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:01	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:01	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:01	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:01	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943032** Date Collected: 4/13/2018 11:30 Matrix: Water

Sample ID: **MRC-MW37C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 01:01	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:01	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 01:01	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:01	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:01	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:01	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:01	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 01:01	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 01:01	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 01:01	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 01:01	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 01:01	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:01	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 01:01	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:01	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:01	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:01	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 01:01	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:01	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 01:01	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 01:01	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:01	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:01	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 01:01	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:01	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 01:01	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:01	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:01	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:01	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 01:01	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 01:01	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 01:01	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943032** Date Collected: 4/13/2018 11:30 Matrix: Water

Sample ID: **MRC-MW37C** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 01:01	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 01:01	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/24/18 01:01	CJG	B
4-Bromofluorobenzene (S)	99.7		%	79 - 114		SW846 8260B			4/24/18 01:01	CJG	B
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/24/18 01:01	CJG	B
Toluene-d8 (S)	99.1		%	76 - 127		SW846 8260B			4/24/18 01:01	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.10	0.019	8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	59		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
Fluoranthene-d10 (S)	110		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 19:44	GEC	E
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/25/18 01:56	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943033** Date Collected: 4/13/2018 09:35 Matrix: Water

Sample ID: **MRC-MW72B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 04:16	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 04:16	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 04:16	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:16	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 04:16	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 04:16	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 04:16	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 04:16	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 04:16	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 04:16	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 04:16	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 04:16	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 04:16	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:16	CJG	A
1,2-Dichloroethene, Total	189		ug/L	100	22.5	SW846 8260B		4/24/18 06:20	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 04:16	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 04:16	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 04:16	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 04:16	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 04:16	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:16	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 04:16	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 04:16	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 04:16	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 04:16	CJG	A
Acetone	4.0J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 04:16	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 04:16	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:16	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:16	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 04:16	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 04:16	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 04:16	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 04:16	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:16	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 04:16	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 04:16	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943033** Date Collected: 4/13/2018 09:35 Matrix: Water

Sample ID: **MRC-MW72B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:16	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 04:16	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:16	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 04:16	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:16	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:16	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 04:16	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 04:16	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 04:16	CJG	A
Freon 113	1.2	1	ug/L	1.0	0.26	SW846 8260B		4/21/18 04:16	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 04:16	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 04:16	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 04:16	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 04:16	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:16	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 04:16	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 04:16	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 04:16	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 04:16	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 04:16	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 04:16	CJG	A
Trichloroethene	3390		ug/L	50.0	16.5	SW846 8260B		4/24/18 06:20	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 04:16	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 04:16	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 04:16	CJG	A
cis-1,2-Dichloroethene	189		ug/L	50.0	16.0	SW846 8260B		4/24/18 06:20	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:16	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 04:16	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 04:16	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:16	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 04:16	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:16	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:16	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:16	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:16	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 04:16	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 04:16	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 04:16	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943033** Date Collected: 4/13/2018 09:35 Matrix: Water
Sample ID: **MRC-MW72B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	9.8		ug/L	1.0	0.26	SW846 8260B			4/21/18 04:16	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 04:16	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.3		%	62 - 133		SW846 8260B			4/21/18 04:16	CJG	A
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/24/18 06:20	CJG	B
4-Bromofluorobenzene (S)	96.2		%	79 - 114		SW846 8260B			4/24/18 06:20	CJG	B
4-Bromofluorobenzene (S)	115	2	%	79 - 114		SW846 8260B			4/21/18 04:16	CJG	A
Dibromofluoromethane (S)	108		%	78 - 116		SW846 8260B			4/24/18 06:20	CJG	B
Dibromofluoromethane (S)	89.4		%	78 - 116		SW846 8260B			4/21/18 04:16	CJG	A
Toluene-d8 (S)	86.5		%	76 - 127		SW846 8260B			4/21/18 04:16	CJG	A
Toluene-d8 (S)	98.8		%	76 - 127		SW846 8260B			4/24/18 06:20	CJG	B
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/27/18 00:51	EGO	D
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/27/18 00:51	EGO	D
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/27/18 00:51	EGO	D
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/27/18 00:51	EGO	D
Methane	3.8		ug/L	1.5	0.34	RSK 175			4/27/18 00:51	EGO	D
Propane	ND		ug/L	3.2	0.22	RSK 175			4/27/18 00:51	EGO	D
WET CHEMISTRY											
Alkalinity, Total	8	3	mg/L	5	0.8	S2320B-97			4/18/18 15:27	MSA	F
Ammonia-N	0.686		mg/L	0.100	0.03	D6919-09			4/25/18 02:40	CMM	G
Chloride	20.4		mg/L	2.0	0.24	EPA 300.0			4/14/18 08:25	CHW	J
Nitrate-N	0.44		mg/L	0.20	0.057	EPA 300.0			4/14/18 08:25	CHW	J
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/14/18 08:25	CHW	J
Orthophosphate	ND		mg/L	0.020	0.0029	S4500PE-99			4/14/18 06:38	MSA	J
Phosphorus, Total	0.040J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 17:15	BMK	4/29/18 16:51	JWB	G
Sulfate	1.2J	J	mg/L	2.0	0.40	EPA 300.0			4/14/18 08:25	CHW	J
Total Dissolved Solids	126		mg/L	5	5	S2540C-11			4/20/18 13:00	LLJ	J
Total Organic Carbon (TOC)	0.62		mg/L	0.50	0.18	S5310B-00			4/18/18 11:43	PAG	H
METALS											
Silica	8.4		mg/L	0.24	0.080	SW846 6010C	4/21/18 17:55	AHI	4/24/18 07:54	SRT	C2
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Beryllium, Total	0.00066J	J	mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Calcium, Total	2.3		mg/L	0.11	0.036	SW846 6010C	4/21/18 17:55	AHI	4/25/18 09:28	SRT	C2

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943033** Date Collected: 4/13/2018 09:35 Matrix: Water
Sample ID: **MRC-MW72B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Chromium, Total	0.0020J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Cobalt, Total	0.0070		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Copper, Total	0.0022J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Iron, Total	0.55		mg/L	0.067	0.022	SW846 6010C	4/21/18 17:55	AHI	4/25/18 09:28	SRT	C2
Lead, Total	0.00075J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Magnesium, Total	1.1		mg/L	0.11	0.036	SW846 6010C	4/21/18 17:55	AHI	4/25/18 09:28	SRT	C2
Manganese, Total	0.063		mg/L	0.0056	0.0020	SW846 6010C	4/21/18 17:55	AHI	4/25/18 09:28	SRT	C2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:10	AXC	C5
Nickel, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Potassium, Total	1.6		mg/L	0.56	0.18	SW846 6010C	4/21/18 17:55	AHI	4/25/18 09:28	SRT	C2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Sodium, Total	9.7		mg/L	0.56	0.18	SW846 6010C	4/21/18 17:55	AHI	4/25/18 09:28	SRT	C2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4
Zinc, Total	0.080		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:13	MO	C4

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943034** Date Collected: 4/13/2018 08:45 Matrix: Water

Sample ID: **MRC-MW37B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:38	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:38	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:38	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:38	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:38	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 00:38	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:38	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 00:38	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:38	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 00:38	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:38	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 00:38	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:38	CJG	B
1,2-Dichloroethene, Total	42.9		ug/L	2.0	0.45	SW846 8260B		4/24/18 00:38	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:38	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:38	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:38	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 00:38	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:38	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:38	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 00:38	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 00:38	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 00:38	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 00:38	CJG	B
Acetone	9.4J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 00:38	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:38	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:38	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:38	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:38	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 00:38	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 00:38	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:38	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:38	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:38	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:38	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943034** Date Collected: 4/13/2018 08:45 Matrix: Water

Sample ID: **MRC-MW37B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 00:38	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:38	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:38	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:38	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:38	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:38	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:38	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:38	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 00:38	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:38	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 00:38	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:38	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:38	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 00:38	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:38	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:38	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:38	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 00:38	CJG	B
Trichloroethene	72.0		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:38	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 00:38	CJG	B
Vinyl Chloride	1.1		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:38	CJG	B
cis-1,2-Dichloroethene	42.0		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:38	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:38	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 00:38	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:38	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:38	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:38	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:38	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:38	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 00:38	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 00:38	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 00:38	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943034** Date Collected: 4/13/2018 08:45 Matrix: Water

Sample ID: **MRC-MW37B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.86J	J,2	ug/L	1.0	0.26	SW846 8260B			4/24/18 00:38	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 00:38	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112		%	62 - 133		SW846 8260B			4/24/18 00:38	CJG	B
4-Bromofluorobenzene (S)	99		%	79 - 114		SW846 8260B			4/24/18 00:38	CJG	B
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/24/18 00:38	CJG	B
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/24/18 00:38	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	0.20		ug/L	0.11	0.020	8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52.3		%	29 - 112		8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
Fluoranthene-d10 (S)	108		%	45 - 130		8270 SIM	4/19/18 08:40	CAC	4/24/18 20:11	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/27/18 01:07	EGO	E
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/27/18 01:07	EGO	E
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/27/18 01:07	EGO	E
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/27/18 01:07	EGO	E
Methane	2.4		ug/L	1.5	0.34	RSK 175			4/27/18 01:07	EGO	E
Propane	ND		ug/L	3.2	0.22	RSK 175			4/27/18 01:07	EGO	E
WET CHEMISTRY											
Alkalinity, Total	14	1	mg/L	5	0.8	S2320B-97			4/18/18 15:36	MSA	G
Ammonia-N	0.388		mg/L	0.100	0.03	D6919-09			4/25/18 02:54	CMM	H
Chloride	30.8		mg/L	2.0	0.24	EPA 300.0			4/14/18 08:39	CHW	K
Nitrate-N	0.92		mg/L	0.20	0.057	EPA 300.0			4/14/18 08:39	CHW	K
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/14/18 08:39	CHW	K
Orthophosphate	0.013J	J	mg/L	0.020	0.0029	S4500PE-99			4/14/18 06:38	MSA	K
Phosphorus, Total	0.13		mg/L	0.10	0.017	EPA 365.1	4/19/18 17:15	BMK	4/29/18 16:51	JWB	H
Sulfate	24.6		mg/L	2.0	0.40	EPA 300.0			4/14/18 08:39	CHW	K
Total Dissolved Solids	69		mg/L	5	5	S2540C-11			4/20/18 13:00	LLJ	K
Total Organic Carbon (TOC)	1.2		mg/L	0.50	0.18	S5310B-00			4/18/18 11:43	PAG	I

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943034** Date Collected: 4/13/2018 08:45 Matrix: Water
Sample ID: **MRC-MW37B** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
METALS											
Silica	2.9		mg/L	0.24	0.080	SW846 6010C	4/24/18 08:30	DXC	4/30/18 04:30	DAG	L3
Calcium, Total	8.6		mg/L	0.11	0.036	SW846 6010C	4/24/18 08:30	DXC	4/25/18 09:32	SRT	L3
Iron, Total	0.30		mg/L	0.067	0.022	SW846 6010C	4/24/18 08:30	DXC	4/25/18 09:32	SRT	L3
Magnesium, Total	4.0		mg/L	0.11	0.036	SW846 6010C	4/24/18 08:30	DXC	4/25/18 09:32	SRT	L3
Manganese, Total	0.14		mg/L	0.0056	0.0020	SW846 6010C	4/24/18 08:30	DXC	4/25/18 09:32	SRT	L3
Potassium, Total	2.7		mg/L	0.56	0.18	SW846 6010C	4/24/18 08:30	DXC	4/25/18 09:32	SRT	L3
Sodium, Total	13.0		mg/L	0.56	0.18	SW846 6010C	4/24/18 08:30	DXC	4/25/18 09:32	SRT	L3
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/25/18 02:25	SUB	M

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943035** Date Collected: 4/13/2018 12:57 Matrix: Water

Sample ID: **MRC-SEMW-8I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 04:59	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 04:59	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 04:59	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:59	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 04:59	CJG	A
1,1-Dichloroethene	3.7		ug/L	1.0	0.29	SW846 8260B		4/21/18 04:59	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 04:59	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 04:59	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 04:59	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 04:59	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 04:59	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 04:59	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 04:59	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:59	CJG	A
1,2-Dichloroethene, Total	1830		ug/L	100	22.5	SW846 8260B		4/24/18 06:43	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 04:59	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 04:59	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 04:59	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 04:59	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 04:59	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:59	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 04:59	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 04:59	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 04:59	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 04:59	CJG	A
Acetone	4.5J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 04:59	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 04:59	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:59	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:59	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 04:59	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 04:59	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 04:59	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 04:59	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:59	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 04:59	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 04:59	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943035** Date Collected: 4/13/2018 12:57 Matrix: Water

Sample ID: **MRC-SEMW-8I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:59	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/21/18 04:59	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:59	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 04:59	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:59	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:59	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 04:59	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 04:59	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 04:59	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 04:59	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 04:59	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 04:59	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 04:59	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 04:59	CJG	A
Methyl t-Butyl Ether	4.9		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:59	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 04:59	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 04:59	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 04:59	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 04:59	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 04:59	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 04:59	CJG	A
Trichloroethene	1080		ug/L	50.0	16.5	SW846 8260B		4/24/18 06:43	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 04:59	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 04:59	CJG	A
Vinyl Chloride	1.0		ug/L	1.0	0.30	SW846 8260B		4/21/18 04:59	CJG	A
cis-1,2-Dichloroethene	1830		ug/L	50.0	16.0	SW846 8260B		4/24/18 06:43	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:59	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 04:59	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 04:59	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:59	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 04:59	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:59	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 04:59	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 04:59	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 04:59	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 04:59	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 04:59	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 04:59	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943035** Date Collected: 4/13/2018 12:57 Matrix: Water
Sample ID: **MRC-SEMW-8I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	2.5		ug/L	1.0	0.26	SW846 8260B			4/21/18 04:59	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 04:59	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/24/18 06:43	CJG	B
1,2-Dichloroethane-d4 (S)	81.8		%	62 - 133		SW846 8260B			4/21/18 04:59	CJG	A
4-Bromofluorobenzene (S)	96.3		%	79 - 114		SW846 8260B			4/24/18 06:43	CJG	B
4-Bromofluorobenzene (S)	115	1	%	79 - 114		SW846 8260B			4/21/18 04:59	CJG	A
Dibromofluoromethane (S)	110		%	78 - 116		SW846 8260B			4/24/18 06:43	CJG	B
Dibromofluoromethane (S)	89.4		%	78 - 116		SW846 8260B			4/21/18 04:59	CJG	A
Toluene-d8 (S)	85.5		%	76 - 127		SW846 8260B			4/21/18 04:59	CJG	A
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/24/18 06:43	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	0.14		ug/L	0.10	0.019	8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	79.3		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
Fluoranthene-d10 (S)	114		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 18:54	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/25/18 02:54	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943036** Date Collected: 4/13/2018 13:45 Matrix: Water

Sample ID: **MRC-SEMW-9I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 05:21	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 05:21	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 05:21	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:21	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 05:21	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 05:21	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 05:21	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 05:21	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 05:21	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 05:21	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 05:21	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 05:21	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 05:21	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:21	CJG	A
1,2-Dichloroethene, Total	12.1		ug/L	2.0	0.45	SW846 8260B		4/21/18 05:21	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 05:21	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 05:21	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 05:21	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 05:21	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 05:21	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:21	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 05:21	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 05:21	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 05:21	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 05:21	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/21/18 05:21	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 05:21	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:21	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:21	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 05:21	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 05:21	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 05:21	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 05:21	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:21	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 05:21	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 05:21	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943036** Date Collected: 4/13/2018 13:45 Matrix: Water

Sample ID: **MRC-SEMW-9I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:21	CJG	A
Chloroform	0.66J	J	ug/L	1.0	0.21	SW846 8260B		4/21/18 05:21	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:21	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 05:21	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:21	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:21	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 05:21	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 05:21	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 05:21	CJG	A
Freon 113	0.86J	J,1	ug/L	1.0	0.26	SW846 8260B		4/21/18 05:21	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 05:21	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 05:21	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 05:21	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 05:21	CJG	A
Methyl t-Butyl Ether	7.4		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:21	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 05:21	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 05:21	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 05:21	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 05:21	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 05:21	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 05:21	CJG	A
Trichloroethene	236		ug/L	5.0	1.7	SW846 8260B		4/24/18 05:58	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 05:21	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 05:21	CJG	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 05:21	CJG	A
cis-1,2-Dichloroethene	11.5		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:21	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:21	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 05:21	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 05:21	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:21	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 05:21	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:21	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:21	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:21	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:21	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 05:21	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 05:21	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 05:21	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943036** Date Collected: 4/13/2018 13:45 Matrix: Water

Sample ID: **MRC-SEMW-9I** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.64J	J	ug/L	1.0	0.26	SW846 8260B			4/21/18 05:21	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 05:21	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	82.6		%	62 - 133		SW846 8260B			4/21/18 05:21	CJG	A
1,2-Dichloroethane-d4 (S)	116		%	62 - 133		SW846 8260B			4/24/18 05:58	CJG	B
4-Bromofluorobenzene (S)	112		%	79 - 114		SW846 8260B			4/21/18 05:21	CJG	A
4-Bromofluorobenzene (S)	98.5		%	79 - 114		SW846 8260B			4/24/18 05:58	CJG	B
Dibromofluoromethane (S)	113		%	78 - 116		SW846 8260B			4/24/18 05:58	CJG	B
Dibromofluoromethane (S)	89.5		%	78 - 116		SW846 8260B			4/21/18 05:21	CJG	A
Toluene-d8 (S)	84.9		%	76 - 127		SW846 8260B			4/21/18 05:21	CJG	A
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/24/18 05:58	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	0.17		ug/L	0.10	0.019	8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	64.5		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
Fluoranthene-d10 (S)	139	2	%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 19:48	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 18:48	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943037** Date Collected: 4/13/2018 14:00 Matrix: Water

Sample ID: **MRC-SEMW-9S** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/21/18 05:43	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 05:43	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 05:43	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:43	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 05:43	CJG	A
1,1-Dichloroethene	2.2		ug/L	1.0	0.29	SW846 8260B		4/21/18 05:43	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/21/18 05:43	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 05:43	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/21/18 05:43	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 05:43	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/21/18 05:43	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/21/18 05:43	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/21/18 05:43	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:43	CJG	A
1,2-Dichloroethene, Total	190		ug/L	2.0	0.45	SW846 8260B		4/21/18 05:43	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 05:43	CJG	A
1,3-Dichlorobenzene	0.25J	J	ug/L	1.0	0.25	SW846 8260B		4/21/18 05:43	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 05:43	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/21/18 05:43	CJG	A
1,4-Dichlorobenzene	0.56J	J	ug/L	1.0	0.27	SW846 8260B		4/21/18 05:43	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:43	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/21/18 05:43	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/21/18 05:43	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/21/18 05:43	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/21/18 05:43	CJG	A
Acetone	3.2J	J	ug/L	10.0	3.1	SW846 8260B		4/21/18 05:43	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 05:43	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:43	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:43	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/21/18 05:43	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/21/18 05:43	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/21/18 05:43	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 05:43	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:43	CJG	A
Chlorobenzene	5.9		ug/L	1.0	0.19	SW846 8260B		4/21/18 05:43	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/21/18 05:43	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943037** Date Collected: 4/13/2018 14:00 Matrix: Water

Sample ID: **MRC-SEMW-9S** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:43	CJG	A
Chloroform	16.7		ug/L	1.0	0.21	SW846 8260B		4/21/18 05:43	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:43	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/21/18 05:43	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:43	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:43	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/21/18 05:43	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/21/18 05:43	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/21/18 05:43	CJG	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 05:43	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/21/18 05:43	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/21/18 05:43	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/21/18 05:43	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/21/18 05:43	CJG	A
Methyl t-Butyl Ether	1.2		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:43	CJG	A
Methylene Chloride	1.5		ug/L	1.0	0.45	SW846 8260B		4/21/18 05:43	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/21/18 05:43	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 05:43	CJG	A
Tetrachloroethene	0.43J	J	ug/L	1.0	0.35	SW846 8260B		4/21/18 05:43	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/21/18 05:43	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/21/18 05:43	CJG	A
Trichloroethene	32800		ug/L	500	165	SW846 8260B		4/25/18 04:57	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/21/18 05:43	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/21/18 05:43	CJG	A
Vinyl Chloride	1.3		ug/L	1.0	0.30	SW846 8260B		4/21/18 05:43	CJG	A
cis-1,2-Dichloroethene	187		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:43	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:43	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/21/18 05:43	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/21/18 05:43	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:43	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/21/18 05:43	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:43	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/21/18 05:43	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/21/18 05:43	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/21/18 05:43	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/21/18 05:43	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/21/18 05:43	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/21/18 05:43	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943037** Date Collected: 4/13/2018 14:00 Matrix: Water

Sample ID: **MRC-SEMW-9S** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	2.5		ug/L	1.0	0.26	SW846 8260B			4/21/18 05:43	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/21/18 05:43	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.4		%	62 - 133		SW846 8260B			4/21/18 05:43	CJG	A
1,2-Dichloroethane-d4 (S)	117		%	62 - 133		SW846 8260B			4/25/18 04:57	CJG	B
4-Bromofluorobenzene (S)	92.7		%	79 - 114		SW846 8260B			4/25/18 04:57	CJG	B
4-Bromofluorobenzene (S)	116	1	%	79 - 114		SW846 8260B			4/21/18 05:43	CJG	A
Dibromofluoromethane (S)	90.4		%	78 - 116		SW846 8260B			4/21/18 05:43	CJG	A
Dibromofluoromethane (S)	99.6		%	78 - 116		SW846 8260B			4/25/18 04:57	CJG	B
Toluene-d8 (S)	96.4		%	76 - 127		SW846 8260B			4/25/18 04:57	CJG	B
Toluene-d8 (S)	84.3		%	76 - 127		SW846 8260B			4/21/18 05:43	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.11		ug/L	0.096	0.018	8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	81.4		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
Fluoranthene-d10 (S)	135	2	%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 20:42	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 19:17	SUB	E

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943038** Date Collected: 4/13/2018 13:49 Matrix: Water

Sample ID: **MRC-MW37A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:23	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 01:23	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:23	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:23	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:23	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 01:23	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 01:23	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:23	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 01:23	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:23	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 01:23	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:23	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 01:23	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:23	CJG	A
1,2-Dichloroethene, Total	18.3		ug/L	2.0	0.45	SW846 8260B		4/24/18 01:23	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:23	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:23	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:23	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 01:23	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:23	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:23	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 01:23	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 01:23	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 01:23	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 01:23	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/24/18 01:23	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:23	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:23	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:23	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:23	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 01:23	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 01:23	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:23	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:23	CJG	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:23	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:23	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943038** Date Collected: 4/13/2018 13:49 Matrix: Water

Sample ID: **MRC-MW37A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:23	CJG	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 01:23	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:23	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 01:23	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:23	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:23	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:23	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:23	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:23	CJG	A
Freon 113	2.0	1	ug/L	1.0	0.26	SW846 8260B		4/24/18 01:23	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 01:23	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 01:23	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 01:23	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 01:23	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:23	CJG	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:23	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 01:23	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:23	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:23	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:23	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 01:23	CJG	A
Trichloroethene	423		ug/L	10.0	3.3	SW846 8260B		4/25/18 04:12	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:23	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 01:23	CJG	A
Vinyl Chloride	0.73J	J	ug/L	1.0	0.30	SW846 8260B		4/24/18 01:23	CJG	A
cis-1,2-Dichloroethene	18.0		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:23	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:23	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 01:23	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:23	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:23	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 01:23	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:23	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:23	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:23	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:23	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 01:23	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 01:23	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 01:23	CJG	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943038** Date Collected: 4/13/2018 13:49 Matrix: Water

Sample ID: **MRC-MW37A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.27J	J,2	ug/L	1.0	0.26	SW846 8260B			4/24/18 01:23	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 01:23	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	118		%	62 - 133		SW846 8260B			4/25/18 04:12	CJG	B
1,2-Dichloroethane-d4 (S)	113		%	62 - 133		SW846 8260B			4/24/18 01:23	CJG	A
4-Bromofluorobenzene (S)	98.4		%	79 - 114		SW846 8260B			4/24/18 01:23	CJG	A
4-Bromofluorobenzene (S)	91.7		%	79 - 114		SW846 8260B			4/25/18 04:12	CJG	B
Dibromofluoromethane (S)	111		%	78 - 116		SW846 8260B			4/24/18 01:23	CJG	A
Dibromofluoromethane (S)	96.4		%	78 - 116		SW846 8260B			4/25/18 04:12	CJG	B
Toluene-d8 (S)	101		%	76 - 127		SW846 8260B			4/24/18 01:23	CJG	A
Toluene-d8 (S)	94.3		%	76 - 127		SW846 8260B			4/25/18 04:12	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.10	0.020	8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	74.5		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
Fluoranthene-d10 (S)	127		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 21:09	GEC	C
LIGHT HYDROCARBON GASES											
n-Butane	ND		ug/L	4.3	0.35	RSK 175			4/27/18 01:22	EGO	H
Ethane	ND		ug/L	3.3	0.23	RSK 175			4/27/18 01:22	EGO	H
Ethene	ND		ug/L	2.4	0.40	RSK 175			4/27/18 01:22	EGO	H
Isobutane	ND		ug/L	4.6	0.31	RSK 175			4/27/18 01:22	EGO	H
Methane	0.78J	J	ug/L	1.5	0.34	RSK 175			4/27/18 01:22	EGO	H
Propane	ND		ug/L	3.2	0.22	RSK 175			4/27/18 01:22	EGO	H
WET CHEMISTRY											
Alkalinity, Total	92	3	mg/L	5	0.8	S2320B-97			4/18/18 15:45	MSA	J
Ammonia-N	0.289		mg/L	0.100	0.03	D6919-09			4/25/18 03:07	CMM	K
Chloride	10.9		mg/L	2.0	0.24	EPA 300.0			4/14/18 08:52	CHW	N
Nitrate-N	2.6		mg/L	0.20	0.057	EPA 300.0			4/14/18 08:52	CHW	N
Nitrite-N	ND		mg/L	0.20	0.040	EPA 300.0			4/14/18 08:52	CHW	N
Orthophosphate	0.0030J	J	mg/L	0.020	0.0029	S4500PE-99			4/14/18 06:38	MSA	N
Phosphorus, Total	0.039J	J	mg/L	0.10	0.017	EPA 365.1	4/19/18 17:15	BMK	4/29/18 16:51	JWB	K

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943038** Date Collected: 4/13/2018 13:49 Matrix: Water

Sample ID: **MRC-MW37A** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	291		mg/L	5.0	1.0	EPA 300.0			4/18/18 12:54	CHW	N
Total Dissolved Solids	503		mg/L	5	5	S2540C-11			4/20/18 13:00	LLJ	N
Total Organic Carbon (TOC)	4.0		mg/L	0.50	0.18	S5310B-00			4/18/18 11:43	PAG	L
METALS											
Silica	10.5		mg/L	0.24	0.080	SW846 6010C	4/18/18 09:30	DXC	4/24/18 07:56	SRT	G1
Antimony, Total	0.0016J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Arsenic, Total	0.0018J	J	mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Beryllium, Total	0.00041J	J	mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Calcium, Total	104		mg/L	0.11	0.036	SW846 6010C	4/18/18 09:30	DXC	4/25/18 09:35	SRT	G1
Chromium, Total	0.0068		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Cobalt, Total	0.0029J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Copper, Total	0.0032J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Iron, Total	3.4		mg/L	0.067	0.022	SW846 6010C	4/18/18 09:30	DXC	4/25/18 09:35	SRT	G1
Lead, Total	0.0031		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Magnesium, Total	22.3		mg/L	0.11	0.036	SW846 6010C	4/18/18 09:30	DXC	4/25/18 09:35	SRT	G1
Manganese, Total	0.025		mg/L	0.0056	0.0020	SW846 6010C	4/18/18 09:30	DXC	4/25/18 09:35	SRT	G1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:11	AXC	G4
Nickel, Total	0.0040J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Potassium, Total	7.7		mg/L	0.56	0.18	SW846 6010C	4/18/18 09:30	DXC	4/25/18 09:35	SRT	G1
Selenium, Total	0.0022J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Sodium, Total	11.4		mg/L	0.56	0.18	SW846 6010C	4/18/18 09:30	DXC	4/25/18 09:35	SRT	G1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
Zinc, Total	0.042		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:36	MO	G3
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 19:46	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943039** Date Collected: 4/13/2018 13:40 Matrix: Water

Sample ID: **MRC-SEMW-8S** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:46	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 01:46	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:46	CJG	A
1,1,2-Trichloroethane	0.67J	J	ug/L	1.0	0.33	SW846 8260B		4/24/18 01:46	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:46	CJG	A
1,1-Dichloroethene	2.2	1	ug/L	1.0	0.29	SW846 8260B		4/24/18 01:46	CJG	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 01:46	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:46	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 01:46	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:46	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 01:46	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 01:46	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 01:46	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:46	CJG	A
1,2-Dichloroethene, Total	187		ug/L	2.0	0.45	SW846 8260B		4/24/18 01:46	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:46	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:46	CJG	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:46	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 01:46	CJG	A
1,4-Dichlorobenzene	0.36J	J	ug/L	1.0	0.27	SW846 8260B		4/24/18 01:46	CJG	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:46	CJG	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 01:46	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 01:46	CJG	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 01:46	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 01:46	CJG	A
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/24/18 01:46	CJG	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:46	CJG	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:46	CJG	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:46	CJG	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 01:46	CJG	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 01:46	CJG	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 01:46	CJG	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:46	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:46	CJG	A
Chlorobenzene	2.9		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:46	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:46	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943039** Date Collected: 4/13/2018 13:40 Matrix: Water

Sample ID: **MRC-SEMW-8S** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:46	CJG	A
Chloroform	15.2		ug/L	1.0	0.21	SW846 8260B		4/24/18 01:46	CJG	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:46	CJG	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 01:46	CJG	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:46	CJG	A
Dichlorodifluoromethane	0.51J	J	ug/L	1.0	0.33	SW846 8260B		4/24/18 01:46	CJG	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 01:46	CJG	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 01:46	CJG	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 01:46	CJG	A
Freon 113	132	2	ug/L	1.0	0.26	SW846 8260B		4/24/18 01:46	CJG	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 01:46	CJG	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 01:46	CJG	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 01:46	CJG	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 01:46	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:46	CJG	A
Methylene Chloride	5.3		ug/L	1.0	0.45	SW846 8260B		4/24/18 01:46	CJG	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 01:46	CJG	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:46	CJG	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 01:46	CJG	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 01:46	CJG	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 01:46	CJG	A
Trichloroethene	24500		ug/L	500	165	SW846 8260B		4/25/18 05:20	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 01:46	CJG	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 01:46	CJG	A
Vinyl Chloride	1.4		ug/L	1.0	0.30	SW846 8260B		4/24/18 01:46	CJG	A
cis-1,2-Dichloroethene	185		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:46	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:46	CJG	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 01:46	CJG	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 01:46	CJG	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:46	CJG	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 01:46	CJG	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:46	CJG	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 01:46	CJG	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 01:46	CJG	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 01:46	CJG	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 01:46	CJG	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 01:46	CJG	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 01:46	CJG	A

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943039** Date Collected: 4/13/2018 13:40 Matrix: Water

Sample ID: **MRC-SEMW-8S** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	1.1	3	ug/L	1.0	0.26	SW846 8260B			4/24/18 01:46	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 01:46	CJG	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	113		%	62 - 133		SW846 8260B			4/24/18 01:46	CJG	A
1,2-Dichloroethane-d4 (S)	119		%	62 - 133		SW846 8260B			4/25/18 05:20	CJG	B
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			4/24/18 01:46	CJG	A
4-Bromofluorobenzene (S)	92.1		%	79 - 114		SW846 8260B			4/25/18 05:20	CJG	B
Dibromofluoromethane (S)	109		%	78 - 116		SW846 8260B			4/24/18 01:46	CJG	A
Dibromofluoromethane (S)	97.2		%	78 - 116		SW846 8260B			4/25/18 05:20	CJG	B
Toluene-d8 (S)	95.7		%	76 - 127		SW846 8260B			4/25/18 05:20	CJG	B
Toluene-d8 (S)	103		%	76 - 127		SW846 8260B			4/24/18 01:46	CJG	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.28		ug/L	0.10	0.019	8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	94		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
Fluoranthene-d10 (S)	136	4	%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 21:37	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 20:15	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943040** Date Collected: 4/13/2018 14:50 Matrix: Water

Sample ID: **EB-041318-AD** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:23	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:23	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:23	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:23	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:23	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 00:23	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:23	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 00:23	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:23	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 00:23	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 00:23	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 00:23	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:23	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 00:23	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:23	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:23	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:23	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 00:23	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:23	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:23	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 00:23	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 00:23	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 00:23	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 00:23	CJG	B
Acetone	11.4		ug/L	10.0	3.1	SW846 8260B		4/24/18 00:23	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:23	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:23	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:23	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 00:23	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 00:23	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 00:23	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:23	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:23	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:23	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:23	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943040** Date Collected: 4/13/2018 14:50 Matrix: Water

Sample ID: **EB-041318-AD** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 00:23	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:23	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 00:23	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:23	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 00:23	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 00:23	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 00:23	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:23	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 00:23	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 00:23	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 00:23	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:23	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 00:23	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 00:23	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:23	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 00:23	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 00:23	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 00:23	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 00:23	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 00:23	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 00:23	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:23	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:23	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 00:23	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 00:23	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 00:23	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 00:23	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 00:23	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 00:23	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 00:23	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 00:23	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 00:23	CJG	B

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943040** Date Collected: 4/13/2018 14:50 Matrix: Water

Sample ID: **EB-041318-AD** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 00:23	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 00:23	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	85.4		%	62 - 133		SW846 8260B			4/24/18 00:23	CJG	B
4-Bromofluorobenzene (S)	90.5		%	79 - 114		SW846 8260B			4/24/18 00:23	CJG	B
Dibromofluoromethane (S)	86.4		%	78 - 116		SW846 8260B			4/24/18 00:23	CJG	B
Toluene-d8 (S)	77.5		%	76 - 127		SW846 8260B			4/24/18 00:23	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	85		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
Fluoranthene-d10 (S)	121		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 22:03	GEC	C
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Arsenic, Total	ND		mg/L	0.0033	0.0011	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Chromium, Total	0.0015J	J	mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Cobalt, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Copper, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:13	AXC	E3
Nickel, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2
Zinc, Total	0.0033J	J	mg/L	0.0056	0.0019	SW846 6020A	4/24/18 02:00	LXC	4/24/18 11:40	MO	E2

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ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

Lab ID: **2308943040** Date Collected: 4/13/2018 14:50 Matrix: Water

Sample ID: **EB-041318-AD** Date Received: 4/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2308943004	1	MRC-MW124A	SW846 8260B	Methyl cyclohexane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 135 and the control limits were 70 to 130.				
2308943004	2	MRC-MW124A	SW846 8260B	Methyl cyclohexane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 137 and the control limits were 70 to 130.				
2308943004	3	MRC-MW124A	SW846 8260B	1,1-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.				
2308943004	4	MRC-MW124A	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 133 and the control limits were 50 to 130.				
2308943004	5	MRC-MW124A	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 137 and the control limits were 50 to 130.				
2308943004	6	MRC-MW124A	SW846 8260B	cis-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 133 and the control limits were 78 to 125.				
2308943004	7	MRC-MW124A	SW846 8260B	cis-1,2-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2308943004	8	MRC-MW124A	SW846 8260B	Cyclohexane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 136 and the control limits were 66 to 130.				
2308943004	9	MRC-MW124A	SW846 8260B	Cyclohexane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 139 and the control limits were 66 to 130.				
2308943004	10	MRC-MW124A	SW846 8260B	2-Chloroethylvinyl ether
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .36 and the control limits were 1 to 150.				
2308943004	11	MRC-MW124A	SW846 8260B	2-Chloroethylvinyl ether
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .28 and the control limits were 1 to 150.				
2308943004	12	MRC-MW124A	SW846 8260B	Toluene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Toluene. The % Recovery was reported as 127 and the control limits were 80 to 125.				
2308943004	13	MRC-MW124A	SW846 8260B	Isopropylbenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Isopropylbenzene. The % Recovery was reported as 131 and the control limits were 73 to 129.				
2308943004	14	MRC-MW124A	SW846 8260B	1,2-Dichlorobenzene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichlorobenzene. The % Recovery was reported as 125 and the control limits were 82 to 118.				

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

2308943004	15	MRC-MW124A	SW846 8260B	1,2-Dichlorobenzene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,2-Dichlorobenzene. The % Recovery was reported as 142 and the control limits were 82 to 118.

2308943004	16	MRC-MW124A	SW846 8260B	Naphthalene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 206 and the control limits were 56 to 134.

2308943004	17	MRC-MW124A	SW846 8260B	Naphthalene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 228 and the control limits were 56 to 134.

2308943004	36	MRC-MW124A	SW846 8260B	1,3-Dichlorobenzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,3-Dichlorobenzene. The % Recovery was reported as 119 and the control limits were 81 to 118.

2308943004	37	MRC-MW124A	SW846 8260B	1,3-Dichlorobenzene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,3-Dichlorobenzene. The % Recovery was reported as 119 and the control limits were 81 to 118.

2308943004	39	MRC-MW124A	SW846 8260B	1,2,3-Trichlorobenzene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 128 and the control limits were 61 to 126.

2308943011	1	MRC-MW96A	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 115 and the control limits were 79 to 114. This result was reported at a dilution of 100.

2308943013	1	MRC-MW98B	SW846 8260B	Freon 113

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 144 and the control limits were 50 to 130.

2308943013	2	MRC-MW98B	SW846 8260B	Freon 113

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 151 and the control limits were 50 to 130.

2308943013	3	MRC-MW98B	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 133 and the control limits were 66 to 130.

2308943013	4	MRC-MW98B	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 136 and the control limits were 66 to 130.

2308943013	5	MRC-MW98B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .64 and the control limits were 1 to 150.

2308943013	6	MRC-MW98B	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The RPD was reported as 74.8 and the upper control limit is 40.

2308943013	7	MRC-MW98B	SW846 8260B	Isopropylbenzene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Isopropylbenzene. The % Recovery was reported as 133 and the control limits were 73 to 129.

2308943013	8	MRC-MW98B	SW846 8260B	Methyl cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 154 and the control limits were 70 to 130.

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

2308943013	9	MRC-MW98B	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 158 and the control limits were 70 to 130.

2308943013	14	MRC-MW98B	SW846 8260B	Trichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 71.5 and the control limits were 77 to 124.

2308943013	15	MRC-MW98B	SW846 8260B	Trichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 62.4 and the control limits were 77 to 124.

2308943014	1	MRC-MW98A	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 141 and the control limits were 63 to 128.

2308943020	19	MRC-SWMW-3I	SW846 8260B	Bromomethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromomethane. The RPD was reported as 38.3 and the upper control limit is 26.

2308943020	20	MRC-SWMW-3I	SW846 8260B	Chloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Chloroethane. The RPD was reported as 32.1 and the upper control limit is 24.

2308943020	21	MRC-SWMW-3I	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .63 and the control limits were 1 to 150.

2308943020	22	MRC-SWMW-3I	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .43 and the control limits were 1 to 150.

2308943028	1	MRC-MW74B	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 116 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2308943028	2	MRC-MW74B	SW846 8260B	Toluene-d8

The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 74.9 and the control limits were 76 to 127. This result was reported at a dilution of 100.

2308943029	1	MRC-SEMW-7I	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 115 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2308943033	1	MRC-MW72B	SW846 8260B	Freon 113

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 131 and the control limits were 50 to 130.

2308943033	2	MRC-MW72B	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 115 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2308943033	3	MRC-MW72B	S2320B-97	Alkalinity, Total

The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.

2308943034	1	MRC-MW37B	S2320B-97	Alkalinity, Total

The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.

2308943034	2	MRC-MW37B	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 128 and the control limits were 71 to 122.

ANALYTICAL RESULTS

Workorder: 2308943 LMC MRC 4/12/18

2308943035	1	MRC-SEMW-8I	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 115 and the control limits were 79 to 114. This result was reported at a dilution of 1.				
2308943036	1	MRC-SEMW-9I	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 131 and the control limits were 50 to 130.				
2308943036	2	MRC-SEMW-9I	8270 SIM	Fluoranthene-d10
The surrogate Fluoranthene-d10 for method 8270 SIM was outside of control limits. The % Recovery was reported as 139 and the control limits were 45 to 130. This result was reported at a dilution of 1.				
2308943037	1	MRC-SEMW-9S	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 116 and the control limits were 79 to 114. This result was reported at a dilution of 1.				
2308943037	2	MRC-SEMW-9S	8270 SIM	Fluoranthene-d10
The surrogate Fluoranthene-d10 for method 8270 SIM was outside of control limits. The % Recovery was reported as 135 and the control limits were 45 to 130. This result was reported at a dilution of 1.				
2308943038	1	MRC-MW37A	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 169 and the control limits were 50 to 130.				
2308943038	2	MRC-MW37A	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 128 and the control limits were 71 to 122.				
2308943038	3	MRC-MW37A	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2308943039	1	MRC-SEMW-8S	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 141 and the control limits were 63 to 128.				
2308943039	2	MRC-SEMW-8S	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 169 and the control limits were 50 to 130.				
2308943039	3	MRC-SEMW-8S	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 128 and the control limits were 71 to 122.				
2308943039	4	MRC-SEMW-8S	8270 SIM	Fluoranthene-d10
The surrogate Fluoranthene-d10 for method 8270 SIM was outside of control limits. The % Recovery was reported as 136 and the control limits were 45 to 130. This result was reported at a dilution of 1.				

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: EXTR/51819 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308943001, 2308943004, 2308943008, 2308943011, 2308943012, 2308943013, 2308943014, 2308943015, 2308943016, 2308943023, 2308943026, 2308943027, 2308943029, 2308943032, 2308943034

METHOD BLANK: 2725743

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	0.021J	ug/L	0.10
2-Methylnapthalene-d10 (S)	66.1	%	29 - 112
Fluoranthene-d10 (S)	109	%	45 - 130

LABORATORY CONTROL SAMPLE: 2725744

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	52.1	ug/L	1	0.52	22 - 75
2-Methylnapthalene-d10 (S)	74.2	%			29 - 112
Fluoranthene-d10 (S)	96.7	%			45 - 130

MATRIX SPIKE: 2725745 DUPLICATE: 2725746 ORIGINAL: 2308629006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	.50424	ug/L	1	.9301	.96633	42.4	47.1	22 - 75	3.82	
2-Methylnapthalene-d10 (S)	58.1	%				58.1	60.2	29 - 112		
Fluoranthene-d10 (S)	99.4	%				99.4	84.7	45 - 130		

MATRIX SPIKE: 2725747 DUPLICATE: 2725748 ORIGINAL: 2308943013

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	118.198	ug/L	.99	60.2628	64.29	NC	NC	22 - 75	6.47	
2-Methylnapthalene-d10 (S)	78.5	%				78.5	80.4	29 - 112		
Fluoranthene-d10 (S)	95.6	%				95.6	97.1	45 - 130		

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

MATRIX SPIKE: 2725749 DUPLICATE: 2725750 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	.25549	ug/L	1	.68546	.67613	41.3	40.4	22 - 75	1.37	
2-Methylnapthalene-d10 (S)	71.5	%				71.5	70.7	29 - 112		
Fluoranthene-d10 (S)	92.6	%				92.6	92.3	45 - 130		

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: EXTR/51837 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2308943035, 2308943036, 2308943037, 2308943038, 2308943039, 2308943040

METHOD BLANK: 2726699

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	82.6	%	29 - 112
Fluoranthene-d10 (S)	123	%	45 - 130

LABORATORY CONTROL SAMPLE: 2726700

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	57.3	ug/L	1	0.57	22 - 75
2-Methylnapthalene-d10 (S)	96	%			29 - 112
Fluoranthene-d10 (S)	127	%			45 - 130

MATRIX SPIKE SAMPLE: 2726701 ORIGINAL: 2308943035

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.13783	ug/L	1	.59422	44.7	22 - 75
2-Methylnapthalene-d10 (S)	78.6	%				29 - 112
Fluoranthene-d10 (S)	113	%				45 - 130

SAMPLE DUPLICATE: 2726702 ORIGINAL: 2308943036

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	.17347	ug/L	.15205	13.2	

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: MDIG/71244 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2308943038

METHOD BLANK: 2724660

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	ND	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2724661

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	101	mg/L	1.1	1.1	80 - 120
Iron, Total	99.9	mg/L	1.1	1.1	80 - 120
Magnesium, Total	101	mg/L	1.1	1.1	80 - 120
Manganese, Total	100	mg/L	.11	0.11	80 - 120
Potassium, Total	98.1	mg/L	22.2	21.8	80 - 120
Sodium, Total	98.4	mg/L	22.2	21.9	80 - 120

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: MDIG/71315 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2308943033

METHOD BLANK: 2727205

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	ND	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2727206

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	101	mg/L	1.1	1.1	80 - 120
Iron, Total	102	mg/L	1.1	1.1	80 - 120
Magnesium, Total	101	mg/L	1.1	1.1	80 - 120
Manganese, Total	99.1	mg/L	.11	0.11	80 - 120
Potassium, Total	99.2	mg/L	22.2	22.0	80 - 120
Sodium, Total	101	mg/L	22.2	22.4	80 - 120

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: MDIG/71333 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2308943001, 2308943002, 2308943003, 2308943004, 2308943016, 2308943028, 2308943030, 2308943033, 2308943038, 2308943040

METHOD BLANK: 2727978

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	ND	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2727979

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	103	mg/L	.22	0.23	80 - 120
Arsenic, Total	93.9	mg/L	.22	0.21	80 - 120
Beryllium, Total	90.3	mg/L	.22	0.20	80 - 120
Cadmium, Total	97.7	mg/L	.22	0.22	80 - 120
Chromium, Total	103	mg/L	.22	0.23	80 - 120
Cobalt, Total	101	mg/L	.22	0.22	80 - 120
Copper, Total	99.7	mg/L	.22	0.22	80 - 120
Lead, Total	102	mg/L	.22	0.23	80 - 120
Nickel, Total	100	mg/L	.22	0.22	80 - 120
Selenium, Total	88.1	mg/L	.22	0.20	80 - 120
Silver, Total	98.5	mg/L	.11	0.11	80 - 120
Thallium, Total	104	mg/L	.22	0.23	80 - 120
Zinc, Total	90.2	mg/L	.22	0.20	80 - 120

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

MATRIX SPIKE: 2727980 DUPLICATE: 2727981 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Antimony, Total	.00022	mg/L	.22	.20514	.21236	92.2	95.5	75 - 125	3.46	20
Arsenic, Total	.0023	mg/L	.22	.19366	.19959	86.1	88.8	75 - 125	3.01	20
Beryllium, Total	.00286	mg/L	.22	.19479	.20276	86.4	90	75 - 125	4.01	20
Cadmium, Total	0	mg/L	.22	.19362	.20259	87.1	91.2	75 - 125	4.53	20
Chromium, Total	.0007	mg/L	.22	.20093	.20995	90.1	94.2	75 - 125	4.39	20
Cobalt, Total	.03103	mg/L	.22	.22694	.23551	88.2	92	75 - 125	3.71	20
Copper, Total	.00084	mg/L	.22	.19737	.20416	88.4	91.5	75 - 125	3.39	20
Lead, Total	.00003	mg/L	.22	.20932	.21736	94.2	97.8	75 - 125	3.77	20
Nickel, Total	.05209	mg/L	.22	.24737	.2548	87.9	91.2	75 - 125	2.96	20
Selenium, Total	.00011	mg/L	.22	.17837	.18777	80.2	84.4	75 - 125	5.14	20
Silver, Total	0	mg/L	.11	.09626	.09953	86.6	89.6	75 - 125	3.35	20
Thallium, Total	0	mg/L	.22	.20915	.21602	94.1	97.2	75 - 125	3.23	20
Zinc, Total	.05909	mg/L	.22	.23601	.24647	79.6	84.3	75 - 125	4.34	20

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: MDIG/71343 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2308943034

METHOD BLANK: 2728307

Parameter	Blank Result	Units	Reporting Limit
Calcium, Total	0.040J	mg/L	0.11
Iron, Total	ND	mg/L	0.067
Magnesium, Total	ND	mg/L	0.11
Manganese, Total	ND	mg/L	0.0056
Potassium, Total	ND	mg/L	0.56
Sodium, Total	ND	mg/L	0.56

LABORATORY CONTROL SAMPLE: 2728308

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Calcium, Total	101	mg/L	1.1	1.1	80 - 120
Iron, Total	98.8	mg/L	1.1	1.1	80 - 120
Magnesium, Total	101	mg/L	1.1	1.1	80 - 120
Manganese, Total	101	mg/L	.11	0.11	80 - 120
Potassium, Total	99.3	mg/L	22.2	22.1	80 - 120
Sodium, Total	98.9	mg/L	22.2	22.0	80 - 120

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: MDIG/71348 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2308943001, 2308943002, 2308943003, 2308943004, 2308943016, 2308943028, 2308943030, 2308943033, 2308943038, 2308943040

METHOD BLANK: 2728349

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2728350

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	97.5	mg/L	.002	0.0020	85 - 115

MATRIX SPIKE: 2728351 DUPLICATE: 2728352 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00478	.00479	95.6	95.8	70 - 130	.21	20

MATRIX SPIKE: 2728353 DUPLICATE: 2728354 ORIGINAL: 2308943040

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00492	.00496	98.4	99.2	70 - 130	.81	20

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: SVGC/48972 **Analysis Method:** RSK 175

QC Batch Method: RSK 175

Associated Lab Samples: 2308943033, 2308943034, 2308943038

METHOD BLANK: 2729840

Parameter	Blank Result	Units	Reporting Limit
n-Butane	ND	ug/L	4.3
Ethane	ND	ug/L	3.3
Ethene	ND	ug/L	2.4
Isobutane	ND	ug/L	4.6
Methane	ND	ug/L	1.5
Propane	ND	ug/L	3.2

SAMPLE DUPLICATE: 2730644 ORIGINAL: 2309419001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	.5	ug/L	.42	17.4	20
Propane	0	ug/L	0	NC	30

SAMPLE DUPLICATE: 2730645 ORIGINAL: 2309420001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
n-Butane	0	ug/L	0	NC	40
Ethane	0	ug/L	0	NC	20
Isobutane	0	ug/L	0	NC	40
Methane	2.68	ug/L	2.43	9.78	20
Propane	0	ug/L	0	NC	30

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46582 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943001, 2308943003, 2308943004, 2308943005, 2308943006, 2308943007, 2308943009, 2308943010, 2308943011, 2308943012

METHOD BLANK: 2726308

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	78	%	62 - 133
4-Bromofluorobenzene (S)	109	%	79 - 114
Dibromofluoromethane (S)	85.7	%	78 - 116
Toluene-d8 (S)	85.7	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2726309

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	114	ug/L	20	22.7	78 - 121
1,1,1-Trichloroethane	109	ug/L	20	21.8	66 - 130
1,1,2,2-Tetrachloroethane	103	ug/L	20	20.7	74 - 135
1,1,2-Trichloroethane	109	ug/L	20	21.7	82 - 126
1,1-Dichloroethane	105	ug/L	20	20.9	78 - 124
1,1-Dichloroethene	115	ug/L	20	22.9	63 - 128
1,2,3-Trichlorobenzene	112	ug/L	20	22.4	61 - 126
1,2,3-Trichloropropane	106	ug/L	20	21.2	75 - 132
1,2,4-Trichlorobenzene	90.8	ug/L	20	18.2	67 - 123
1,2,4-Trimethylbenzene	103	ug/L	20	20.5	76 - 125
1,2-Dibromo-3-chloropropane	83	ug/L	20	16.6	59 - 133
1,2-Dibromoethane	111	ug/L	20	22.2	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.3	82 - 118
1,2-Dichloroethane	94.4	ug/L	20	18.9	70 - 133
1,2-Dichloroethene, Total	107	ug/L	40	42.8	78 - 125
1,2-Dichloropropane	107	ug/L	20	21.3	81 - 127
1,3-Dichlorobenzene	110	ug/L	20	22.0	81 - 118
1,3-Dichloropropane	108	ug/L	20	21.5	82 - 126
1,3-Dichloropropene, Total	95	ug/L	40	38.0	80 - 123
1,4-Dichlorobenzene	106	ug/L	20	21.1	81 - 116
2,2-Dichloropropane	113	ug/L	20	22.6	64 - 129
2-Butanone	99.6	ug/L	100	99.6	50 - 152
2-Chloroethylvinyl ether	65.8	ug/L	20	13.2	1 - 150
2-Hexanone	81.5	ug/L	100	81.5	65 - 154
4-Methyl-2-Pentanone(MIBK)	87.3	ug/L	100	87.3	71 - 146
Acetone	97.7	ug/L	100	97.7	40 - 151
Benzene	103	ug/L	20	20.5	80 - 124
Bromobenzene	115	ug/L	20	22.9	81 - 119
Bromochloromethane	102	ug/L	20	20.5	73 - 117
Bromodichloromethane	96.3	ug/L	20	19.3	79 - 126
Bromoform	95.4	ug/L	20	19.1	70 - 123
Bromomethane	70.4	ug/L	20	14.1	45 - 148
Carbon Disulfide	104	ug/L	20	20.9	57 - 131
Carbon Tetrachloride	114	ug/L	20	22.9	62 - 132
Chlorobenzene	105	ug/L	20	21.1	85 - 117
Chlorodibromomethane	98	ug/L	20	19.6	77 - 122
Chloroethane	70.6	ug/L	20	14.1	51 - 142
Chloroform	102	ug/L	20	20.3	78 - 122
Chloromethane	97.4	ug/L	20	19.5	38 - 156
Cyclohexane	127	ug/L	20	25.3	66 - 130
Dibromomethane	96	ug/L	20	19.2	81 - 125

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	74.4	ug/L	20	14.9	17 - 166
Diisopropyl ether	94.2	ug/L	20	18.8	74 - 131
Ethyl tert-butyl ether	86.8	ug/L	20	17.4	75 - 123
Ethylbenzene	113	ug/L	20	22.7	80 - 124
Freon 113	127	ug/L	20	25.4	50 - 130
Hexachlorobutadiene	108	ug/L	20	21.5	55 - 128
Isopropylbenzene	124	ug/L	20	24.9	73 - 129
Methyl acetate	88.9	ug/L	20	17.8	70 - 130
Methyl cyclohexane	129	ug/L	20	25.7	70 - 130
Methyl t-Butyl Ether	99.8	ug/L	20	20.0	69 - 115
Methylene Chloride	101	ug/L	20	20.2	76 - 121
Naphthalene	140*	ug/L	20	28.0	56 - 134
Styrene	105	ug/L	20	21.0	79 - 123
Tetrachloroethene	113	ug/L	20	22.7	72 - 124
Toluene	120	ug/L	20	24.0	80 - 125
Total Xylenes	111	ug/L	60	66.8	79 - 125
Trichloroethene	100	ug/L	20	20.0	77 - 124
Trichlorofluoromethane	68.7	ug/L	20	13.7	38 - 123
Vinyl Acetate	87	ug/L	20	17.4	58 - 136
Vinyl Chloride	74.3	ug/L	20	14.9	27 - 138
cis-1,2-Dichloroethene	103	ug/L	20	20.7	78 - 125
cis-1,3-Dichloropropene	91.7	ug/L	20	18.3	81 - 121
mp-Xylene	118	ug/L	40	47.1	79 - 125
n-Butylbenzene	95	ug/L	20	19.0	71 - 130
n-Propylbenzene	108	ug/L	20	21.6	74 - 122
o-Chlorotoluene	119	ug/L	20	23.7	78 - 126
o-Xylene	98.5	ug/L	20	19.7	79 - 124
p-Chlorotoluene	118	ug/L	20	23.7	78 - 125
p-Isopropyltoluene	102	ug/L	20	20.3	72 - 123
sec-Butylbenzene	103	ug/L	20	20.6	72 - 127
tert-Amyl methyl ether	85.6	ug/L	20	17.1	75 - 121
tert-Butyl Alcohol	61.2	ug/L	100	61.2	17 - 168
tert-Butylbenzene	108	ug/L	20	21.6	72 - 124
trans-1,2-Dichloroethene	111	ug/L	20	22.1	71 - 122
trans-1,3-Dichloropropene	98.4	ug/L	20	19.7	78 - 126
1,2-Dichloroethane-d4 (S)	79.8	%			62 - 133
4-Bromofluorobenzene (S)	110	%			79 - 114
Dibromofluoromethane (S)	89.5	%			78 - 116
Toluene-d8 (S)	85.8	%			76 - 127

MATRIX SPIKE: 2726360 DUPLICATE: 2726361 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	22.2322	23.0163	111	115	78 - 121	3.47	16
1,1,1-Trichloroethane	0	ug/L	20	23.0715	23.7848	115	119	66 - 130	3.04	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.3877	21.539	102	108	74 - 135	5.49	16
1,1,2-Trichloroethane	0	ug/L	20	21.8171	22.4515	109	112	82 - 126	2.87	15
1,1-Dichloroethane	0	ug/L	20	22.3543	22.9567	112	115	78 - 124	2.66	15
1,1-Dichloroethene	0	ug/L	20	25.0712	25.8141	125	129*	63 - 128	2.92	21
1,2,3-Trichloropropane	0	ug/L	20	20.4331	21.743	102	109	75 - 132	6.21	19
1,2,4-Trimethylbenzene	0	ug/L	20	20.5116	21.6524	103	108	76 - 125	5.41	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	16.2145	17.9174	81.1	89.6	59 - 133	9.98	26
1,2-Dibromoethane	0	ug/L	20	22.3475	22.7766	112	114	80 - 124	1.9	19
1,2-Dichlorobenzene	75.411	ug/L	20	100.375	103.78	125*	142*	82 - 118	3.34	15
1,2-Dichloroethane	0	ug/L	20	19.5919	20.0781	98	100	70 - 133	2.45	19
1,2-Dichloroethene, Total	27.6571	ug/L	40	77.6062	76.9054	125	123	78 - 125	.91	40
1,2-Dichloropropane	0	ug/L	20	22.0039	22.4729	110	112	81 - 127	2.11	15
1,3-Dichloropropane	0	ug/L	20	21.2721	22.0079	106	110	82 - 126	3.4	15
1,3-Dichloropropene, Total	0	ug/L	40	35.3226	36.1533	88.3	90.4	80 - 123	2.32	16
2,2-Dichloropropane	0	ug/L	20	19.898	20.3007	99.5	102	64 - 129	2	18
2-Butanone	0	ug/L	100	100.921	107.716	101	108	50 - 152	6.51	16
2-Chloroethylvinyl ether	0	ug/L	20	.07154	.05599	.36*	.28*	1 - 150	24.4	40
2-Hexanone	0	ug/L	100	81.3067	86.9851	81.3	87	65 - 154	6.75	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	87.6556	92.1116	87.7	92.1	71 - 146	4.96	16
Acetone	7.76883	ug/L	100	95.2106	101.737	87.4	94	40 - 151	6.63	40
Benzene	17.0691	ug/L	20	38.9307	40.0996	109	115	80 - 124	2.96	26
Bromobenzene	0	ug/L	20	22.7151	23.8738	114	119	81 - 119	4.97	17
Bromochloromethane	0	ug/L	20	21.1739	21.7375	106	109	73 - 117	2.63	19
Bromodichloromethane	0	ug/L	20	20.0823	20.2314	100	101	79 - 126	.74	16
Bromoform	0	ug/L	20	15.7375	15.4415	78.7	77.2	70 - 123	1.9	16
Bromomethane	0	ug/L	20	12.5019	12.5956	62.5	63	45 - 148	.75	26
Carbon Disulfide	0	ug/L	20	22.3779	22.5743	112	113	57 - 131	.87	28
Carbon Tetrachloride	0	ug/L	20	24.3837	25.1187	122	126	62 - 132	2.97	17
Chlorodibromomethane	0	ug/L	20	18.8624	19.0069	94.3	95	77 - 122	.76	15
Chloroethane	0	ug/L	20	14.6283	14.8825	73.1	74.4	51 - 142	1.72	24
Chloroform	0	ug/L	20	20.5806	21.0744	103	105	78 - 122	2.37	16
Chloromethane	0	ug/L	20	22.0826	21.5429	110	108	38 - 156	2.47	27
Cyclohexane	0	ug/L	20	27.2592	27.7883	136*	139*	66 - 130	1.92	20
Dibromomethane	0	ug/L	20	19.9799	20.1576	99.9	101	81 - 125	.89	16
Dichlorodifluoromethane	0	ug/L	20	16.0705	15.7041	80.4	78.5	17 - 166	2.31	24
Diisopropyl ether	0	ug/L	20	19.2401	19.7692	96.2	98.8	74 - 131	2.71	15
Ethyl tert-butyl ether	0	ug/L	20	17.9346	18.4759	89.7	92.4	75 - 123	2.97	16
Ethylbenzene	0	ug/L	20	23.4533	24.1524	117	121	80 - 124	2.94	19
Freon 113	0	ug/L	20	26.502	27.416	133*	137*	50 - 130	3.39	26
Hexachlorobutadiene	0	ug/L	20	21.4169	24.5205	107	123	55 - 128	13.5	35
Isopropylbenzene	0	ug/L	20	24.5795	26.1013	123	131*	73 - 129	6.01	18
Methyl acetate	0	ug/L	20	15.2102	16.7932	76.1	84	70 - 130	9.89	18
Methyl cyclohexane	0	ug/L	20	26.9008	27.3501	135*	137*	70 - 130	1.66	18
Methyl t-Butyl Ether	0	ug/L	20	19.769	20.6398	98.8	103	69 - 115	4.31	20

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Methylene Chloride	0	ug/L	20	20.1167	20.5724	101	103	76 - 121	2.24	17
Naphthalene	0	ug/L	20	41.1375	45.5231	206*	228*	56 - 134	10.1	40
Styrene	0	ug/L	20	20.7296	21.8405	104	109	79 - 123	5.22	16
Tetrachloroethene	0	ug/L	20	23.0429	23.5519	115	118	72 - 124	2.18	38
Toluene	.31451	ug/L	20	24.9655	25.7562	123	127*	80 - 125	3.12	20
Total Xylenes	0	ug/L	60	67.471	70.0137	112	117	79 - 125	3.7	35
Trichloroethene	5.20799	ug/L	20	26.7528	27.1803	108	110	77 - 124	1.59	18
Trichlorofluoromethane	0	ug/L	20	15.0674	15.3891	75.3	76.9	38 - 123	2.11	23
Vinyl Acetate	0	ug/L	20	13.0552	13.8564	65.3	69.3	58 - 136	5.95	17
Vinyl Chloride	.96387	ug/L	20	17.0544	17.4759	80.5	82.6	27 - 138	2.44	40
cis-1,2-Dichloroethene	26.3359	ug/L	20	52.8635	51.5847	133*	126*	78 - 125	2.45	21
cis-1,3-Dichloropropene	0	ug/L	20	16.9467	17.4122	84.7	87.1	81 - 121	2.71	16
mp-Xylene	0	ug/L	40	47.2126	48.9588	118	122	79 - 125	3.63	21
n-Butylbenzene	0	ug/L	20	18.5595	20.4018	92.8	102	71 - 130	9.46	20
n-Propylbenzene	0	ug/L	20	21.6799	23.2315	108	116	74 - 122	6.91	20
o-Chlorotoluene	0	ug/L	20	23.638	25.1028	118	126	78 - 126	6.01	17
o-Xylene	0	ug/L	20	20.2584	21.055	101	105	79 - 124	3.86	19
p-Chlorotoluene	0	ug/L	20	23.6754	24.9788	118	125	78 - 125	5.36	16
p-Isopropyltoluene	0	ug/L	20	20.3779	21.6619	102	108	72 - 123	6.11	17
sec-Butylbenzene	0	ug/L	20	20.8412	22.3604	104	112	72 - 127	7.03	17
tert-Amyl methyl ether	0	ug/L	20	17.1807	18.1661	85.9	90.8	75 - 121	5.58	40
tert-Butyl Alcohol	0	ug/L	100	61.3477	68.3516	61.3	68.4	17 - 168	10.8	40
tert-Butylbenzene	0	ug/L	20	21.4716	23.145	107	116	72 - 124	7.5	17
trans-1,2-Dichloroethene	1.32117	ug/L	20	24.7427	25.3207	117	120	71 - 122	2.31	22
trans-1,3-Dichloropropene	0	ug/L	20	18.3758	18.741	91.9	93.7	78 - 126	1.97	18
1,2-Dichloroethane-d4 (S)	81	%				81	81.3	62 - 133		
4-Bromofluorobenzene (S)	107	%				107	108	79 - 114		
Dibromofluoromethane (S)	89.4	%				89.4	91.9	78 - 116		
Toluene-d8 (S)	83.8	%				83.8	85.3	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46587 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943013, 2308943014, 2308943015, 2308943016, 2308943017, 2308943018, 2308943019, 2308943021, 2308943022, 2308943023, 2308943025, 2308943028, 2308943029, 2308943030, 2308943031

METHOD BLANK: 2726611

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloroethane	ND	ug/L	1.0
Chloroform	0.24J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	79.4	%	62 - 133
4-Bromofluorobenzene (S)	111	%	79 - 114
Dibromofluoromethane (S)	86.5	%	78 - 116
Toluene-d8 (S)	85.8	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2726612

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	109	ug/L	20	21.9	78 - 121
1,1,1-Trichloroethane	108	ug/L	20	21.7	66 - 130
1,1,2,2-Tetrachloroethane	104	ug/L	20	20.7	74 - 135
1,1,2-Trichloroethane	109	ug/L	20	21.7	82 - 126
1,1-Dichloroethane	104	ug/L	20	20.8	78 - 124
1,1-Dichloroethene	115	ug/L	20	22.9	63 - 128
1,2,3-Trichlorobenzene	112	ug/L	20	22.5	61 - 126
1,2,3-Trichloropropane	104	ug/L	20	20.9	75 - 132
1,2,4-Trichlorobenzene	94	ug/L	20	18.8	67 - 123
1,2,4-Trimethylbenzene	103	ug/L	20	20.6	76 - 125
1,2-Dibromo-3-chloropropane	82.2	ug/L	20	16.4	59 - 133
1,2-Dibromoethane	110	ug/L	20	22.0	80 - 124
1,2-Dichlorobenzene	104	ug/L	20	20.9	82 - 118
1,2-Dichloroethane	95.8	ug/L	20	19.2	70 - 133
1,2-Dichloroethene, Total	105	ug/L	40	42.2	78 - 125
1,2-Dichloropropane	106	ug/L	20	21.1	81 - 127
1,3-Dichlorobenzene	109	ug/L	20	21.7	81 - 118
1,3-Dichloropropane	104	ug/L	20	20.8	82 - 126
1,3-Dichloropropene, Total	92.4	ug/L	40	37.0	80 - 123
1,4-Dichlorobenzene	104	ug/L	20	20.9	81 - 116
2,2-Dichloropropane	108	ug/L	20	21.6	64 - 129
2-Butanone	97.4	ug/L	100	97.4	50 - 152
2-Chloroethylvinyl ether	64.4	ug/L	20	12.9	1 - 150
2-Hexanone	79.6	ug/L	100	79.6	65 - 154
4-Methyl-2-Pentanone(MIBK)	87	ug/L	100	87.0	71 - 146
Acetone	93.5	ug/L	100	93.5	40 - 151
Benzene	103	ug/L	20	20.5	80 - 124
Bromobenzene	115	ug/L	20	23.0	81 - 119
Bromochloromethane	101	ug/L	20	20.2	73 - 117
Bromodichloromethane	95.4	ug/L	20	19.1	79 - 126
Bromoform	93.3	ug/L	20	18.7	70 - 123
Bromomethane	69.3	ug/L	20	13.9	45 - 148
Carbon Disulfide	103	ug/L	20	20.6	57 - 131
Carbon Tetrachloride	113	ug/L	20	22.6	62 - 132
Chlorobenzene	105	ug/L	20	21.1	85 - 117
Chlorodibromomethane	96.4	ug/L	20	19.3	77 - 122
Chloroethane	67.7	ug/L	20	13.5	51 - 142
Chloroform	100	ug/L	20	20.1	78 - 122
Chloromethane	95	ug/L	20	19.0	38 - 156
Cyclohexane	124	ug/L	20	24.8	66 - 130
Dibromomethane	95.3	ug/L	20	19.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	76.5	ug/L	20	15.3	17 - 166
Diisopropyl ether	93.6	ug/L	20	18.7	74 - 131
Ethyl tert-butyl ether	86.7	ug/L	20	17.3	75 - 123
Ethylbenzene	112	ug/L	20	22.5	80 - 124
Freon 113	124	ug/L	20	24.8	50 - 130
Hexachlorobutadiene	111	ug/L	20	22.2	55 - 128
Isopropylbenzene	122	ug/L	20	24.5	73 - 129
Methyl acetate	88.4	ug/L	20	17.7	70 - 130
Methyl cyclohexane	126	ug/L	20	25.3	70 - 130
Methyl t-Butyl Ether	95.9	ug/L	20	19.2	69 - 115
Methylene Chloride	101	ug/L	20	20.2	76 - 121
Naphthalene	133	ug/L	20	26.7	56 - 134
Styrene	103	ug/L	20	20.5	79 - 123
Tetrachloroethene	111	ug/L	20	22.3	72 - 124
Toluene	120	ug/L	20	24.0	80 - 125
Total Xylenes	109	ug/L	60	65.7	79 - 125
Trichloroethene	98	ug/L	20	19.6	77 - 124
Trichlorofluoromethane	67.5	ug/L	20	13.5	38 - 123
Vinyl Acetate	83.5	ug/L	20	16.7	58 - 136
Vinyl Chloride	74.4	ug/L	20	14.9	27 - 138
cis-1,2-Dichloroethene	104	ug/L	20	20.8	78 - 125
cis-1,3-Dichloropropene	88.7	ug/L	20	17.7	81 - 121
mp-Xylene	115	ug/L	40	46.1	79 - 125
n-Butylbenzene	95.8	ug/L	20	19.2	71 - 130
n-Propylbenzene	106	ug/L	20	21.1	74 - 122
o-Chlorotoluene	117	ug/L	20	23.4	78 - 126
o-Xylene	97.9	ug/L	20	19.6	79 - 124
p-Chlorotoluene	118	ug/L	20	23.6	78 - 125
p-Isopropyltoluene	102	ug/L	20	20.4	72 - 123
sec-Butylbenzene	103	ug/L	20	20.6	72 - 127
tert-Amyl methyl ether	83.6	ug/L	20	16.7	75 - 121
tert-Butyl Alcohol	63.8	ug/L	100	63.8	17 - 168
tert-Butylbenzene	108	ug/L	20	21.5	72 - 124
trans-1,2-Dichloroethene	107	ug/L	20	21.3	71 - 122
trans-1,3-Dichloropropene	96.1	ug/L	20	19.2	78 - 126
1,2-Dichloroethane-d4 (S)	78.6	%			62 - 133
4-Bromofluorobenzene (S)	110	%			79 - 114
Dibromofluoromethane (S)	89.7	%			78 - 116
Toluene-d8 (S)	85.1	%			76 - 127

MATRIX SPIKE: 2726827 DUPLICATE: 2726828 ORIGINAL: 2308943013

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	22.4051	22.7581	112	114	78 - 121	1.56	16
1,1,1-Trichloroethane	13.8474	ug/L	20	37.6962	37.3649	119	118	66 - 130	.88	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.4502	20.6411	102	103	74 - 135	.93	16
1,1,2-Trichloroethane	1.14195	ug/L	20	22.5478	23.0395	107	109	82 - 126	2.16	15
1,1-Dichloroethane	85.1953	ug/L	20	106.082	106.186	NC	NC	78 - 124	.1	15
1,2,3-Trichlorobenzene	0	ug/L	20	20.4475	22.8946	102	114	61 - 126	11.3	36
1,2,3-Trichloropropane	0	ug/L	20	20.7711	20.6776	104	103	75 - 132	.45	19
1,2,4-Trichlorobenzene	0	ug/L	20	16.7577	17.336	83.8	86.7	67 - 123	3.39	22
1,2,4-Trimethylbenzene	0	ug/L	20	20.4208	20.9407	102	105	76 - 125	2.51	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	14.659	15.4059	73.3	77	59 - 133	4.97	26
1,2-Dibromoethane	0	ug/L	20	21.6043	22.2925	108	111	80 - 124	3.14	19
1,2-Dichlorobenzene	0	ug/L	20	21.1664	21.5995	106	108	82 - 118	2.03	15
1,2-Dichloroethane	0	ug/L	20	20.4332	21.1886	102	106	70 - 133	3.63	19
1,2-Dichloroethene, Total	23.6567	ug/L	40	67.2957	68.5931	109	112	78 - 125	1.91	40
1,2-Dichloropropane	0	ug/L	20	21.3561	22.0714	107	110	81 - 127	3.29	15
1,3-Dichlorobenzene	0	ug/L	20	21.7397	22.0731	109	110	81 - 118	1.52	16
1,3-Dichloropropane	0	ug/L	20	21.0922	21.3523	105	107	82 - 126	1.23	15
1,3-Dichloropropene, Total	0	ug/L	40	35.287	35.7383	88.2	89.3	80 - 123	1.27	16
1,4-Dichlorobenzene	0	ug/L	20	21.0149	21.1387	105	106	81 - 116	.59	15
2,2-Dichloropropane	0	ug/L	20	18.4642	19.0334	92.3	95.2	64 - 129	3.04	18
2-Butanone	0	ug/L	100	90.4006	96.0238	90.4	96	50 - 152	6.03	16
2-Chloroethylvinyl ether	0	ug/L	20	.12777	.28052	.64*	1.4	1 - 150	74.8	40
2-Hexanone	0	ug/L	100	75.1825	76.8934	75.2	76.9	65 - 154	2.25	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	84.3293	85.465	84.3	85.5	71 - 146	1.34	16
Acetone	5.10058	ug/L	100	87.2858	81.8947	82.2	76.8	40 - 151	6.37	40
Benzene	1.94996	ug/L	20	23.5201	25.1704	108	116	80 - 124	6.78	26
Bromobenzene	0	ug/L	20	22.8155	23.0703	114	115	81 - 119	1.11	17
Bromochloromethane	0	ug/L	20	20.6494	20.3477	103	102	73 - 117	1.47	19
Bromodichloromethane	0	ug/L	20	20.4146	20.4142	102	102	79 - 126	.002	16
Bromoform	0	ug/L	20	16.8819	17.261	84.4	86.3	70 - 123	2.22	16
Bromomethane	0	ug/L	20	14.3318	14.2654	71.7	71.3	45 - 148	.46	26
Carbon Disulfide	0	ug/L	20	22.334	22.3899	112	112	57 - 131	.25	28
Carbon Tetrachloride	0	ug/L	20	24.5482	24.8291	123	124	62 - 132	1.14	17
Chlorobenzene	0	ug/L	20	21.6164	21.8233	108	109	85 - 117	.95	15
Chlorodibromomethane	0	ug/L	20	18.9379	18.8731	94.7	94.4	77 - 122	.34	15
Chloroethane	21.9991	ug/L	20	35.7047	35.1932	68.5	66	51 - 142	1.44	24
Chloroform	.44628	ug/L	20	21.0117	21.3127	103	104	78 - 122	1.42	16
Chloromethane	0	ug/L	20	21.4431	21.9508	107	110	38 - 156	2.34	27
Cyclohexane	0	ug/L	20	26.6365	27.1669	133*	136*	66 - 130	1.97	20
Dibromomethane	0	ug/L	20	19.408	19.7454	97	98.7	81 - 125	1.72	16
Dichlorodifluoromethane	0	ug/L	20	17.5345	17.9876	87.7	89.9	17 - 166	2.55	24
Diisopropyl ether	0	ug/L	20	18.788	19.4391	93.9	97.2	74 - 131	3.41	15
Ethyl tert-butyl ether	0	ug/L	20	17.1558	17.7845	85.8	88.9	75 - 123	3.6	16
Ethylbenzene	0	ug/L	20	22.8972	23.2	114	116	80 - 124	1.31	19
Freon 113	0	ug/L	20	28.8803	30.2766	144*	151*	50 - 130	4.72	26
Hexachlorobutadiene	0	ug/L	20	21.493	22.878	107	114	55 - 128	6.24	35

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Isopropylbenzene	0	ug/L	20	25.3081	26.5838	127	133*	73 - 129	4.92	18
Methyl acetate	0	ug/L	20	14.6566	14.7587	73.3	73.8	70 - 130	.69	18
Methyl cyclohexane	0	ug/L	20	30.8241	31.5427	154*	158*	70 - 130	2.3	18
Methyl t-Butyl Ether	0	ug/L	20	18.9781	19.4079	94.9	97	69 - 115	2.24	20
Methylene Chloride	4.2257	ug/L	20	26.2428	26.8285	110	113	76 - 121	2.21	17
Naphthalene	0	ug/L	20	23.0207	25.0544	115	125	56 - 134	8.46	40
Styrene	0	ug/L	20	21.088	21.0193	105	105	79 - 123	.33	16
Tetrachloroethene	5.38335	ug/L	20	27.2058	29.011	109	118	72 - 124	6.42	38
Toluene	0	ug/L	20	24.2959	24.7551	121	124	80 - 125	1.87	20
Total Xylenes	0	ug/L	60	66.3075	67.6559	111	113	79 - 125	2.01	35
Trichlorofluoromethane	0	ug/L	20	16.2098	16.6738	81	83.4	38 - 123	2.82	23
Vinyl Acetate	0	ug/L	20	12.6216	13.4409	63.1	67.2	58 - 136	6.29	17
Vinyl Chloride	.94081	ug/L	20	17.6634	18.3177	83.6	86.9	27 - 138	3.64	40
cis-1,2-Dichloroethene	23.6567	ug/L	20	44.1396	45.1033	102	107	78 - 125	2.16	21
cis-1,3-Dichloropropene	0	ug/L	20	16.9836	17.2385	84.9	86.2	81 - 121	1.49	16
mp-Xylene	0	ug/L	40	46.778	47.5563	117	119	79 - 125	1.65	21
n-Butylbenzene	0	ug/L	20	18.1969	19.2589	91	96.3	71 - 130	5.67	20
n-Propylbenzene	0	ug/L	20	22.2511	22.099	111	110	74 - 122	.69	20
o-Chlorotoluene	0	ug/L	20	23.8425	24.1929	119	121	78 - 126	1.46	17
o-Xylene	0	ug/L	20	19.5295	20.0996	97.6	100	79 - 124	2.88	19
p-Chlorotoluene	0	ug/L	20	23.6331	24.181	118	121	78 - 125	2.29	16
p-Isopropyltoluene	0	ug/L	20	20.1029	20.6804	101	103	72 - 123	2.83	17
sec-Butylbenzene	0	ug/L	20	20.7984	21.561	104	108	72 - 127	3.6	17
tert-Amyl methyl ether	0	ug/L	20	16.0082	17.3703	80	86.9	75 - 121	8.16	40
tert-Butyl Alcohol	0	ug/L	100	51.1776	49.3087	51.2	49.3	17 - 168	3.72	40
tert-Butylbenzene	0	ug/L	20	21.4138	22.01	107	110	72 - 124	2.75	17
trans-1,2-Dichloroethene	0	ug/L	20	23.156	23.4897	116	117	71 - 122	1.43	22
trans-1,3-Dichloropropene	0	ug/L	20	18.3033	18.4998	91.5	92.5	78 - 126	1.07	18
1,2-Dichloroethane-d4 (S)	82.1	%				82.1	81.4	62 - 133		
4-Bromofluorobenzene (S)	111	%				111	110	79 - 114		
Dibromofluoromethane (S)	91.1	%				91.1	90.8	78 - 116		
Toluene-d8 (S)	84.5	%				84.5	83.5	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46591 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943003, 2308943004, 2308943005, 2308943006, 2308943007, 2308943009, 2308943010, 2308943011, 2308943012, 2308943024, 2308943032, 2308943033, 2308943034, 2308943035, 2308943036, 2308943037, 2308943040

LABORATORY CONTROL SAMPLE: 2726759

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	109	ug/L	20	21.8	78 - 121
1,1,1-Trichloroethane	113	ug/L	20	22.6	66 - 130
1,1,2,2-Tetrachloroethane	101	ug/L	20	20.2	74 - 135
1,1,2-Trichloroethane	106	ug/L	20	21.2	82 - 126
1,1-Dichloroethane	107	ug/L	20	21.4	78 - 124
1,1-Dichloroethene	119	ug/L	20	23.7	63 - 128
1,2,3-Trichlorobenzene	101	ug/L	20	20.2	61 - 126
1,2,3-Trichloropropane	100	ug/L	20	20.1	75 - 132
1,2,4-Trichlorobenzene	84.1	ug/L	20	16.8	67 - 123
1,2,4-Trimethylbenzene	101	ug/L	20	20.3	76 - 125
1,2-Dibromo-3-chloropropane	75.5	ug/L	20	15.1	59 - 133
1,2-Dibromoethane	106	ug/L	20	21.3	80 - 124
1,2-Dichlorobenzene	104	ug/L	20	20.9	82 - 118
1,2-Dichloroethane	96.8	ug/L	20	19.4	70 - 133
1,2-Dichloroethene, Total	108	ug/L	40	43.3	78 - 125
1,2-Dichloropropane	108	ug/L	20	21.5	81 - 127
1,3-Dichlorobenzene	108	ug/L	20	21.6	81 - 118
1,3-Dichloropropane	104	ug/L	20	20.9	82 - 126
1,3-Dichloropropene, Total	91	ug/L	40	36.4	80 - 123
1,4-Dichlorobenzene	102	ug/L	20	20.5	81 - 116
2,2-Dichloropropane	110	ug/L	20	22.1	64 - 129
2-Butanone	100	ug/L	100	100	50 - 152
2-Chloroethylvinyl ether	62.5	ug/L	20	12.5	1 - 150
2-Hexanone	76.1	ug/L	100	76.1	65 - 154
4-Methyl-2-Pentanone(MIBK)	84	ug/L	100	84.0	71 - 146
Acetone	94.5	ug/L	100	94.5	40 - 151
Benzene	105	ug/L	20	21.0	80 - 124
Bromobenzene	112	ug/L	20	22.3	81 - 119
Bromochloromethane	100	ug/L	20	20.1	73 - 117
Bromodichloromethane	101	ug/L	20	20.1	79 - 126
Bromoform	90.9	ug/L	20	18.2	70 - 123
Bromomethane	76.6	ug/L	20	15.3	45 - 148
Carbon Disulfide	110	ug/L	20	22.0	57 - 131
Carbon Tetrachloride	117	ug/L	20	23.4	62 - 132
Chlorobenzene	104	ug/L	20	20.8	85 - 117

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chlorodibromomethane	94.7	ug/L	20	18.9	77 - 122
Chloroethane	73.7	ug/L	20	14.7	51 - 142
Chloroform	104	ug/L	20	20.8	78 - 122
Chloromethane	99.7	ug/L	20	19.9	38 - 156
Cyclohexane	130	ug/L	20	26.0	66 - 130
Dibromomethane	96	ug/L	20	19.2	81 - 125
Dichlorodifluoromethane	83.4	ug/L	20	16.7	17 - 166
Diisopropyl ether	95.8	ug/L	20	19.2	74 - 131
Ethyl tert-butyl ether	87.2	ug/L	20	17.4	75 - 123
Ethylbenzene	112	ug/L	20	22.4	80 - 124
Freon 113	131*	ug/L	20	26.3	50 - 130
Hexachlorobutadiene	110	ug/L	20	22.0	55 - 128
Isopropylbenzene	122	ug/L	20	24.3	73 - 129
Methyl acetate	90.1	ug/L	20	18.0	70 - 130
Methyl cyclohexane	131*	ug/L	20	26.1	70 - 130
Methyl t-Butyl Ether	97.1	ug/L	20	19.4	69 - 115
Methylene Chloride	98.1	ug/L	20	19.6	76 - 121
Naphthalene	118	ug/L	20	23.6	56 - 134
Styrene	103	ug/L	20	20.5	79 - 123
Tetrachloroethene	110	ug/L	20	22.0	72 - 124
Toluene	118	ug/L	20	23.5	80 - 125
Total Xylenes	108	ug/L	60	65.0	79 - 125
Trichloroethene	105	ug/L	20	21.0	77 - 124
Trichlorofluoromethane	75.4	ug/L	20	15.1	38 - 123
Vinyl Acetate	79.6	ug/L	20	15.9	58 - 136
Vinyl Chloride	78.5	ug/L	20	15.7	27 - 138
cis-1,2-Dichloroethene	105	ug/L	20	20.9	78 - 125
cis-1,3-Dichloropropene	88.3	ug/L	20	17.7	81 - 121
mp-Xylene	115	ug/L	40	45.8	79 - 125
n-Butylbenzene	92.2	ug/L	20	18.4	71 - 130
n-Propylbenzene	107	ug/L	20	21.4	74 - 122
o-Chlorotoluene	118	ug/L	20	23.6	78 - 126
o-Xylene	96.1	ug/L	20	19.2	79 - 124
p-Chlorotoluene	118	ug/L	20	23.7	78 - 125
p-Isopropyltoluene	101	ug/L	20	20.2	72 - 123
sec-Butylbenzene	103	ug/L	20	20.5	72 - 127
tert-Amyl methyl ether	83.3	ug/L	20	16.7	75 - 121
tert-Butyl Alcohol	53.5	ug/L	100	53.5	17 - 168
tert-Butylbenzene	104	ug/L	20	20.9	72 - 124
trans-1,2-Dichloroethene	112	ug/L	20	22.4	71 - 122
trans-1,3-Dichloropropene	93.6	ug/L	20	18.7	78 - 126
1,2-Dichloroethane-d4 (S)	75	%			62 - 133
4-Bromofluorobenzene (S)	110	%			79 - 114
Dibromofluoromethane (S)	87.5	%			78 - 116
Toluene-d8 (S)	82.3	%			76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

METHOD BLANK: 2726758

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	0.35J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	0.59J	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	81.8	%	62 - 133
4-Bromofluorobenzene (S)	110	%	79 - 114
Dibromofluoromethane (S)	86.7	%	78 - 116
Toluene-d8 (S)	83	%	76 - 127

MATRIX SPIKE: 2726968 DUPLICATE: 2726969 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,1,1,2-Tetrachloroethane	0	ug/L	1000	1180.24	1139.87	118	114	78 - 121	3.48	16
1,1,1-Trichloroethane	0	ug/L	1000	1220.7	1186.58	122	119	66 - 130	2.83	20
1,1,2,2-Tetrachloroethane	0	ug/L	1000	1082.37	1080.15	108	108	74 - 135	.21	16
1,1,2-Trichloroethane	0	ug/L	1000	1111.03	1096.31	111	110	82 - 126	1.33	15
1,1-Dichloroethane	0	ug/L	1000	1169.57	1140.3	117	114	78 - 124	2.53	15
1,1-Dichloroethene	0	ug/L	1000	1346.66	1291.71	135*	129*	63 - 128	4.17	21
1,2,3-Trichlorobenzene	213.716	ug/L	1000	1351.07	1495.18	114	128*	61 - 126	10.1	36
1,2,3-Trichloropropane	0	ug/L	1000	1057.58	1056.85	106	106	75 - 132	.07	19
1,2,4-Trichlorobenzene	885.137	ug/L	1000	1934.25	2098.16	105	121	67 - 123	8.13	22
1,2,4-Trimethylbenzene	0	ug/L	1000	1091.47	1106.2	109	111	76 - 125	1.34	24
1,2-Dibromo-3-chloropropane	0	ug/L	1000	765.431	761.488	76.5	76.1	59 - 133	.52	26
1,2-Dibromoethane	0	ug/L	1000	1108.27	1117.61	111	112	80 - 124	.84	19
1,2-Dichlorobenzene	72.326	ug/L	1000	1191.29	1193.13	112	112	82 - 118	.15	15
1,2-Dichloroethane	0	ug/L	1000	1030.6	1003.93	103	100	70 - 133	2.62	19
1,2-Dichloroethene, Total	37.6731	ug/L	2000	2414.65	2333.74	119	115	78 - 125	3.41	40
1,2-Dichloropropane	0	ug/L	1000	1150.85	1122.54	115	112	81 - 127	2.49	15
1,3-Dichlorobenzene	262.861	ug/L	1000	1451.49	1450.66	119*	119*	81 - 118	.06	16
1,3-Dichloropropane	0	ug/L	1000	1081.98	1086.31	108	109	82 - 126	.4	15
1,3-Dichloropropene, Total	0	ug/L	2000	1876.74	1848.06	93.8	92.4	80 - 123	1.54	16
1,4-Dichlorobenzene	237.766	ug/L	1000	1338.26	1337.97	110	110	81 - 116	.02	15
2,2-Dichloropropane	0	ug/L	1000	996.146	939.87	99.6	94	64 - 129	5.81	18
2-Butanone	0	ug/L	5000	4841.94	5019.63	96.8	100	50 - 152	3.6	16
2-Chloroethylvinyl ether	0	ug/L	1000	527.061	624.635	52.7	62.5	1 - 150	16.9	40
2-Hexanone	0	ug/L	5000	3783.48	4072.31	75.7	81.4	65 - 154	7.35	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	5000	4225.31	4443.76	84.5	88.9	71 - 146	5.04	16
Acetone	0	ug/L	5000	4051.41	4401.32	81	88	40 - 151	8.28	40
Benzene	16.1607	ug/L	1000	1140.52	1113.54	112	110	80 - 124	2.39	26
Bromobenzene	0	ug/L	1000	1206.42	1183.9	121*	118	81 - 119	1.88	17
Bromochloromethane	0	ug/L	1000	1080.93	1038.75	108	104	73 - 117	3.98	19
Bromodichloromethane	0	ug/L	1000	1074.62	1005.47	107	101	79 - 126	6.65	16
Bromoform	0	ug/L	1000	801.56	827.428	80.2	82.7	70 - 123	3.18	16
Bromomethane	0	ug/L	1000	744.923	709.57	74.5	71	45 - 148	4.86	26
Carbon Disulfide	0	ug/L	1000	1303.42	1170.17	130	117	57 - 131	10.8	28
Carbon Tetrachloride	0	ug/L	1000	1321.42	1253.11	132	125	62 - 132	5.31	17
Chlorobenzene	541.588	ug/L	1000	1617.08	1594.98	108	105	85 - 117	1.38	15
Chlorodibromomethane	0	ug/L	1000	957.87	942.19	95.8	94.2	77 - 122	1.65	15
Chloroethane	0	ug/L	1000	810.707	765.333	81.1	76.5	51 - 142	5.76	24
Chloroform	19.5854	ug/L	1000	1117.86	1084.29	110	106	78 - 122	3.05	16
Chloromethane	0	ug/L	1000	1130.04	1110.8	113	111	38 - 156	1.72	27
Cyclohexane	0	ug/L	1000	1417.25	1440	142*	144*	66 - 130	1.59	20
Dibromomethane	0	ug/L	1000	1011.14	992.142	101	99.2	81 - 125	1.9	16
Dichlorodifluoromethane	0	ug/L	1000	912.063	864.219	91.2	86.4	17 - 166	5.39	24
Diisopropyl ether	0	ug/L	1000	1001.86	997.378	100	99.7	74 - 131	.45	15
Ethyl tert-butyl ether	0	ug/L	1000	922.917	903.152	92.3	90.3	75 - 123	2.16	16
Ethylbenzene	0	ug/L	1000	1201.11	1183.68	120	118	80 - 124	1.46	19
Freon 113	0	ug/L	1000	1457.32	1404.59	146*	140*	50 - 130	3.68	26

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Hexachlorobutadiene	0	ug/L	1000	1207.76	1105.68	121	111	55 - 128	8.82	35
Isopropylbenzene	0	ug/L	1000	1317.23	1342.36	132*	134*	73 - 129	1.89	18
Methyl acetate	0	ug/L	1000	908.706	925.937	90.9	92.6	70 - 130	1.88	18
Methyl cyclohexane	0	ug/L	1000	1402.67	1428.25	140*	143*	70 - 130	1.81	18
Methyl t-Butyl Ether	0	ug/L	1000	1006.33	1010.1	101	101	69 - 115	.37	20
Methylene Chloride	0	ug/L	1000	1052.75	1004.87	105	100	76 - 121	4.65	17
Naphthalene	0	ug/L	1000	1203.61	1395.01	120	140*	56 - 134	14.7	40
Styrene	0	ug/L	1000	1109.56	1072.87	111	107	79 - 123	3.36	16
Tetrachloroethene	0	ug/L	1000	1182.01	1184.13	118	118	72 - 124	.18	38
Toluene	0	ug/L	1000	1276.2	1251.71	128*	125	80 - 125	1.94	20
Total Xylenes	0	ug/L	3000	3408.93	3414.04	114	114	79 - 125	.15	35
Trichloroethene	28.8429	ug/L	1000	2271.78	1459.8	224*	143*	77 - 124	43.5	18
Trichlorofluoromethane	0	ug/L	1000	839.566	806.991	84	80.7	38 - 123	3.96	23
Vinyl Acetate	0	ug/L	1000	833.249	866.62	83.3	86.7	58 - 136	3.93	17
Vinyl Chloride	0	ug/L	1000	913.607	866.725	91.4	86.7	27 - 138	5.27	40
cis-1,2-Dichloroethene	37.6731	ug/L	1000	1172.56	1127.06	113	109	78 - 125	3.96	21
cis-1,3-Dichloropropene	0	ug/L	1000	908.554	908.168	90.9	90.8	81 - 121	.04	16
mp-Xylene	0	ug/L	2000	2410.99	2405.5	121	120	79 - 125	.23	21
n-Butylbenzene	0	ug/L	1000	990.82	980.916	99.1	98.1	71 - 130	1	20
n-Propylbenzene	0	ug/L	1000	1163	1169.74	116	117	74 - 122	.58	20
o-Chlorotoluene	0	ug/L	1000	1265.79	1253.58	127*	125	78 - 126	.97	17
o-Xylene	0	ug/L	1000	997.939	1008.55	99.8	101	79 - 124	1.06	19
p-Chlorotoluene	0	ug/L	1000	1258.85	1242.26	126*	124	78 - 125	1.33	16
p-Isopropyltoluene	0	ug/L	1000	1077.84	1086.39	108	109	72 - 123	.79	17
sec-Butylbenzene	0	ug/L	1000	1114.23	1139.13	111	114	72 - 127	2.21	17
tert-Amyl methyl ether	0	ug/L	1000	857.703	850.16	85.8	85	75 - 121	.88	40
tert-Butyl Alcohol	0	ug/L	5000	2223.89	2625.61	44.5	52.5	17 - 168	16.6	40
tert-Butylbenzene	0	ug/L	1000	1130.32	1159.38	113	116	72 - 124	2.54	17
trans-1,2-Dichloroethene	0	ug/L	1000	1242.09	1206.68	124*	121	71 - 122	2.89	22
trans-1,3-Dichloropropene	0	ug/L	1000	968.188	939.896	96.8	94	78 - 126	2.97	18
1,2-Dichloroethane-d4 (S)	75.9	%				75.9	81.7	62 - 133		
4-Bromofluorobenzene (S)	112	%				112	111	79 - 114		
Dibromofluoromethane (S)	91.3	%				91.3	88.1	78 - 116		
Toluene-d8 (S)	83.1	%				83.1	83.8	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46598 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943013, 2308943028, 2308943029, 2308943030

METHOD BLANK: 2727340

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	82.3	%	62 - 133
4-Bromofluorobenzene (S)	114	%	79 - 114
Dibromofluoromethane (S)	88.2	%	78 - 116
Toluene-d8 (S)	84.5	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2727341

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	110	ug/L	20	22.0	78 - 121
1,1,1-Trichloroethane	110	ug/L	20	22.1	66 - 130
1,1,2,2-Tetrachloroethane	103	ug/L	20	20.6	74 - 135
1,1,2-Trichloroethane	105	ug/L	20	21.0	82 - 126
1,1-Dichloroethane	107	ug/L	20	21.5	78 - 124
1,1-Dichloroethene	116	ug/L	20	23.3	63 - 128
1,2,3-Trichlorobenzene	101	ug/L	20	20.2	61 - 126
1,2,3-Trichloropropane	102	ug/L	20	20.4	75 - 132
1,2,4-Trichlorobenzene	80.8	ug/L	20	16.2	67 - 123
1,2,4-Trimethylbenzene	97.9	ug/L	20	19.6	76 - 125
1,2-Dibromo-3-chloropropane	78.5	ug/L	20	15.7	59 - 133
1,2-Dibromoethane	109	ug/L	20	21.8	80 - 124
1,2-Dichlorobenzene	101	ug/L	20	20.3	82 - 118
1,2-Dichloroethane	98.9	ug/L	20	19.8	70 - 133
1,2-Dichloroethene, Total	109	ug/L	40	43.6	78 - 125
1,2-Dichloropropane	108	ug/L	20	21.6	81 - 127
1,3-Dichlorobenzene	104	ug/L	20	20.9	81 - 118
1,3-Dichloropropane	104	ug/L	20	20.8	82 - 126
1,3-Dichloropropene, Total	92.5	ug/L	40	37.0	80 - 123
1,4-Dichlorobenzene	101	ug/L	20	20.3	81 - 116
2,2-Dichloropropane	109	ug/L	20	21.7	64 - 129
2-Butanone	102	ug/L	100	102	50 - 152
2-Chloroethylvinyl ether	60.5	ug/L	20	12.1	1 - 150
2-Hexanone	81.2	ug/L	100	81.2	65 - 154
4-Methyl-2-Pentanone(MIBK)	87.7	ug/L	100	87.7	71 - 146
Acetone	88	ug/L	100	88.0	40 - 151
Benzene	104	ug/L	20	20.7	80 - 124
Bromobenzene	111	ug/L	20	22.2	81 - 119
Bromochloromethane	101	ug/L	20	20.3	73 - 117
Bromodichloromethane	100	ug/L	20	20.1	79 - 126
Bromoform	102	ug/L	20	20.4	70 - 123
Bromomethane	69.2	ug/L	20	13.8	45 - 148
Carbon Disulfide	110	ug/L	20	22.1	57 - 131
Carbon Tetrachloride	117	ug/L	20	23.4	62 - 132
Chlorobenzene	102	ug/L	20	20.5	85 - 117
Chlorodibromomethane	101	ug/L	20	20.1	77 - 122
Chloroethane	67.2	ug/L	20	13.4	51 - 142
Chloroform	102	ug/L	20	20.3	78 - 122
Chloromethane	87.6	ug/L	20	17.5	38 - 156
Cyclohexane	126	ug/L	20	25.2	66 - 130
Dibromomethane	96.3	ug/L	20	19.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	67.2	ug/L	20	13.4	17 - 166
Diisopropyl ether	95	ug/L	20	19.0	74 - 131
Ethyl tert-butyl ether	88.9	ug/L	20	17.8	75 - 123
Ethylbenzene	108	ug/L	20	21.7	80 - 124
Freon 113	129	ug/L	20	25.7	50 - 130
Hexachlorobutadiene	105	ug/L	20	21.0	55 - 128
Isopropylbenzene	118	ug/L	20	23.5	73 - 129
Methyl acetate	93.5	ug/L	20	18.7	70 - 130
Methyl cyclohexane	127	ug/L	20	25.3	70 - 130
Methyl t-Butyl Ether	99.4	ug/L	20	19.9	69 - 115
Methylene Chloride	103	ug/L	20	20.6	76 - 121
Naphthalene	120	ug/L	20	24.0	56 - 134
Styrene	99.4	ug/L	20	19.9	79 - 123
Tetrachloroethene	107	ug/L	20	21.4	72 - 124
Toluene	115	ug/L	20	22.9	80 - 125
Total Xylenes	105	ug/L	60	62.8	79 - 125
Trichloroethene	101	ug/L	20	20.2	77 - 124
Trichlorofluoromethane	70.7	ug/L	20	14.1	38 - 123
Vinyl Acetate	85.5	ug/L	20	17.1	58 - 136
Vinyl Chloride	69.4	ug/L	20	13.9	27 - 138
cis-1,2-Dichloroethene	105	ug/L	20	21.1	78 - 125
cis-1,3-Dichloropropene	88.7	ug/L	20	17.7	81 - 121
mp-Xylene	111	ug/L	40	44.4	79 - 125
n-Butylbenzene	89.7	ug/L	20	17.9	71 - 130
n-Propylbenzene	104	ug/L	20	20.7	74 - 122
o-Chlorotoluene	115	ug/L	20	23.0	78 - 126
o-Xylene	91.9	ug/L	20	18.4	79 - 124
p-Chlorotoluene	114	ug/L	20	22.8	78 - 125
p-Isopropyltoluene	97.7	ug/L	20	19.5	72 - 123
sec-Butylbenzene	99.6	ug/L	20	19.9	72 - 127
tert-Amyl methyl ether	83.9	ug/L	20	16.8	75 - 121
tert-Butyl Alcohol	55.6	ug/L	100	55.6	17 - 168
tert-Butylbenzene	102	ug/L	20	20.3	72 - 124
trans-1,2-Dichloroethene	113	ug/L	20	22.5	71 - 122
trans-1,3-Dichloropropene	96.4	ug/L	20	19.3	78 - 126
1,2-Dichloroethane-d4 (S)	76	%			62 - 133
4-Bromofluorobenzene (S)	109	%			79 - 114
Dibromofluoromethane (S)	89.7	%			78 - 116
Toluene-d8 (S)	82.8	%			76 - 127

MATRIX SPIKE: 2728501 DUPLICATE: 2728502 ORIGINAL: 2308943013

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,1,1,2-Tetrachloroethane	0	ug/L	200	225.974	227.061	113	114	78 - 121	.48	16
1,1,1-Trichloroethane	12.7556	ug/L	200	250.646	246.174	119	117	66 - 130	1.8	20
1,1,2,2-Tetrachloroethane	0	ug/L	200	207.604	223.052	104	112	74 - 135	7.17	16
1,1,2-Trichloroethane	0	ug/L	200	213.802	217.232	107	109	82 - 126	1.59	15
1,1-Dichloroethane	83.8483	ug/L	200	310.725	299.626	113	108	78 - 124	3.64	15
1,1-Dichloroethene	195.054	ug/L	200	411.567	407.195	108	106	63 - 128	1.07	21
1,2,3-Trichlorobenzene	0	ug/L	200	184.588	221.085	92.3	111	61 - 126	18	36
1,2,3-Trichloropropane	0	ug/L	200	208.271	222.116	104	111	75 - 132	6.43	19
1,2,4-Trichlorobenzene	0	ug/L	200	153.443	176.084	76.7	88	67 - 123	13.7	22
1,2,4-Trimethylbenzene	0	ug/L	200	206.613	217.518	103	109	76 - 125	5.14	24
1,2-Dibromo-3-chloropropane	0	ug/L	200	151.46	171.506	75.7	85.8	59 - 133	12.4	26
1,2-Dibromoethane	0	ug/L	200	213.783	219.65	107	110	80 - 124	2.71	19
1,2-Dichlorobenzene	0	ug/L	200	209.009	217.658	105	109	82 - 118	4.05	15
1,2-Dichloroethane	0	ug/L	200	203.508	207.901	102	104	70 - 133	2.14	19
1,2-Dichloroethene, Total	22.2386	ug/L	400	480.657	472.05	115	112	78 - 125	1.81	40
1,2-Dichloropropane	0	ug/L	200	227.792	227.288	114	114	81 - 127	.22	15
1,3-Dichlorobenzene	0	ug/L	200	215.007	225.693	108	113	81 - 118	4.85	16
1,3-Dichloropropane	0	ug/L	200	209.27	214.622	105	107	82 - 126	2.53	15
1,3-Dichloropropene, Total	0	ug/L	400	354.933	367.795	88.7	91.9	80 - 123	3.56	16
1,4-Dichlorobenzene	0	ug/L	200	208.822	216.676	104	108	81 - 116	3.69	15
2,2-Dichloropropane	0	ug/L	200	201.806	198.428	101	99.2	64 - 129	1.69	18
2-Butanone	0	ug/L	1000	944.779	1046.68	94.5	105	50 - 152	10.2	16
2-Chloroethylvinyl ether	0	ug/L	200	1.11376	1.48019	.56*	.74*	1 - 150	28.3	40
2-Hexanone	0	ug/L	1000	746.391	809.522	74.6	81	65 - 154	8.11	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	1000	840.476	886.106	84	88.6	71 - 146	5.29	16
Acetone	0	ug/L	1000	921.752	941.419	92.2	94.1	40 - 151	2.11	40
Benzene	0	ug/L	200	220.47	218.41	110	109	80 - 124	.94	26
Bromobenzene	0	ug/L	200	230.987	237.174	115	119	81 - 119	2.64	17
Bromochloromethane	0	ug/L	200	214.668	212.101	107	106	73 - 117	1.2	19
Bromodichloromethane	0	ug/L	200	213.106	209.506	107	105	79 - 126	1.7	16
Bromoform	0	ug/L	200	197.003	205.262	98.5	103	70 - 123	4.11	16
Bromomethane	0	ug/L	200	128.652	130.964	64.3	65.5	45 - 148	1.78	26
Carbon Disulfide	0	ug/L	200	236.275	231.623	118	116	57 - 131	1.99	28
Carbon Tetrachloride	0	ug/L	200	253.151	247.17	127	124	62 - 132	2.39	17
Chlorobenzene	0	ug/L	200	209.225	212.238	105	106	85 - 117	1.43	15
Chlorodibromomethane	0	ug/L	200	202.55	199.02	101	99.5	77 - 122	1.76	15
Chloroethane	22.0786	ug/L	200	159.894	157.47	68.9	67.7	51 - 142	1.53	24
Chloroform	4.38989	ug/L	200	221.107	216.182	108	106	78 - 122	2.25	16
Chloromethane	0	ug/L	200	198.704	197.953	99.4	99	38 - 156	.38	27
Cyclohexane	0	ug/L	200	268.307	265.219	134*	133*	66 - 130	1.16	20
Dibromomethane	0	ug/L	200	202.709	200.289	101	100	81 - 125	1.2	16
Dichlorodifluoromethane	0	ug/L	200	145.571	146.012	72.8	73	17 - 166	.3	24
Diisopropyl ether	0	ug/L	200	198.596	201.125	99.3	101	74 - 131	1.27	15
Ethyl tert-butyl ether	0	ug/L	200	183.318	185.092	91.7	92.5	75 - 123	.96	16
Ethylbenzene	0	ug/L	200	222.717	225.75	111	113	80 - 124	1.35	19
Freon 113	0	ug/L	200	269.439	262.97	135*	131*	50 - 130	2.43	26

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Hexachlorobutadiene	0	ug/L	200	200.557	233.616	100	117	55 - 128	15.2	35
Isopropylbenzene	0	ug/L	200	246.017	256.47	123	128	73 - 129	4.16	18
Methyl acetate	0	ug/L	200	180.522	183.63	90.3	91.8	70 - 130	1.71	18
Methyl cyclohexane	0	ug/L	200	258.884	261.778	129	131*	70 - 130	1.11	18
Methyl t-Butyl Ether	0	ug/L	200	199.489	203.112	99.7	102	69 - 115	1.8	20
Methylene Chloride	0	ug/L	200	218.465	215.338	109	108	76 - 121	1.44	17
Naphthalene	0	ug/L	200	211.851	239.447	106	120	56 - 134	12.2	40
Styrene	0	ug/L	200	210.309	217.235	105	109	79 - 123	3.24	16
Tetrachloroethene	4.28829	ug/L	200	223.391	222.226	110	109	72 - 124	.52	38
Toluene	0	ug/L	200	235.488	240.894	118	120	80 - 125	2.27	20
Total Xylenes	0	ug/L	600	647.298	655.663	108	109	79 - 125	1.28	35
Trichloroethene	413.674	ug/L	200	556.643	538.511	71.5*	62.4*	77 - 124	3.31	18
Trichlorofluoromethane	0	ug/L	200	154.03	152.105	77	76.1	38 - 123	1.26	23
Vinyl Acetate	0	ug/L	200	169.411	172.606	84.7	86.3	58 - 136	1.87	17
Vinyl Chloride	0	ug/L	200	148.678	151.645	74.3	75.8	27 - 138	1.98	40
cis-1,2-Dichloroethene	22.2386	ug/L	200	242.831	238.766	110	108	78 - 125	1.69	21
cis-1,3-Dichloropropene	0	ug/L	200	170.225	175.463	85.1	87.7	81 - 121	3.03	16
mp-Xylene	0	ug/L	400	456.333	464.22	114	116	79 - 125	1.71	21
n-Butylbenzene	0	ug/L	200	177.796	202.493	88.9	101	71 - 130	13	20
n-Propylbenzene	0	ug/L	200	214.501	225.786	107	113	74 - 122	5.13	20
o-Chlorotoluene	0	ug/L	200	238.587	248.972	119	124	78 - 126	4.26	17
o-Xylene	0	ug/L	200	190.964	191.443	95.5	95.7	79 - 124	.25	19
p-Chlorotoluene	0	ug/L	200	238.22	246.973	119	123	78 - 125	3.61	16
p-Isopropyltoluene	0	ug/L	200	195.261	209.436	97.6	105	72 - 123	7.01	17
sec-Butylbenzene	0	ug/L	200	206.227	222.928	103	111	72 - 127	7.78	17
tert-Amyl methyl ether	0	ug/L	200	170.434	175.01	85.2	87.5	75 - 121	2.65	40
tert-Butyl Alcohol	0	ug/L	1000	576.886	628.949	57.7	62.9	17 - 168	8.64	40
tert-Butylbenzene	0	ug/L	200	213.364	225.316	107	113	72 - 124	5.45	17
trans-1,2-Dichloroethene	0	ug/L	200	237.826	233.284	119	117	71 - 122	1.93	22
trans-1,3-Dichloropropene	0	ug/L	200	184.708	192.331	92.4	96.2	78 - 126	4.04	18
1,2-Dichloroethane-d4 (S)	82.2	%				82.2	81.5	62 - 133		
4-Bromofluorobenzene (S)	85.7	%				85.7	87.5	79 - 114		
Dibromofluoromethane (S)	88.6	%				88.6	86.8	78 - 116		
Toluene-d8 (S)	73.4	%				73.4*	75.3*	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46608 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943014, 2308943017, 2308943020, 2308943032, 2308943033, 2308943034, 2308943035, 2308943036, 2308943037, 2308943038, 2308943039

METHOD BLANK: 2727844

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloroethane	ND	ug/L	1.0
Chloroform	0.28J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	115	%	62 - 133
4-Bromofluorobenzene (S)	98.8	%	79 - 114
Dibromofluoromethane (S)	111	%	78 - 116
Toluene-d8 (S)	100	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2727845

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	108	ug/L	20	21.6	78 - 121
1,1,1-Trichloroethane	115	ug/L	20	23.0	66 - 130
1,1,2,2-Tetrachloroethane	93.5	ug/L	20	18.7	74 - 135
1,1,2-Trichloroethane	98.4	ug/L	20	19.7	82 - 126
1,1-Dichloroethane	116	ug/L	20	23.3	78 - 124
1,1-Dichloroethene	141*	ug/L	20	28.2	63 - 128
1,2,3-Trichlorobenzene	73.5	ug/L	20	14.7	61 - 126
1,2,3-Trichloropropane	96.6	ug/L	20	19.3	75 - 132
1,2,4-Trichlorobenzene	87	ug/L	20	17.4	67 - 123
1,2,4-Trimethylbenzene	114	ug/L	20	22.7	76 - 125
1,2-Dibromo-3-chloropropane	89.8	ug/L	20	18.0	59 - 133
1,2-Dibromoethane	102	ug/L	20	20.3	80 - 124
1,2-Dichlorobenzene	100	ug/L	20	20.0	82 - 118
1,2-Dichloroethane	105	ug/L	20	21.0	70 - 133
1,2-Dichloroethene, Total	120	ug/L	40	48.1	78 - 125
1,2-Dichloropropane	101	ug/L	20	20.2	81 - 127
1,3-Dichlorobenzene	103	ug/L	20	20.6	81 - 118
1,3-Dichloropropane	101	ug/L	20	20.2	82 - 126
1,3-Dichloropropene, Total	107	ug/L	40	42.8	80 - 123
1,4-Dichlorobenzene	102	ug/L	20	20.3	81 - 116
2,2-Dichloropropane	130*	ug/L	20	26.1	64 - 129
2-Butanone	96.2	ug/L	100	96.2	50 - 152
2-Chloroethylvinyl ether	91.8	ug/L	20	18.4	1 - 150
2-Hexanone	103	ug/L	100	103	65 - 154
4-Methyl-2-Pentanone(MIBK)	103	ug/L	100	103	71 - 146
Acetone	118	ug/L	100	118	40 - 151
Benzene	116	ug/L	20	23.1	80 - 124
Bromobenzene	104	ug/L	20	20.8	81 - 119
Bromochloromethane	110	ug/L	20	22.0	73 - 117
Bromodichloromethane	101	ug/L	20	20.1	79 - 126
Bromoform	95.8	ug/L	20	19.2	70 - 123
Bromomethane	91.4	ug/L	20	18.3	45 - 148
Carbon Disulfide	141*	ug/L	20	28.2	57 - 131
Carbon Tetrachloride	118	ug/L	20	23.6	62 - 132
Chlorobenzene	102	ug/L	20	20.3	85 - 117
Chlorodibromomethane	101	ug/L	20	20.3	77 - 122
Chloroethane	80.9	ug/L	20	16.2	51 - 142
Chloroform	112	ug/L	20	22.4	78 - 122
Chloromethane	110	ug/L	20	21.9	38 - 156
Cyclohexane	151*	ug/L	20	30.2	66 - 130
Dibromomethane	100	ug/L	20	20.0	81 - 125

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	89.6	ug/L	20	17.9	17 - 166
Diisopropyl ether	123	ug/L	20	24.6	74 - 131
Ethyl tert-butyl ether	113	ug/L	20	22.5	75 - 123
Ethylbenzene	110	ug/L	20	22.0	80 - 124
Freon 113	169*	ug/L	20	33.9	50 - 130
Hexachlorobutadiene	104	ug/L	20	20.8	55 - 128
Isopropylbenzene	115	ug/L	20	23.0	73 - 129
Methyl acetate	101	ug/L	20	20.1	70 - 130
Methyl cyclohexane	117	ug/L	20	23.4	70 - 130
Methyl t-Butyl Ether	108	ug/L	20	21.6	69 - 115
Methylene Chloride	115	ug/L	20	23.0	76 - 121
Naphthalene	70	ug/L	20	14.0	56 - 134
Styrene	112	ug/L	20	22.4	79 - 123
Tetrachloroethene	110	ug/L	20	22.1	72 - 124
Toluene	110	ug/L	20	22.0	80 - 125
Total Xylenes	111	ug/L	60	66.8	79 - 125
Trichloroethene	104	ug/L	20	20.9	77 - 124
Trichlorofluoromethane	97.2	ug/L	20	19.4	38 - 123
Vinyl Acetate	103	ug/L	20	20.6	58 - 136
Vinyl Chloride	92	ug/L	20	18.4	27 - 138
cis-1,2-Dichloroethene	112	ug/L	20	22.4	78 - 125
cis-1,3-Dichloropropene	105	ug/L	20	21.0	81 - 121
mp-Xylene	113	ug/L	40	45.1	79 - 125
n-Butylbenzene	93.8	ug/L	20	18.8	71 - 130
n-Propylbenzene	113	ug/L	20	22.6	74 - 122
o-Chlorotoluene	109	ug/L	20	21.7	78 - 126
o-Xylene	108	ug/L	20	21.7	79 - 124
p-Chlorotoluene	110	ug/L	20	21.9	78 - 125
p-Isopropyltoluene	98	ug/L	20	19.6	72 - 123
sec-Butylbenzene	118	ug/L	20	23.6	72 - 127
tert-Amyl methyl ether	96.5	ug/L	20	19.3	75 - 121
tert-Butyl Alcohol	92.6	ug/L	100	92.6	17 - 168
tert-Butylbenzene	109	ug/L	20	21.9	72 - 124
trans-1,2-Dichloroethene	128*	ug/L	20	25.6	71 - 122
trans-1,3-Dichloropropene	109	ug/L	20	21.8	78 - 126
1,2-Dichloroethane-d4 (S)	114	%			62 - 133
4-Bromofluorobenzene (S)	97.5	%			79 - 114
Dibromofluoromethane (S)	107	%			78 - 116
Toluene-d8 (S)	98.5	%			76 - 127

MATRIX SPIKE: 2728027 DUPLICATE: 2728028 ORIGINAL: 2308943020

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,2-Dichloroethane-d4 (S)	108	%	108	106	62 - 133
4-Bromofluorobenzene (S)	96.2	%	96.2	95.2	79 - 114
Dibromofluoromethane (S)	103	%	103	105	78 - 116
Toluene-d8 (S)	95.6	%	95.6	97.1	76 - 127

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46611 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943031, 2308943040

METHOD BLANK: 2727879

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloroform	0.44J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	87.2	%	62 - 133
4-Bromofluorobenzene (S)	90.8	%	79 - 114
Dibromofluoromethane (S)	88.5	%	78 - 116
Toluene-d8 (S)	78.6	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2727880

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	115	ug/L	20	23.1	78 - 121
1,1,1-Trichloroethane	113	ug/L	20	22.6	66 - 130
1,1,2,2-Tetrachloroethane	105	ug/L	20	21.1	74 - 135
1,1,2-Trichloroethane	109	ug/L	20	21.9	82 - 126
1,1-Dichloroethane	108	ug/L	20	21.7	78 - 124
1,1-Dichloroethene	121	ug/L	20	24.3	63 - 128
1,2,3-Trichlorobenzene	90.6	ug/L	20	18.1	61 - 126
1,2,3-Trichloropropane	104	ug/L	20	20.9	75 - 132
1,2,4-Trichlorobenzene	80.3	ug/L	20	16.1	67 - 123
1,2,4-Trimethylbenzene	104	ug/L	20	20.7	76 - 125
1,2-Dibromo-3-chloropropane	78.3	ug/L	20	15.7	59 - 133
1,2-Dibromoethane	110	ug/L	20	22.1	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.3	82 - 118
1,2-Dichloroethane	100	ug/L	20	20.1	70 - 133
1,2-Dichloroethene, Total	110	ug/L	40	44.2	78 - 125
1,2-Dichloropropane	111	ug/L	20	22.3	81 - 127
1,3-Dichlorobenzene	111	ug/L	20	22.1	81 - 118
1,3-Dichloropropane	106	ug/L	20	21.2	82 - 126
1,3-Dichloropropene, Total	94.2	ug/L	40	37.7	80 - 123
1,4-Dichlorobenzene	105	ug/L	20	21.0	81 - 116
2,2-Dichloropropane	109	ug/L	20	21.8	64 - 129
2-Butanone	100	ug/L	100	100	50 - 152
2-Chloroethylvinyl ether	62	ug/L	20	12.4	1 - 150
2-Hexanone	78.1	ug/L	100	78.1	65 - 154
4-Methyl-2-Pentanone(MIBK)	85.1	ug/L	100	85.1	71 - 146
Acetone	96.5	ug/L	100	96.5	40 - 151
Benzene	106	ug/L	20	21.2	80 - 124
Bromobenzene	116	ug/L	20	23.2	81 - 119
Bromochloromethane	105	ug/L	20	21.1	73 - 117
Bromodichloromethane	106	ug/L	20	21.1	79 - 126
Bromoform	101	ug/L	20	20.2	70 - 123
Bromomethane	66.8	ug/L	20	13.4	45 - 148
Carbon Disulfide	113	ug/L	20	22.6	57 - 131
Carbon Tetrachloride	119	ug/L	20	23.8	62 - 132
Chlorobenzene	106	ug/L	20	21.1	85 - 117
Chlorodibromomethane	102	ug/L	20	20.3	77 - 122
Chloroethane	69.3	ug/L	20	13.9	51 - 142
Chloroform	105	ug/L	20	21.0	78 - 122
Chloromethane	91.5	ug/L	20	18.3	38 - 156
Cyclohexane	128	ug/L	20	25.5	66 - 130
Dibromomethane	97.6	ug/L	20	19.5	81 - 125

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	69.3	ug/L	20	13.9	17 - 166
Diisopropyl ether	97.8	ug/L	20	19.6	74 - 131
Ethyl tert-butyl ether	88.6	ug/L	20	17.7	75 - 123
Ethylbenzene	112	ug/L	20	22.4	80 - 124
Freon 113	129	ug/L	20	25.8	50 - 130
Hexachlorobutadiene	106	ug/L	20	21.3	55 - 128
Isopropylbenzene	123	ug/L	20	24.6	73 - 129
Methyl acetate	85.6	ug/L	20	17.1	70 - 130
Methyl cyclohexane	128	ug/L	20	25.6	70 - 130
Methyl t-Butyl Ether	99.2	ug/L	20	19.8	69 - 115
Methylene Chloride	102	ug/L	20	20.4	76 - 121
Naphthalene	108	ug/L	20	21.6	56 - 134
Styrene	107	ug/L	20	21.4	79 - 123
Tetrachloroethene	111	ug/L	20	22.2	72 - 124
Toluene	120	ug/L	20	23.9	80 - 125
Total Xylenes	108	ug/L	60	65.0	79 - 125
Trichloroethene	103	ug/L	20	20.7	77 - 124
Trichlorofluoromethane	72.7	ug/L	20	14.5	38 - 123
Vinyl Acetate	85	ug/L	20	17.0	58 - 136
Vinyl Chloride	70.7	ug/L	20	14.1	27 - 138
cis-1,2-Dichloroethene	107	ug/L	20	21.4	78 - 125
cis-1,3-Dichloropropene	90.7	ug/L	20	18.1	81 - 121
mp-Xylene	114	ug/L	40	45.8	79 - 125
n-Butylbenzene	91.4	ug/L	20	18.3	71 - 130
n-Propylbenzene	108	ug/L	20	21.5	74 - 122
o-Chlorotoluene	120	ug/L	20	24.1	78 - 126
o-Xylene	96.1	ug/L	20	19.2	79 - 124
p-Chlorotoluene	121	ug/L	20	24.1	78 - 125
p-Isopropyltoluene	101	ug/L	20	20.2	72 - 123
sec-Butylbenzene	104	ug/L	20	20.7	72 - 127
tert-Amyl methyl ether	83.7	ug/L	20	16.7	75 - 121
tert-Butyl Alcohol	55.9	ug/L	100	55.9	17 - 168
tert-Butylbenzene	107	ug/L	20	21.4	72 - 124
trans-1,2-Dichloroethene	114	ug/L	20	22.7	71 - 122
trans-1,3-Dichloropropene	97.8	ug/L	20	19.6	78 - 126
1,2-Dichloroethane-d4 (S)	84.3	%			62 - 133
4-Bromofluorobenzene (S)	90.5	%			79 - 114
Dibromofluoromethane (S)	89	%			78 - 116
Toluene-d8 (S)	77.9	%			76 - 127

MATRIX SPIKE: 2727622 DUPLICATE: 2727623 ORIGINAL: 2308629006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	22.1955	22.707	111	114	78 - 121	2.28	16
1,1,1-Trichloroethane	0	ug/L	20	24.1067	24.1901	121	121	66 - 130	.35	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	20.9887	21.502	105	108	74 - 135	2.42	16
1,1,2-Trichloroethane	0	ug/L	20	21.71	21.5148	109	108	82 - 126	.9	15
1,1-Dichloroethane	0	ug/L	20	23.292	23.5056	116	118	78 - 124	.91	15
1,1-Dichloroethene	0	ug/L	20	26.6178	26.1575	133*	131*	63 - 128	1.74	21
1,2,3-Trichlorobenzene	0	ug/L	20	21.3237	24.1033	107	121	61 - 126	12.2	36
1,2,3-Trichloropropane	0	ug/L	20	21.0952	21.5304	105	108	75 - 132	2.04	19
1,2,4-Trichlorobenzene	0	ug/L	20	18.0616	20.079	90.3	100	67 - 123	10.6	22
1,2,4-Trimethylbenzene	15.629	ug/L	20	36.2968	37.5561	103	110	76 - 125	3.41	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	16.8739	16.9044	84.4	84.5	59 - 133	.18	26
1,2-Dibromoethane	0	ug/L	20	21.69	21.9366	108	110	80 - 124	1.13	19
1,2-Dichlorobenzene	0	ug/L	20	20.7222	21.6028	104	108	82 - 118	4.16	15
1,2-Dichloroethane	0	ug/L	20	21.2353	20.7969	106	104	70 - 133	2.09	19
1,2-Dichloroethene, Total	14.3188	ug/L	40	60.1091	60.8391	114	116	78 - 125	1.21	40
1,2-Dichloropropane	0	ug/L	20	23.0247	23.1979	115	116	81 - 127	.75	15
1,3-Dichlorobenzene	0	ug/L	20	21.1411	22.0607	106	110	81 - 118	4.26	16
1,3-Dichloropropane	0	ug/L	20	21.1432	21.2272	106	106	82 - 126	.4	15
1,3-Dichloropropene, Total	0	ug/L	40	33.6265	34.0867	84.1	85.2	80 - 123	1.36	16
1,4-Dichlorobenzene	0	ug/L	20	20.6627	21.0459	103	105	81 - 116	1.84	15
2,2-Dichloropropane	0	ug/L	20	14.0862	14.3484	70.4	71.7	64 - 129	1.84	18
2-Butanone	0	ug/L	100	96.4038	105.729	96.4	106	50 - 152	9.23	16
2-Chloroethylvinyl ether	0	ug/L	20	.11935	.12859	.6*	.64*	1 - 150	7.45	40
2-Hexanone	0	ug/L	100	80.4616	83.5989	80.5	83.6	65 - 154	3.82	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	88.8476	91.8266	88.8	91.8	71 - 146	3.3	16
Acetone	0	ug/L	100	93.9599	100.144	94	100	40 - 151	6.37	40
Bromobenzene	0	ug/L	20	22.5872	22.8865	113	114	81 - 119	1.32	17
Bromochloromethane	0	ug/L	20	21.7744	20.9778	109	105	73 - 117	3.73	19
Bromodichloromethane	0	ug/L	20	21.5268	20.7288	108	104	79 - 126	3.78	16
Bromoform	0	ug/L	20	18.5277	18.5458	92.6	92.7	70 - 123	.1	16
Bromomethane	0	ug/L	20	12.8099	13.3348	64	66.7	45 - 148	4.02	26
Carbon Disulfide	0	ug/L	20	23.8943	22.9483	119	115	57 - 131	4.04	28
Carbon Tetrachloride	0	ug/L	20	25.31	25.0923	127	125	62 - 132	.86	17
Chlorobenzene	0	ug/L	20	20.8248	21.319	104	107	85 - 117	2.35	15
Chlorodibromomethane	0	ug/L	20	19.7779	19.4443	98.9	97.2	77 - 122	1.7	15
Chloroethane	0	ug/L	20	13.9039	14.6316	69.5	73.2	51 - 142	5.1	24
Chloroform	.37026	ug/L	20	22.3342	22.3718	110	110	78 - 122	.17	16
Chloromethane	1.26068	ug/L	20	20.9725	21.8635	98.6	103	38 - 156	4.16	27
Cyclohexane	8.8178	ug/L	20	34.9867	35.6546	131*	134*	66 - 130	1.89	20
Dibromomethane	0	ug/L	20	20.2919	20.2551	101	101	81 - 125	.18	16
Dichlorodifluoromethane	0	ug/L	20	15.7106	16.0306	78.6	80.2	17 - 166	2.02	24
Diisopropyl ether	0	ug/L	20	20.2762	20.5164	101	103	74 - 131	1.18	15
Ethyl tert-butyl ether	0	ug/L	20	18.2502	18.7592	91.3	93.8	75 - 123	2.75	16
Ethylbenzene	6.0773	ug/L	20	28.5938	29.4462	113	117	80 - 124	2.94	19
Freon 113	0	ug/L	20	27.263	27.5573	136*	138*	50 - 130	1.07	26
Hexachlorobutadiene	0	ug/L	20	20.6391	22.9042	103	115	55 - 128	10.4	35

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Isopropylbenzene	11.1766	ug/L	20	35.7663	37.2257	123	130*	73 - 129	4	18
Methyl acetate	0	ug/L	20	12.2745	12.8225	61.4*	64.1*	70 - 130	4.37	18
Methyl cyclohexane	0	ug/L	20	29.117	29.6168	146*	148*	70 - 130	1.7	18
Methyl t-Butyl Ether	29.6781	ug/L	20	49.8624	51.1522	101	107	69 - 115	2.55	20
Methylene Chloride	0	ug/L	20	22.4118	21.6977	112	108	76 - 121	3.24	17
Naphthalene	23.404	ug/L	20	48.4418	54.8853	125	157*	56 - 134	12.5	40
Styrene	0	ug/L	20	21.038	21.4251	105	107	79 - 123	1.82	16
Tetrachloroethene	0	ug/L	20	21.7738	22.2692	109	111	72 - 124	2.25	38
Toluene	1.71447	ug/L	20	25.442	25.7584	119	120	80 - 125	1.24	20
Total Xylenes	113.91	ug/L	60	168.552	173.445	91.1	99.2	79 - 125	2.86	35
Trichloroethene	13.4704	ug/L	20	34.4984	34.6671	105	106	77 - 124	.49	18
Trichlorofluoromethane	0	ug/L	20	15.8692	15.9677	79.3	79.8	38 - 123	.62	23
Vinyl Acetate	0	ug/L	20	9.67071	9.54253	48.4*	47.7*	58 - 136	1.33	17
Vinyl Chloride	.92015	ug/L	20	16.3006	16.905	76.9	79.9	27 - 138	3.64	40
cis-1,2-Dichloroethene	12.6131	ug/L	20	34.1736	34.8331	108	111	78 - 125	1.91	21
cis-1,3-Dichloropropene	0	ug/L	20	16.1237	16.2429	80.6*	81.2	81 - 121	.74	16
mp-Xylene	35.3356	ug/L	40	79.3458	81.2391	110	115	79 - 125	2.36	21
n-Butylbenzene	0	ug/L	20	20.4145	22.0657	102	110	71 - 130	7.77	20
n-Propylbenzene	4.23045	ug/L	20	25.8004	26.5139	108	111	74 - 122	2.73	20
o-Chlorotoluene	0	ug/L	20	24.7385	25.6196	124	128*	78 - 126	3.5	17
o-Xylene	78.5745	ug/L	20	89.2057	92.2061	53.2*	68.2*	79 - 124	3.31	19
p-Chlorotoluene	0	ug/L	20	23.2389	24.06	116	120	78 - 125	3.47	16
p-Isopropyltoluene	0	ug/L	20	21.1345	22.6161	106	113	72 - 123	6.77	17
sec-Butylbenzene	2.00562	ug/L	20	22.828	24.0955	104	110	72 - 127	5.4	17
tert-Amyl methyl ether	0	ug/L	20	18.1431	18.0811	90.7	90.4	75 - 121	.34	40
tert-Butyl Alcohol	3.06043	ug/L	100	61.848	69.1997	58.8	66.1	17 - 168	11.2	40
tert-Butylbenzene	0	ug/L	20	21.2971	22.4446	106	112	72 - 124	5.25	17
trans-1,2-Dichloroethene	1.70566	ug/L	20	25.9356	26.0059	121	122	71 - 122	.27	22
trans-1,3-Dichloropropene	0	ug/L	20	17.5028	17.8438	87.5	89.2	78 - 126	1.93	18
1,2-Dichloroethane-d4 (S)	78.6	%				78.6	83.3	62 - 133		
4-Bromofluorobenzene (S)	86.2	%				86.2	86.3	79 - 114		
Dibromofluoromethane (S)	90.6	%				90.6	88	78 - 116		
Toluene-d8 (S)	75	%				75*	76.2	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46617 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943024

METHOD BLANK: 2728421

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.3	%	62 - 133
4-Bromofluorobenzene (S)	93.7	%	79 - 114
Dibromofluoromethane (S)	90.4	%	78 - 116
Toluene-d8 (S)	80.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2728422

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	110	ug/L	20	22.0	78 - 121
1,1,1-Trichloroethane	115	ug/L	20	23.0	66 - 130
1,1,2,2-Tetrachloroethane	105	ug/L	20	21.1	74 - 135
1,1,2-Trichloroethane	108	ug/L	20	21.6	82 - 126
1,1-Dichloroethane	112	ug/L	20	22.4	78 - 124
1,1-Dichloroethene	124	ug/L	20	24.8	63 - 128
1,2,3-Trichlorobenzene	87.7	ug/L	20	17.5	61 - 126
1,2,3-Trichloropropane	105	ug/L	20	21.0	75 - 132
1,2,4-Trichlorobenzene	74.7	ug/L	20	14.9	67 - 123
1,2,4-Trimethylbenzene	102	ug/L	20	20.5	76 - 125
1,2-Dibromo-3-chloropropane	74.6	ug/L	20	14.9	59 - 133
1,2-Dibromoethane	107	ug/L	20	21.5	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.2	82 - 118
1,2-Dichloroethane	104	ug/L	20	20.7	70 - 133
1,2-Dichloroethene, Total	113	ug/L	40	45.2	78 - 125
1,2-Dichloropropane	113	ug/L	20	22.6	81 - 127
1,3-Dichlorobenzene	107	ug/L	20	21.3	81 - 118
1,3-Dichloropropane	107	ug/L	20	21.3	82 - 126
1,3-Dichloropropene, Total	88.7	ug/L	40	35.5	80 - 123
1,4-Dichlorobenzene	103	ug/L	20	20.5	81 - 116
2,2-Dichloropropane	83.3	ug/L	20	16.7	64 - 129
2-Butanone	98.5	ug/L	100	98.5	50 - 152
2-Chloroethylvinyl ether	61	ug/L	20	12.2	1 - 150
2-Hexanone	78.4	ug/L	100	78.4	65 - 154
4-Methyl-2-Pentanone(MIBK)	87.3	ug/L	100	87.3	71 - 146
Acetone	87.9	ug/L	100	87.9	40 - 151
Benzene	106	ug/L	20	21.2	80 - 124
Bromobenzene	114	ug/L	20	22.8	81 - 119
Bromochloromethane	106	ug/L	20	21.2	73 - 117
Bromodichloromethane	105	ug/L	20	21.1	79 - 126
Bromoform	87.9	ug/L	20	17.6	70 - 123
Bromomethane	70.6	ug/L	20	14.1	45 - 148
Carbon Disulfide	109	ug/L	20	21.8	57 - 131
Carbon Tetrachloride	120	ug/L	20	24.0	62 - 132
Chlorobenzene	103	ug/L	20	20.7	85 - 117
Chlorodibromomethane	95.8	ug/L	20	19.2	77 - 122
Chloroethane	69.7	ug/L	20	13.9	51 - 142
Chloroform	109	ug/L	20	21.8	78 - 122
Chloromethane	91.4	ug/L	20	18.3	38 - 156
Cyclohexane	130	ug/L	20	25.9	66 - 130
Dibromomethane	101	ug/L	20	20.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	68.6	ug/L	20	13.7	17 - 166
Diisopropyl ether	101	ug/L	20	20.3	74 - 131
Ethyl tert-butyl ether	91.3	ug/L	20	18.3	75 - 123
Ethylbenzene	110	ug/L	20	22.0	80 - 124
Freon 113	129	ug/L	20	25.9	50 - 130
Hexachlorobutadiene	100	ug/L	20	20.0	55 - 128
Isopropylbenzene	122	ug/L	20	24.3	73 - 129
Methyl acetate	94.8	ug/L	20	19.0	70 - 130
Methyl cyclohexane	120	ug/L	20	24.1	70 - 130
Methyl t-Butyl Ether	102	ug/L	20	20.4	69 - 115
Methylene Chloride	106	ug/L	20	21.2	76 - 121
Naphthalene	104	ug/L	20	20.8	56 - 134
Styrene	104	ug/L	20	20.8	79 - 123
Tetrachloroethene	112	ug/L	20	22.4	72 - 124
Toluene	118	ug/L	20	23.5	80 - 125
Total Xylenes	106	ug/L	60	63.7	79 - 125
Trichloroethene	103	ug/L	20	20.6	77 - 124
Trichlorofluoromethane	72.7	ug/L	20	14.5	38 - 123
Vinyl Acetate	78.9	ug/L	20	15.8	58 - 136
Vinyl Chloride	71.3	ug/L	20	14.3	27 - 138
cis-1,2-Dichloroethene	108	ug/L	20	21.6	78 - 125
cis-1,3-Dichloropropene	85.2	ug/L	20	17.0	81 - 121
mp-Xylene	113	ug/L	40	45.0	79 - 125
n-Butylbenzene	86.4	ug/L	20	17.3	71 - 130
n-Propylbenzene	105	ug/L	20	21.0	74 - 122
o-Chlorotoluene	118	ug/L	20	23.7	78 - 126
o-Xylene	93.4	ug/L	20	18.7	79 - 124
p-Chlorotoluene	118	ug/L	20	23.5	78 - 125
p-Isopropyltoluene	96.9	ug/L	20	19.4	72 - 123
sec-Butylbenzene	102	ug/L	20	20.3	72 - 127
tert-Amyl methyl ether	87.4	ug/L	20	17.5	75 - 121
tert-Butyl Alcohol	47.6	ug/L	100	47.6	17 - 168
tert-Butylbenzene	102	ug/L	20	20.5	72 - 124
trans-1,2-Dichloroethene	118	ug/L	20	23.6	71 - 122
trans-1,3-Dichloropropene	92.2	ug/L	20	18.4	78 - 126
1,2-Dichloroethane-d4 (S)	82.9	%			62 - 133
4-Bromofluorobenzene (S)	92.7	%			79 - 114
Dibromofluoromethane (S)	93.7	%			78 - 116
Toluene-d8 (S)	80.4	%			76 - 127

MATRIX SPIKE: 2728934 DUPLICATE: 2728935 ORIGINAL: 2308629006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,1,1,2-Tetrachloroethane	0	ug/L	200	227.214	227.236	114	114	78 - 121	.01	16
1,1,1-Trichloroethane	0	ug/L	200	242.924	240.61	121	120	66 - 130	.96	20
1,1,2,2-Tetrachloroethane	0	ug/L	200	215.429	213.171	108	107	74 - 135	1.05	16
1,1,2-Trichloroethane	0	ug/L	200	217.44	218.916	109	109	82 - 126	.68	15
1,1-Dichloroethane	0	ug/L	200	231.837	229.585	116	115	78 - 124	.98	15
1,1-Dichloroethene	0	ug/L	200	258.616	254.213	129*	127	63 - 128	1.72	21
1,2,3-Trichlorobenzene	0	ug/L	200	196.48	212.093	98.2	106	61 - 126	7.64	36
1,2,3-Trichloropropane	0	ug/L	200	220.249	210.987	110	105	75 - 132	4.3	19
1,2,4-Trichlorobenzene	0	ug/L	200	162.396	181.906	81.2	91	67 - 123	11.3	22
1,2,4-Trimethylbenzene	8.30985	ug/L	200	228.199	240.462	110	116	76 - 125	5.23	24
1,2-Dibromo-3-chloropropane	0	ug/L	200	160.199	163.526	80.1	81.8	59 - 133	2.06	26
1,2-Dibromoethane	0	ug/L	200	214.091	215.077	107	108	80 - 124	.46	19
1,2-Dichlorobenzene	0	ug/L	200	214.611	222.493	107	111	82 - 118	3.61	15
1,2-Dichloroethane	0	ug/L	200	206.828	202.804	103	101	70 - 133	1.96	19
1,2-Dichloroethene, Total	11.0077	ug/L	400	486.346	480.68	119	117	78 - 125	1.17	40
1,2-Dichloropropane	0	ug/L	200	225.074	233.185	113	117	81 - 127	3.54	15
1,3-Dichlorobenzene	0	ug/L	200	222.346	228.485	111	114	81 - 118	2.72	16
1,3-Dichloropropane	0	ug/L	200	210.032	213.18	105	107	82 - 126	1.49	15
1,3-Dichloropropene, Total	0	ug/L	400	362.809	369.596	90.7	92.4	80 - 123	1.85	16
1,4-Dichlorobenzene	0	ug/L	200	213.457	220.415	107	110	81 - 116	3.21	15
2,2-Dichloropropane	0	ug/L	200	213.384	212.184	107	106	64 - 129	.56	18
2-Butanone	0	ug/L	1000	1013.77	958.345	101	95.8	50 - 152	5.62	16
2-Chloroethylvinyl ether	0	ug/L	200	1.22314	.86182	.61*	.43*	1 - 150	34.7	40
2-Hexanone	0	ug/L	1000	787.665	776.266	78.8	77.6	65 - 154	1.46	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	1000	875.069	864.491	87.5	86.4	71 - 146	1.22	16
Acetone	0	ug/L	1000	900.501	849.055	90.1	84.9	40 - 151	5.88	40
Benzene	526.573	ug/L	200	751.484	745.801	112	110	80 - 124	.76	26
Bromobenzene	0	ug/L	200	232.154	234.346	116	117	81 - 119	.94	17
Bromochloromethane	0	ug/L	200	208.37	204.364	104	102	73 - 117	1.94	19
Bromodichloromethane	0	ug/L	200	215.345	213.491	108	107	79 - 126	.86	16
Bromoform	0	ug/L	200	171.995	173.56	86	86.8	70 - 123	.91	16
Bromomethane	0	ug/L	200	139.041	136.539	69.5	68.3	45 - 148	1.82	26
Carbon Disulfide	0	ug/L	200	226.82	218.34	113	109	57 - 131	3.81	28
Carbon Tetrachloride	0	ug/L	200	253.045	253.625	127	127	62 - 132	.23	17
Chlorobenzene	0	ug/L	200	211.484	215.408	106	108	85 - 117	1.84	15
Chlorodibromomethane	0	ug/L	200	184.507	192.981	92.3	96.5	77 - 122	4.49	15
Chloroethane	0	ug/L	200	153.658	151.074	76.8	75.5	51 - 142	1.7	24
Chloroform	4.36504	ug/L	200	221.843	223.206	109	109	78 - 122	.61	16
Chloromethane	0	ug/L	200	210.817	207.81	105	104	38 - 156	1.44	27
Cyclohexane	6.92514	ug/L	200	275.874	281.448	134*	137*	66 - 130	2	20
Dibromomethane	0	ug/L	200	204.557	203.09	102	102	81 - 125	.72	16
Dichlorodifluoromethane	0	ug/L	200	166.091	165.2	83	82.6	17 - 166	.54	24
Diisopropyl ether	0	ug/L	200	200.587	201.359	100	101	74 - 131	.38	15
Ethyl tert-butyl ether	0	ug/L	200	178.742	179.56	89.4	89.8	75 - 123	.46	16
Ethylbenzene	4.90095	ug/L	200	231.96	241.086	114	118	80 - 124	3.86	19
Freon 113	0	ug/L	200	267.536	268.063	134*	134*	50 - 130	.2	26

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Hexachlorobutadiene	0	ug/L	200	227.952	225.087	114	113	55 - 128	1.26	35
Isopropylbenzene	7.8548	ug/L	200	265.349	276.009	129	134*	73 - 129	3.94	18
Methyl acetate	0	ug/L	200	184.323	177.989	92.2	89	70 - 130	3.5	18
Methyl cyclohexane	0	ug/L	200	262.023	275.72	131*	138*	70 - 130	5.09	18
Methyl t-Butyl Ether	24.9342	ug/L	200	226.37	227.109	101	101	69 - 115	.33	20
Methylene Chloride	0	ug/L	200	215.417	211.711	108	106	76 - 121	1.74	17
Naphthalene	0	ug/L	200	249.004	262.176	125	131	56 - 134	5.15	40
Styrene	0	ug/L	200	216.868	218.222	108	109	79 - 123	.62	16
Tetrachloroethene	0	ug/L	200	223.019	229.641	112	115	72 - 124	2.93	38
Toluene	0	ug/L	200	240.535	244.727	120	122	80 - 125	1.73	20
Total Xylenes	74.6573	ug/L	600	744.727	769.777	112	116	79 - 125	3.31	35
Trichloroethene	14.7491	ug/L	200	229.05	224.567	107	105	77 - 124	1.98	18
Trichlorofluoromethane	0	ug/L	200	167.007	165.226	83.5	82.6	38 - 123	1.07	23
Vinyl Acetate	0	ug/L	200	165.038	162.618	82.5	81.3	58 - 136	1.48	17
Vinyl Chloride	0	ug/L	200	163.096	163.185	81.5	81.6	27 - 138	.05	40
cis-1,2-Dichloroethene	11.0077	ug/L	200	240.345	236.848	115	113	78 - 125	1.47	21
cis-1,3-Dichloropropene	0	ug/L	200	171.664	175.712	85.8	87.9	81 - 121	2.33	16
mp-Xylene	23.2991	ug/L	400	491.393	505.957	117	121	79 - 125	2.92	21
n-Butylbenzene	0	ug/L	200	197.128	208.904	98.6	104	71 - 130	5.8	20
n-Propylbenzene	0	ug/L	200	226.673	242.556	113	121	74 - 122	6.77	20
o-Chlorotoluene	0	ug/L	200	247.008	254.613	124	127*	78 - 126	3.03	17
o-Xylene	51.3581	ug/L	200	253.334	263.821	101	106	79 - 124	4.06	19
p-Chlorotoluene	0	ug/L	200	244.327	248.621	122	124	78 - 125	1.74	16
p-Isopropyltoluene	0	ug/L	200	207.307	219.636	104	110	72 - 123	5.78	17
sec-Butylbenzene	0	ug/L	200	222.009	231.639	111	116	72 - 127	4.25	17
tert-Amyl methyl ether	0	ug/L	200	176.85	179.059	88.4	89.5	75 - 121	1.24	40
tert-Butyl Alcohol	0	ug/L	1000	549.856	491.124	55	49.1	17 - 168	11.3	40
tert-Butylbenzene	0	ug/L	200	218.449	233.33	109	117	72 - 124	6.59	17
trans-1,2-Dichloroethene	0	ug/L	200	246.001	243.832	123*	122	71 - 122	.89	22
trans-1,3-Dichloropropene	0	ug/L	200	191.145	193.884	95.6	96.9	78 - 126	1.42	18
1,2-Dichloroethane-d4 (S)	91.3	%				91.3	90.9	62 - 133		
4-Bromofluorobenzene (S)	92	%				92	92.9	79 - 114		
Dibromofluoromethane (S)	95.3	%				95.3	94.4	78 - 116		
Toluene-d8 (S)	79.9	%				79.9	81	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46623 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943020, 2308943037, 2308943038, 2308943039

METHOD BLANK: 2728888

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	113	%	62 - 133
4-Bromofluorobenzene (S)	92.1	%	79 - 114
Dibromofluoromethane (S)	97.4	%	78 - 116
Toluene-d8 (S)	95.4	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2728889

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	95.6	ug/L	20	19.1	78 - 121
1,1,1-Trichloroethane	99.3	ug/L	20	19.9	66 - 130
1,1,2,2-Tetrachloroethane	91.2	ug/L	20	18.2	74 - 135
1,1,2-Trichloroethane	92.1	ug/L	20	18.4	82 - 126
1,1-Dichloroethane	98.6	ug/L	20	19.7	78 - 124
1,1-Dichloroethene	128	ug/L	20	25.6	63 - 128
1,2,3-Trichlorobenzene	82.6	ug/L	20	16.5	61 - 126
1,2,3-Trichloropropane	90.5	ug/L	20	18.1	75 - 132
1,2,4-Trichlorobenzene	88.6	ug/L	20	17.7	67 - 123
1,2,4-Trimethylbenzene	96.2	ug/L	20	19.2	76 - 125
1,2-Dibromo-3-chloropropane	89.5	ug/L	20	17.9	59 - 133
1,2-Dibromoethane	91.7	ug/L	20	18.3	80 - 124
1,2-Dichlorobenzene	93.3	ug/L	20	18.7	82 - 118
1,2-Dichloroethane	97.1	ug/L	20	19.4	70 - 133
1,2-Dichloroethene, Total	100	ug/L	40	40.1	78 - 125
1,2-Dichloropropane	96.9	ug/L	20	19.4	81 - 127
1,3-Dichlorobenzene	94.9	ug/L	20	19.0	81 - 118
1,3-Dichloropropane	92.3	ug/L	20	18.5	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.1	80 - 123
1,4-Dichlorobenzene	91.5	ug/L	20	18.3	81 - 116
2,2-Dichloropropane	105	ug/L	20	21.0	64 - 129
2-Butanone	101	ug/L	100	101	50 - 152
2-Chloroethylvinyl ether	88.2	ug/L	20	17.6	1 - 150
2-Hexanone	89.3	ug/L	100	89.3	65 - 154
4-Methyl-2-Pentanone(MIBK)	94.5	ug/L	100	94.5	71 - 146
Acetone	139	ug/L	100	139	40 - 151
Benzene	99.5	ug/L	20	19.9	80 - 124
Bromobenzene	97.2	ug/L	20	19.4	81 - 119
Bromochloromethane	93.9	ug/L	20	18.8	73 - 117
Bromodichloromethane	96.5	ug/L	20	19.3	79 - 126
Bromoform	90.4	ug/L	20	18.1	70 - 123
Bromomethane	83.3	ug/L	20	16.7	45 - 148
Carbon Disulfide	138*	ug/L	20	27.7	57 - 131
Carbon Tetrachloride	106	ug/L	20	21.3	62 - 132
Chlorobenzene	94.7	ug/L	20	18.9	85 - 117
Chlorodibromomethane	96.8	ug/L	20	19.4	77 - 122
Chloroethane	88.3	ug/L	20	17.7	51 - 142
Chloroform	103	ug/L	20	20.5	78 - 122
Chloromethane	78.5	ug/L	20	15.7	38 - 156
Cyclohexane	117	ug/L	20	23.3	66 - 130
Dibromomethane	90.4	ug/L	20	18.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Dichlorodifluoromethane	69.7	ug/L	20	13.9	17 - 166
Diisopropyl ether	106	ug/L	20	21.2	74 - 131
Ethyl tert-butyl ether	103	ug/L	20	20.6	75 - 123
Ethylbenzene	95.8	ug/L	20	19.2	80 - 124
Freon 113	134*	ug/L	20	26.7	50 - 130
Hexachlorobutadiene	95	ug/L	20	19.0	55 - 128
Isopropylbenzene	105	ug/L	20	21.0	73 - 129
Methyl acetate	94	ug/L	20	18.8	70 - 130
Methyl cyclohexane	109	ug/L	20	21.7	70 - 130
Methyl t-Butyl Ether	96.2	ug/L	20	19.2	69 - 115
Methylene Chloride	126*	ug/L	20	25.2	76 - 121
Naphthalene	82.4	ug/L	20	16.5	56 - 134
Styrene	101	ug/L	20	20.2	79 - 123
Tetrachloroethene	97.3	ug/L	20	19.5	72 - 124
Toluene	101	ug/L	20	20.2	80 - 125
Total Xylenes	99.6	ug/L	60	59.7	79 - 125
Trichloroethene	103	ug/L	20	20.5	77 - 124
Trichlorofluoromethane	85.8	ug/L	20	17.2	38 - 123
Vinyl Acetate	93.1	ug/L	20	18.6	58 - 136
Vinyl Chloride	76.8	ug/L	20	15.4	27 - 138
cis-1,2-Dichloroethene	95.4	ug/L	20	19.1	78 - 125
cis-1,3-Dichloropropene	98	ug/L	20	19.6	81 - 121
mp-Xylene	99.6	ug/L	40	39.9	79 - 125
n-Butylbenzene	88.3	ug/L	20	17.7	71 - 130
n-Propylbenzene	102	ug/L	20	20.5	74 - 122
o-Chlorotoluene	99.9	ug/L	20	20.0	78 - 126
o-Xylene	99.5	ug/L	20	19.9	79 - 124
p-Chlorotoluene	99.7	ug/L	20	19.9	78 - 125
p-Isopropyltoluene	90.7	ug/L	20	18.1	72 - 123
sec-Butylbenzene	101	ug/L	20	20.3	72 - 127
tert-Amyl methyl ether	88.7	ug/L	20	17.7	75 - 121
tert-Butyl Alcohol	87.2	ug/L	100	87.2	17 - 168
tert-Butylbenzene	91.2	ug/L	20	18.2	72 - 124
trans-1,2-Dichloroethene	105	ug/L	20	21.1	71 - 122
trans-1,3-Dichloropropene	102	ug/L	20	20.4	78 - 126
1,2-Dichloroethane-d4 (S)	108	%			62 - 133
4-Bromofluorobenzene (S)	90.6	%			79 - 114
Dibromofluoromethane (S)	94	%			78 - 116
Toluene-d8 (S)	93.7	%			76 - 127

MATRIX SPIKE: 2728943 DUPLICATE: 2728944 ORIGINAL: 2308943020

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	19.804	19.8791	99	99.4	78 - 121	.38	16
1,1,1-Trichloroethane	0	ug/L	20	20.4502	20.1874	102	101	66 - 130	1.29	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	19.7645	19.4404	98.8	97.2	74 - 135	1.65	16
1,1,2-Trichloroethane	0	ug/L	20	19.3824	19.1417	96.9	95.7	82 - 126	1.25	15
1,1-Dichloroethane	1.11124	ug/L	20	21.679	21.1496	103	100	78 - 124	2.47	15
1,1-Dichloroethene	.38634	ug/L	20	21.2526	19.8649	104	97.4	63 - 128	6.75	21
1,2,3-Trichlorobenzene	0	ug/L	20	17.8009	20.0233	89	100	61 - 126	11.8	36
1,2,3-Trichloropropane	0	ug/L	20	19.9673	19.6925	99.8	98.5	75 - 132	1.39	19
1,2,4-Trichlorobenzene	0	ug/L	20	18.3545	20.0129	91.8	100	67 - 123	8.64	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.5649	19.8268	97.8	99.1	76 - 125	1.33	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	19.2486	19.2299	96.2	96.1	59 - 133	.1	26
1,2-Dibromoethane	0	ug/L	20	19.5969	19.1475	98	95.7	80 - 124	2.32	19
1,2-Dichlorobenzene	0	ug/L	20	19.5548	19.5729	97.8	97.9	82 - 118	.09	15
1,2-Dichloroethane	0	ug/L	20	20.2115	19.874	101	99.4	70 - 133	1.68	19
1,2-Dichloroethene, Total	1.04477	ug/L	40	42.5345	42.0757	104	103	78 - 125	1.08	40
1,2-Dichloropropane	0	ug/L	20	20.6019	21.0575	103	105	81 - 127	2.19	15
1,3-Dichlorobenzene	0	ug/L	20	19.6525	19.8578	98.3	99.3	81 - 118	1.04	16
1,3-Dichloropropane	0	ug/L	20	19.4544	19.1872	97.3	95.9	82 - 126	1.38	15
1,3-Dichloropropene, Total	0	ug/L	40	40.7372	40.4682	102	101	80 - 123	.66	16
1,4-Dichlorobenzene	0	ug/L	20	19.118	19.3154	95.6	96.6	81 - 116	1.03	15
2,2-Dichloropropane	0	ug/L	20	19.5027	18.716	97.5	93.6	64 - 129	4.12	18
2-Butanone	0	ug/L	100	106.054	108.454	106	108	50 - 152	2.24	16
2-Chloroethylvinyl ether	0	ug/L	20	.12582	.08564	.63*	.43*	1 - 150	38	40
2-Hexanone	0	ug/L	100	99.5593	104.13	99.6	104	65 - 154	4.49	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	108.428	109.46	108	109	71 - 146	.95	16
Acetone	7.23321	ug/L	100	110.633	117.314	103	110	40 - 151	5.86	40
Benzene	0	ug/L	20	20.1779	20.047	101	100	80 - 124	.65	26
Bromobenzene	0	ug/L	20	19.7594	20.0698	98.8	100	81 - 119	1.56	17
Bromochloromethane	0	ug/L	20	19.8437	19.472	99.2	97.4	73 - 117	1.89	19
Bromodichloromethane	0	ug/L	20	20.2158	20.1284	101	101	79 - 126	.43	16
Bromoform	0	ug/L	20	19.5272	19.2934	97.6	96.5	70 - 123	1.2	16
Bromomethane	0	ug/L	20	17.309	11.743	86.5	58.7	45 - 148	38.3	26
Carbon Disulfide	0	ug/L	20	22.1844	20.2877	111	101	57 - 131	8.93	28
Carbon Tetrachloride	0	ug/L	20	21.5385	21.4685	108	107	62 - 132	.33	17
Chlorobenzene	0	ug/L	20	20.0955	19.6495	100	98.2	85 - 117	2.24	15
Chlorodibromomethane	0	ug/L	20	20.3144	19.7982	102	99	77 - 122	2.57	15
Chloroethane	0	ug/L	20	19.4635	14.0781	97.3	70.4	51 - 142	32.1	24
Chloroform	0	ug/L	20	21.0431	20.4965	105	102	78 - 122	2.63	16
Chloromethane	0	ug/L	20	16.935	14.3097	84.7	71.5	38 - 156	16.8	27
Cyclohexane	0	ug/L	20	21.4571	21.3828	107	107	66 - 130	.35	20
Dibromomethane	0	ug/L	20	19.4894	18.6052	97.4	93	81 - 125	4.64	16
Dichlorodifluoromethane	0	ug/L	20	13.7824	12.5034	68.9	62.5	17 - 166	9.73	24
Diisopropyl ether	0	ug/L	20	21.2732	21.5216	106	108	74 - 131	1.16	15
Ethyl tert-butyl ether	0	ug/L	20	21.2419	21.3919	106	107	75 - 123	.7	16
Ethylbenzene	0	ug/L	20	19.8015	19.6274	99	98.1	80 - 124	.88	19
Freon 113	0	ug/L	20	20.0899	19.5474	100	97.7	50 - 130	2.74	26

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Hexachlorobutadiene	0	ug/L	20	19.1198	19.0328	95.6	95.2	55 - 128	.46	35
Isopropylbenzene	0	ug/L	20	21.6226	21.644	108	108	73 - 129	.1	18
Methyl acetate	0	ug/L	20	16.8128	17.1224	84.1	85.6	70 - 130	1.82	18
Methyl cyclohexane	0	ug/L	20	20.091	23.6507	100	118	70 - 130	16.3	18
Methyl t-Butyl Ether	0	ug/L	20	19.5665	19.9155	97.8	99.6	69 - 115	1.77	20
Methylene Chloride	0	ug/L	20	20.6345	20.9205	103	105	76 - 121	1.38	17
Naphthalene	0	ug/L	20	17.9386	19.9877	89.7	99.9	56 - 134	10.8	40
Styrene	0	ug/L	20	21.1336	21.0213	106	105	79 - 123	.53	16
Tetrachloroethene	0	ug/L	20	19.7349	18.6285	98.7	93.1	72 - 124	5.77	38
Toluene	0	ug/L	20	20.8713	19.9655	104	99.8	80 - 125	4.44	20
Total Xylenes	0	ug/L	60	62.2308	61.4417	104	102	79 - 125	1.28	35
Trichloroethene	1.06609	ug/L	20	22.7875	21.6578	109	103	77 - 124	5.08	18
Trichlorofluoromethane	0	ug/L	20	17.4876	14.1272	87.4	70.6	38 - 123	21.3	23
Vinyl Acetate	0	ug/L	20	17.9898	16.9383	89.9	84.7	58 - 136	6.02	17
Vinyl Chloride	.37244	ug/L	20	16.7986	13.3553	82.1	64.9	27 - 138	22.8	40
cis-1,2-Dichloroethene	1.04477	ug/L	20	21.0542	20.7318	100	98.4	78 - 125	1.54	21
cis-1,3-Dichloropropene	0	ug/L	20	19.4878	19.3168	97.4	96.6	81 - 121	.88	16
mp-Xylene	0	ug/L	40	41.6616	40.9489	104	102	79 - 125	1.73	21
n-Butylbenzene	0	ug/L	20	17.8233	18.8399	89.1	94.2	71 - 130	5.55	20
n-Propylbenzene	0	ug/L	20	21.0389	21.4096	105	107	74 - 122	1.75	20
o-Chlorotoluene	0	ug/L	20	20.4998	20.6855	102	103	78 - 126	.9	17
o-Xylene	0	ug/L	20	20.5693	20.4928	103	102	79 - 124	.37	19
p-Chlorotoluene	0	ug/L	20	20.533	20.6703	103	103	78 - 125	.67	16
p-Isopropyltoluene	0	ug/L	20	18.2645	19.5715	91.3	97.9	72 - 123	6.91	17
sec-Butylbenzene	0	ug/L	20	20.4519	21.592	102	108	72 - 127	5.42	17
tert-Amyl methyl ether	0	ug/L	20	18.2452	18.2839	91.2	91.4	75 - 121	.21	40
tert-Butyl Alcohol	5.64563	ug/L	100	128.453	144.122	123	138	17 - 168	11.5	40
tert-Butylbenzene	0	ug/L	20	18.4525	19.3618	92.3	96.8	72 - 124	4.81	17
trans-1,2-Dichloroethene	0	ug/L	20	21.4803	21.3439	107	107	71 - 122	.64	22
trans-1,3-Dichloropropene	0	ug/L	20	21.2493	21.1515	106	106	78 - 126	.46	18
1,2-Dichloroethane-d4 (S)	110	%				110	107	62 - 133		
4-Bromofluorobenzene (S)	88.5	%				88.5	90.3	79 - 114		
Dibromofluoromethane (S)	93.4	%				93.4	92.4	78 - 116		
Toluene-d8 (S)	93.2	%				93.2	92.5	76 - 127		

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: VOMS/46641 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2308943011, 2308943028, 2308943029

METHOD BLANK: 2730033

Parameter	Blank Result	Units	Reporting Limit
1,2-Dichloroethene, Total	ND	ug/L	2.0
Trichloroethene	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	100	%	62 - 133
4-Bromofluorobenzene (S)	89.4	%	79 - 114
Dibromofluoromethane (S)	96.8	%	78 - 116
Toluene-d8 (S)	80.1	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

LABORATORY CONTROL SAMPLE: 2730034

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2-Dichloroethene, Total	100	ug/L	40	40.1	78 - 125
Trichloroethene	94.5	ug/L	20	18.9	77 - 124
cis-1,2-Dichloroethene	97.7	ug/L	20	19.5	78 - 125
1,1,1,2-Tetrachloroethane	104	ug/L	20	20.8	78 - 121
1,1,1-Trichloroethane	109	ug/L	20	21.8	66 - 130
1,1,2,2-Tetrachloroethane	90.3	ug/L	20	18.1	74 - 135
1,1,2-Trichloroethane	96.8	ug/L	20	19.4	82 - 126
1,1-Dichloroethane	100	ug/L	20	20.1	78 - 124
1,1-Dichloroethene	113	ug/L	20	22.6	63 - 128
1,2,3-Trichlorobenzene	66.2	ug/L	20	13.2	61 - 126
1,2,3-Trichloropropane	95.9	ug/L	20	19.2	75 - 132
1,2,4-Trichlorobenzene	61.3*	ug/L	20	12.3	67 - 123
1,2,4-Trimethylbenzene	87.6	ug/L	20	17.5	76 - 125
1,2-Dibromo-3-chloropropane	60.7	ug/L	20	12.1	59 - 133
1,2-Dibromoethane	95.5	ug/L	20	19.1	80 - 124
1,2-Dichlorobenzene	92.6	ug/L	20	18.5	82 - 118
1,2-Dichloroethane	99.4	ug/L	20	19.9	70 - 133
1,2-Dichloropropane	97.8	ug/L	20	19.6	81 - 127
1,3-Dichlorobenzene	96.7	ug/L	20	19.3	81 - 118
1,3-Dichloropropane	92.1	ug/L	20	18.4	82 - 126
1,3-Dichloropropene, Total	80.2	ug/L	40	32.1	80 - 123
1,4-Dichlorobenzene	94.4	ug/L	20	18.9	81 - 116
2,2-Dichloropropane	98.5	ug/L	20	19.7	64 - 129
2-Butanone	89.2	ug/L	100	89.2	50 - 152
2-Chloroethylvinyl ether	48.6	ug/L	20	9.7	1 - 150
2-Hexanone	65	ug/L	100	65.0	65 - 154
4-Methyl-2-Pentanone(MIBK)	73.6	ug/L	100	73.6	71 - 146
Acetone	72.7	ug/L	100	72.7	40 - 151
Benzene	97.1	ug/L	20	19.4	80 - 124
Bromobenzene	102	ug/L	20	20.4	81 - 119
Bromochloromethane	98.9	ug/L	20	19.8	73 - 117
Bromodichloromethane	97.8	ug/L	20	19.6	79 - 126
Bromoform	81.2	ug/L	20	16.2	70 - 123
Bromomethane	103	ug/L	20	20.6	45 - 148
Carbon Disulfide	99.9	ug/L	20	20.0	57 - 131
Carbon Tetrachloride	118	ug/L	20	23.5	62 - 132
Chlorobenzene	96	ug/L	20	19.2	85 - 117
Chlorodibromomethane	85.7	ug/L	20	17.1	77 - 122
Chloroethane	93.9	ug/L	20	18.8	51 - 142
Chloroform	99.8	ug/L	20	20.0	78 - 122
Chloromethane	71.4	ug/L	20	14.3	38 - 156

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Cyclohexane	116	ug/L	20	23.3	66 - 130
Dibromomethane	94.8	ug/L	20	19.0	81 - 125
Dichlorodifluoromethane	59.4	ug/L	20	11.9	17 - 166
Diisopropyl ether	81.6	ug/L	20	16.3	74 - 131
Ethyl tert-butyl ether	78.8	ug/L	20	15.8	75 - 123
Ethylbenzene	100	ug/L	20	20.1	80 - 124
Freon 113	124	ug/L	20	24.8	50 - 130
Hexachlorobutadiene	92.3	ug/L	20	18.5	55 - 128
Isopropylbenzene	101	ug/L	20	20.2	73 - 129
Methyl acetate	82.2	ug/L	20	16.4	70 - 130
Methyl cyclohexane	106	ug/L	20	21.3	70 - 130
Methyl t-Butyl Ether	89.5	ug/L	20	17.9	69 - 115
Methylene Chloride	105	ug/L	20	20.9	76 - 121
Naphthalene	75.6	ug/L	20	15.1	56 - 134
Styrene	87.7	ug/L	20	17.5	79 - 123
Tetrachloroethene	104	ug/L	20	20.8	72 - 124
Toluene	103	ug/L	20	20.6	80 - 125
Total Xylenes	94.6	ug/L	60	56.8	79 - 125
Trichlorofluoromethane	90.4	ug/L	20	18.1	38 - 123
Vinyl Acetate	76.1	ug/L	20	15.2	58 - 136
Vinyl Chloride	67.4	ug/L	20	13.5	27 - 138
cis-1,3-Dichloropropene	75.3*	ug/L	20	15.1	81 - 121
mp-Xylene	101	ug/L	40	40.6	79 - 125
n-Butylbenzene	76.3	ug/L	20	15.3	71 - 130
n-Propylbenzene	92.5	ug/L	20	18.5	74 - 122
o-Chlorotoluene	100	ug/L	20	20.0	78 - 126
o-Xylene	81.1	ug/L	20	16.2	79 - 124
p-Chlorotoluene	99.4	ug/L	20	19.9	78 - 125
p-Isopropyltoluene	83.8	ug/L	20	16.8	72 - 123
sec-Butylbenzene	86.9	ug/L	20	17.4	72 - 127
tert-Amyl methyl ether	75.9	ug/L	20	15.2	75 - 121
tert-Butyl Alcohol	44.5	ug/L	100	44.5	17 - 168
tert-Butylbenzene	88.1	ug/L	20	17.6	72 - 124
trans-1,2-Dichloroethene	103	ug/L	20	20.5	71 - 122
trans-1,3-Dichloropropene	85.2	ug/L	20	17.0	78 - 126
1,2-Dichloroethane-d4 (S)	95.7	%			62 - 133
4-Bromofluorobenzene (S)	91.4	%			79 - 114
Dibromofluoromethane (S)	96.8	%			78 - 116
Toluene-d8 (S)	78.8	%			76 - 127

MATRIX SPIKE: 2730258 DUPLICATE: 2730259 ORIGINAL: 2310174012

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Trichloroethene	0	ug/L	400	441.451	442.982	110	111	77 - 124	.35	18
1,1-Dichloroethene	0	ug/L	400	536.52	547.582	134*	137*	63 - 128	2.04	21
1,2-Dichloroethane	0	ug/L	400	454.439	469.033	114	117	70 - 133	3.16	19
2-Butanone	0	ug/L	2000	2132.3	1989.63	107	99.5	50 - 152	6.92	16
Benzene	0	ug/L	400	443.626	458.345	111	115	80 - 124	3.26	26
Carbon Tetrachloride	0	ug/L	400	533.369	553.305	133*	138*	62 - 132	3.67	17
Chlorobenzene	0	ug/L	400	426.491	447.318	107	112	85 - 117	4.77	15
Chloroform	9.50399	ug/L	400	468.131	478.393	115	117	78 - 122	2.17	16
Tetrachloroethene	0	ug/L	400	470.364	497.83	118	124	72 - 124	5.67	38
Vinyl Chloride	0	ug/L	400	319.462	350.561	79.9	87.6	27 - 138	9.28	40
1,2-Dichloroethane-d4 (S)	94.5	%				94.5	94.9	62 - 133		
4-Bromofluorobenzene (S)	90.6	%				90.6	92.1	79 - 114		
Dibromofluoromethane (S)	99.1	%				99.1	98.3	78 - 116		
Toluene-d8 (S)	77.8	%				77.8	80.7	76 - 127		

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WCPR/43317 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples: 2308943033, 2308943034, 2308943038

METHOD BLANK: 2726163

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

LABORATORY CONTROL SAMPLE: 2726164

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Phosphorus, Total	103	mg/L	2.5	2.6	90 - 110

SAMPLE DUPLICATE: 2726165 ORIGINAL: 2308920001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.052	mg/L	.049	5.94	10

MATRIX SPIKE SAMPLE: 2726166 ORIGINAL: 2308920001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.052	mg/L	2.5	2.918	115*	90 - 110

SAMPLE DUPLICATE: 2726167 ORIGINAL: 2308939001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Phosphorus, Total	.128	mg/L	.081	45*	10

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

MATRIX SPIKE SAMPLE: 2726168 ORIGINAL: 2308939001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Phosphorus, Total	.128	mg/L	2.5	3.181	122*	90 - 110

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/202971 **Analysis Method:** S4500PE-99

QC Batch Method: S4500PE-99

Associated Lab Samples: 2308943033, 2308943034, 2308943038

METHOD BLANK: 2722887

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

MATRIX SPIKE: 2722889 DUPLICATE: 2722890 ORIGINAL: 2308285001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Orthophosphate	9.037	mg/L	25	32.7407	32.0741	94.8	92.1	90 - 110	2.06	10

METHOD BLANK: 2722891

Parameter	Blank Result	Units	Reporting Limit
Orthophosphate	ND	mg/L	0.020

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/202979 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2308943033, 2308943034, 2308943038

METHOD BLANK: 2722978

Parameter	Blank Result	Units	Reporting Limit
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

LABORATORY CONTROL SAMPLE: 2722980

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	98.7	mg/L	20	19.7	90 - 110
Nitrate-N	97.2	mg/L	2.5	2.4	90 - 110
Nitrite-N	104	mg/L	.5	0.52	90 - 110
Sulfate	98.8	mg/L	20	19.8	90 - 110

MATRIX SPIKE: 2724218 DUPLICATE: 2724219 ORIGINAL: 2309142001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Chloride	139.18	mg/L	40	171.92	175.36	81.8	90.5	80 - 120	1.98	20
Nitrate-N	0	mg/L	5	5.18	5.3	104	106	80 - 120	2.29	20
Nitrite-N	0	mg/L	1	1.14	1.14	114	114	80 - 120	0	20

METHOD BLANK: 2724221

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.12J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

MATRIX SPIKE SAMPLE: 2724222 ORIGINAL: 2308941006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Chloride	6.32	mg/L	40	48.28	105	80 - 120
Sulfate	52.84	mg/L	40	97.56	112	80 - 120

LABORATORY CONTROL SAMPLE: 2724224

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chloride	99.4	mg/L	20	19.9	90 - 110
Nitrate-N	97.2	mg/L	2.5	2.4	90 - 110
Nitrite-N	108	mg/L	.5	0.54	90 - 110
Sulfate	98.9	mg/L	20	19.8	90 - 110

METHOD BLANK: 2724225

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.14J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

MATRIX SPIKE: 2724226 DUPLICATE: 2724227 ORIGINAL: 2308898002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Sulfate	21.04	mg/L	40	57.94	57.36	92.2	90.8	80 - 120	1.01	20

METHOD BLANK: 2724229

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.15J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

METHOD BLANK: 2724232

Parameter	Blank Result	Units	Reporting Limit
Chloride	0.15J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10
Sulfate	ND	mg/L	1.0

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/203069 **Analysis Method:** S2320B-97

QC Batch Method: S2320B-97

Associated Lab Samples: 2308943033, 2308943034, 2308943038

METHOD BLANK: 2724157

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2724162 ORIGINAL: 2308468005

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	60.28049	mg/L	56.2482	6.92	20

METHOD BLANK: 2724165

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2724166 ORIGINAL: 2308468006

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	1.54392	mg/L	1.71084	10.3	20

METHOD BLANK: 2724169

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2724170 ORIGINAL: 2308635001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Alkalinity, Total	80.60222	mg/L	78.53309	2.6	20

METHOD BLANK: 2724173

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2724174 ORIGINAL: 2308941001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	176.52249	mg/L	183.18791	3.71	20

METHOD BLANK: 2724177

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2724178 ORIGINAL: 2308941005

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	127.9041	mg/L	127.66978	.18	20

METHOD BLANK: 2724181

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

METHOD BLANK: 2724185

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

SAMPLE DUPLICATE: 2724186 ORIGINAL: 2309126002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	7.27571	mg/L	9.03686	21.6*	20

METHOD BLANK: 2724189

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2724190 ORIGINAL: 2309126003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	5.36063	mg/L	6.53678	19.8	20

METHOD BLANK: 2724193

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	4J	mg/L	5

SAMPLE DUPLICATE: 2724194 ORIGINAL: 2309204001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	90.34888	mg/L	92.77829	2.65	20

METHOD BLANK: 2724197

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

SAMPLE DUPLICATE: 2724198 ORIGINAL: 2309205001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	140.86322	mg/L	154.53285	9.26	20

METHOD BLANK: 2724201

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	3J	mg/L	5

SAMPLE DUPLICATE: 2724202 ORIGINAL: 2309215001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Alkalinity, Total	33.70971	mg/L	36.63982	8.33	20

METHOD BLANK: 2724205

Parameter	Blank Result	Units	Reporting Limit
Alkalinity, Total	1J	mg/L	5

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/203134 **Analysis Method:** EPA 300.0

QC Batch Method: 300.0/9056A

Associated Lab Samples: 2308943038

METHOD BLANK: 2724978

Parameter	Blank Result	Units	Reporting Limit
Sulfate	ND	mg/L	1.0
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10

LABORATORY CONTROL SAMPLE: 2724980

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Sulfate	96.8	mg/L	20	19.4	90 - 110
Chloride	96.3	mg/L	20	19.3	90 - 110
Nitrate-N	94.4	mg/L	2.5	2.4	90 - 110
Nitrite-N	104	mg/L	.5	0.52	90 - 110

MATRIX SPIKE: 2725601 DUPLICATE: 2725602 ORIGINAL: 2309434001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Sulfate	7.9	mg/L	40	47.2	47.42	98.3	98.8	80 - 120	.47	20
Chloride	1.42	mg/L	40	41	41.16	99	99.3	80 - 120	.39	20

METHOD BLANK: 2725604

Parameter	Blank Result	Units	Reporting Limit
Sulfate	ND	mg/L	1.0
Chloride	0.13J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

MATRIX SPIKE SAMPLE: 2726097 ORIGINAL: 2309595001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Sulfate	6.58	mg/L	40	46.78	101	80 - 120
Chloride	20	mg/L	40	55.9	89.7	80 - 120
Nitrate-N	.12	mg/L	5	5.2	102	80 - 120

LABORATORY CONTROL SAMPLE: 2726099

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Sulfate	97	mg/L	20	19.4	90 - 110
Chloride	96.6	mg/L	20	19.3	90 - 110
Nitrate-N	94.8	mg/L	2.5	2.4	90 - 110
Nitrite-N	106	mg/L	.5	0.53	90 - 110

METHOD BLANK: 2726100

Parameter	Blank Result	Units	Reporting Limit
Sulfate	ND	mg/L	1.0
Chloride	ND	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10

MATRIX SPIKE: 2726423 DUPLICATE: 2726424 ORIGINAL: 2308684002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Nitrate-N	.04	mg/L	5	5.12	5.18	102	103	80 - 120	1.17	20

METHOD BLANK: 2726426

Parameter	Blank Result	Units	Reporting Limit
Sulfate	ND	mg/L	1.0

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Chloride	0.12J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10

MATRIX SPIKE SAMPLE: 2726427 ORIGINAL: 2309138002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Chloride	218.05	mg/L	100	316.8	98.8	80 - 120

LABORATORY CONTROL SAMPLE: 2726429

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Sulfate	97.1	mg/L	20	19.4	90 - 110
Chloride	96.4	mg/L	20	19.3	90 - 110
Nitrate-N	94.4	mg/L	2.5	2.4	90 - 110
Nitrite-N	104	mg/L	.5	0.52	90 - 110

METHOD BLANK: 2726430

Parameter	Blank Result	Units	Reporting Limit
Sulfate	ND	mg/L	1.0
Chloride	0.13J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10

METHOD BLANK: 2726432

Parameter	Blank Result	Units	Reporting Limit
Sulfate	ND	mg/L	1.0
Chloride	0.15J	mg/L	1.0
Nitrate-N	ND	mg/L	0.10
Nitrite-N	ND	mg/L	0.10

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/203166 **Analysis Method:** S5310B-00

QC Batch Method: 415.1/9060/5310B

Associated Lab Samples: 2308943033, 2308943034, 2308943038

METHOD BLANK: 2725297

Parameter	Blank Result	Units	Reporting Limit
Total Organic Carbon (TOC)	ND	mg/L	0.50

LABORATORY CONTROL SAMPLE: 2725298

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Organic Carbon (TOC)	99.8	mg/L	1	1.0	85 - 115

MATRIX SPIKE: 2725299 DUPLICATE: 2725300 ORIGINAL: 2309324001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Total Organic Carbon (TOC)	.4	mg/L	6	6.326	6.272	98.8	97.9	85 - 115	.86	20

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/203277 **Analysis Method:** S2540C-11

QC Batch Method: S2540C-11

Associated Lab Samples:

METHOD BLANK: 2726616

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

METHOD BLANK: 2726617

Parameter	Blank Result	Units	Reporting Limit
Total Dissolved Solids	ND	mg/L	5

LABORATORY CONTROL SAMPLE: 2726618

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Total Dissolved Solids	92	mg/L	500	460	90 - 110

SAMPLE DUPLICATE: 2726619 ORIGINAL: 2308915001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	661	mg/L	679	2.69	5

SAMPLE DUPLICATE: 2726620 ORIGINAL: 2308941006

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Total Dissolved Solids	275	mg/L	285	3.57	5

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QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/203412 **Analysis Method:** EPA 218.6

QC Batch Method: EPA 218.6

Associated Lab Samples: 2308943001, 2308943004, 2308943008, 2308943016, 2308943024

METHOD BLANK: 2728054

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

LABORATORY CONTROL SAMPLE: 2728057

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Hexavalent Chromium	109	ug/L	10	10.9	90 - 110

MATRIX SPIKE: 2728058 DUPLICATE: 2728059 ORIGINAL: 2308943004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Hexavalent Chromium	0	ug/L	5	4.804	4.726	96.1	94.5	90 - 110	1.64	20

METHOD BLANK: 2728061

Parameter	Blank Result	Units	Reporting Limit
Hexavalent Chromium	ND	ug/L	0.25

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/203465 **Analysis Method:** D6919-09

QC Batch Method: D6919-09

Associated Lab Samples: 2308943033, 2308943034, 2308943038

LABORATORY CONTROL SAMPLE: 2728583

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Ammonia-N	92.9	mg/L	2.5	2.32	90 - 110

METHOD BLANK: 2728584

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	0.006J	mg/L	0.010

METHOD BLANK: 2728586

Parameter	Blank Result	Units	Reporting Limit
Ammonia-N	0.004J	mg/L	0.010

MATRIX SPIKE: 2728587 DUPLICATE: 2728588 ORIGINAL: 2309759001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Ammonia-N	4.798	mg/L	10	12.979	13.123	81.8	83.3	75 - 125	1.1	25

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

QC Batch: WETC/203650 **Analysis Method:** EPA 365.1

QC Batch Method: EPA 365.1

Associated Lab Samples:

METHOD BLANK: 2730882

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730884

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730886

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730888

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730890

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730892

Parameter	Blank Result	Units	Reporting Limit

QUALITY CONTROL DATA

Workorder: 2308943 LMC MRC 4/12/18

Phosphorus, Total	ND	mg/L	0.10

METHOD BLANK: 2730894

Parameter	Blank Result	Units	Reporting Limit
Phosphorus, Total	ND	mg/L	0.10

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 2308943 LMC MRC 4/12/18

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2726309	1	Lab Control Standard	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 140 and the control limits were 56 to 134.				
2726759	2	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 131 and the control limits were 50 to 130.				
2726759	3	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 131 and the control limits were 70 to 130.				
2727845	4	Lab Control Standard	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 128 and the control limits were 71 to 122.				
2727845	5	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 169 and the control limits were 50 to 130.				
2727845	6	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 141 and the control limits were 63 to 128.				
2727845	7	Lab Control Standard	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 141 and the control limits were 57 to 131.				
2727845	8	Lab Control Standard	SW846 8260B	2,2-Dichloropropane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 130 and the control limits were 64 to 129.				
2727845	9	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 151 and the control limits were 66 to 130.				
2728889	10	Lab Control Standard	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 126 and the control limits were 76 to 121.				
2728889	11	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 134 and the control limits were 50 to 130.				
2728889	12	Lab Control Standard	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 138 and the control limits were 57 to 131.				
2730034	13	Lab Control Standard	SW846 8260B	1,2,4-Trichlorobenzene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2,4-Trichlorobenzene. The % Recovery was reported as 61.3 and the control limits were 67 to 123.				

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 2308943 LMC MRC 4/12/18

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2730034	14	Lab Control Standard	SW846 8260B	cis-1,3-Dichloropropene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 75.3 and the control limits were 81 to 121.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308943033	MRC-MW72B			S4500PE-99	WETC/202971
2308943034	MRC-MW37B			S4500PE-99	WETC/202971
2308943038	MRC-MW37A			S4500PE-99	WETC/202971
2308943033	MRC-MW72B			EPA 300.0	WETC/202979
2308943034	MRC-MW37B			EPA 300.0	WETC/202979
2308943038	MRC-MW37A			EPA 300.0	WETC/202979
2308943033	MRC-MW72B			S2320B-97	WETC/203069
2308943034	MRC-MW37B			S2320B-97	WETC/203069
2308943038	MRC-MW37A			S2320B-97	WETC/203069
2308943038	MRC-MW37A	SW846 3015	MDIG/71244	SW846 6010C	META/61750
2308943038	MRC-MW37A	SW846 3015	MDIG/71244	SW846 6010C	META/61772
2308943038	MRC-MW37A			EPA 300.0	WETC/203134
2308943033	MRC-MW72B			S5310B-00	WETC/203166
2308943034	MRC-MW37B			S5310B-00	WETC/203166
2308943038	MRC-MW37A			S5310B-00	WETC/203166
2308943001	MRC-MW124B-D	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308943004	MRC-MW124A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308943008	MRC-MW07A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308943011	MRC-MW96A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308943012	MRC-MW98B-DUP	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308943013	MRC-MW98B	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308943014	MRC-MW98A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30476
2308943011	MRC-MW96A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943012	MRC-MW98B-DUP	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943013	MRC-MW98B	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308943015	MRC-MW111A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943016	MRC-MW124B	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943023	EB-041218-AZ	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943026	MRC-MW101A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943027	MRC-MW122A	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943029	MRC-SEMW-7I	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943032	MRC-MW37C	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943034	MRC-MW37B	SW846 3510C	EXTR/51819	8270 SIM	SVMS/30493
2308943033	MRC-MW72B	EPA 365.1	WCPR/43317	EPA 365.1	WETC/203650
2308943034	MRC-MW37B	EPA 365.1	WCPR/43317	EPA 365.1	WETC/203650
2308943038	MRC-MW37A	EPA 365.1	WCPR/43317	EPA 365.1	WETC/203650
2308943001	MRC-MW124B-D			SW846 8260B	VOMS/46582
2308943003	MRC-MW73B			SW846 8260B	VOMS/46582
2308943004	MRC-MW124A			SW846 8260B	VOMS/46582
2308943005	MRC-MW02A			SW846 8260B	VOMS/46582
2308943006	MRC-MW104A			SW846 8260B	VOMS/46582
2308943007	MRC-MW104B			SW846 8260B	VOMS/46582
2308943009	MRC-MW34C			SW846 8260B	VOMS/46582
2308943010	MRC-MW38B			SW846 8260B	VOMS/46582
2308943011	MRC-MW96A			SW846 8260B	VOMS/46582
2308943012	MRC-MW98B-DUP			SW846 8260B	VOMS/46582
2308943013	MRC-MW98B			SW846 8260B	VOMS/46587
2308943015	MRC-MW111A			SW846 8260B	VOMS/46587
2308943016	MRC-MW124B			SW846 8260B	VOMS/46587
2308943018	MRC-SWMW-1I			SW846 8260B	VOMS/46587
2308943019	MRC-SWMW-2I			SW846 8260B	VOMS/46587
2308943021	MRC-SWMW-3I-D			SW846 8260B	VOMS/46587
2308943022	MRC-MW93A			SW846 8260B	VOMS/46587
2308943023	EB-041218-AZ			SW846 8260B	VOMS/46587

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308943025	TB-041218-1			SW846 8260B	VOMS/46587
2308943028	MRC-MW74B			SW846 8260B	VOMS/46587
2308943029	MRC-SEMW-7I			SW846 8260B	VOMS/46587
2308943033	MRC-MW72B			S2540C-11	WETC/203277
2308943034	MRC-MW37B			S2540C-11	WETC/203277
2308943038	MRC-MW37A			S2540C-11	WETC/203277
2308943035	MRC-SEMW-8I	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2308943036	MRC-SEMW-9I	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2308943037	MRC-SEMW-9S	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2308943038	MRC-MW37A	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2308943039	MRC-SEMW-8S	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2308943040	EB-041318-AD	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2308943003	MRC-MW73B			SW846 8260B	VOMS/46591
2308943004	MRC-MW124A			SW846 8260B	VOMS/46591
2308943005	MRC-MW02A			SW846 8260B	VOMS/46591
2308943006	MRC-MW104A			SW846 8260B	VOMS/46591
2308943007	MRC-MW104B			SW846 8260B	VOMS/46591
2308943009	MRC-MW34C			SW846 8260B	VOMS/46591
2308943010	MRC-MW38B			SW846 8260B	VOMS/46591
2308943011	MRC-MW96A			SW846 8260B	VOMS/46591
2308943012	MRC-MW98B-DUP			SW846 8260B	VOMS/46591
2308943033	MRC-MW72B			SW846 8260B	VOMS/46591
2308943035	MRC-SEMW-8I			SW846 8260B	VOMS/46591
2308943036	MRC-SEMW-9I			SW846 8260B	VOMS/46591
2308943037	MRC-SEMW-9S			SW846 8260B	VOMS/46591
2308943033	MRC-MW72B	SW846 3015	MDIG/71315	SW846 6010C	META/61750
2308943033	MRC-MW72B	SW846 3015	MDIG/71315	SW846 6010C	META/61772

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308943013	MRC-MW98B			SW846 8260B	VOMS/46598
2308943028	MRC-MW74B			SW846 8260B	VOMS/46598
2308943030	MRC-MW74A			SW846 8260B	VOMS/46598
2308943014	MRC-MW98A			SW846 8260B	VOMS/46608
2308943017	MRC-MW34A			SW846 8260B	VOMS/46608
2308943032	MRC-MW37C			SW846 8260B	VOMS/46608
2308943033	MRC-MW72B			SW846 8260B	VOMS/46608
2308943034	MRC-MW37B			SW846 8260B	VOMS/46608
2308943035	MRC-SEMW-8I			SW846 8260B	VOMS/46608
2308943036	MRC-SEMW-9I			SW846 8260B	VOMS/46608
2308943038	MRC-MW37A			SW846 8260B	VOMS/46608
2308943039	MRC-SEMW-8S			SW846 8260B	VOMS/46608
2308943031	MRC-MW74C			SW846 8260B	VOMS/46611
2308943040	EB-041318-AD			SW846 8260B	VOMS/46611
2308943001	MRC-MW124B-D	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943002	MRC-MW73A	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943003	MRC-MW73B	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943004	MRC-MW124A	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943016	MRC-MW124B	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943028	MRC-MW74B	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943030	MRC-MW74A	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943033	MRC-MW72B	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943038	MRC-MW37A	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943040	EB-041318-AD	SW846 3015	MDIG/71333	SW846 6020A	META/61757
2308943001	MRC-MW124B-D			EPA 218.6	WETC/203412
2308943004	MRC-MW124A			EPA 218.6	WETC/203412
2308943008	MRC-MW07A			EPA 218.6	WETC/203412
2308943016	MRC-MW124B			EPA 218.6	WETC/203412

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308943024	MRC-MW119A			EPA 218.6	WETC/203412
2308943034	MRC-MW37B	SW846 3015	MDIG/71343	SW846 6010C	META/61772
2308943034	MRC-MW37B	SW846 3015	MDIG/71343	SW846 6010C	META/61827
2308943001	MRC-MW124B-D	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943002	MRC-MW73A	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943003	MRC-MW73B	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943004	MRC-MW124A	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943016	MRC-MW124B	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943028	MRC-MW74B	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943030	MRC-MW74A	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943033	MRC-MW72B	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943038	MRC-MW37A	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943040	EB-041318-AD	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2308943024	MRC-MW119A			SW846 8260B	VOMS/46617
2308943033	MRC-MW72B			D6919-09	WETC/203465
2308943034	MRC-MW37B			D6919-09	WETC/203465
2308943038	MRC-MW37A			D6919-09	WETC/203465
2308943020	MRC-SWMW-3I			SW846 8260B	VOMS/46623
2308943037	MRC-SEMW-9S			SW846 8260B	VOMS/46623
2308943038	MRC-MW37A			SW846 8260B	VOMS/46623
2308943039	MRC-SEMW-8S			SW846 8260B	VOMS/46623
2308943033	MRC-MW72B			RSK 175	SVGC/48972
2308943034	MRC-MW37B			RSK 175	SVGC/48972
2308943038	MRC-MW37A			RSK 175	SVGC/48972

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2308943 LMC MRC 4/12/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2308943011	MRC-MW96A			SW846 8260B	VOMS/46641
2308943028	MRC-MW74B			SW846 8260B	VOMS/46641
2308943029	MRC-SEMW-7I			SW846 8260B	VOMS/46641

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F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

230 8943

Co. Name: AECOM
Contact (Report to): Ravi Damara + Holly Brown Phone: 301-674-3199
Address: 12420 Milestone Center Dr, Suite 150
Germantown MD 20876

Bill to (if different than Report to): Ravi Damara PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] Y ravi.damara@aecom.com
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOC 8260C	1,4-Dioxane 8270D-SIM	Total metals	Hex chrom	PCB Homologs	MEE/MNA
***Container Type						CG	AG	PL	PL	AG	Var
***Container Size						40ml	1L	250	250	1L	Var
***Preservative						HCl	-	HNO3	Buffer	-	Var
1 MRC-MW124B-D	DUP	4/17/18	1400	G	GW	2	2	1	1	2	
2 MRC-MW73A		4/17/18	0835	G	GW			1			
3 MRC-MW73B		4/17/18	0920	G	GW	2		1			
4 MRC-MW124A	MS/MSD	4/17/18	1110	G	GW	6	6	3	3	6	
5 MRC-MW02A		4/17/18	1353	G	GW	2					
6 MRC-MW104A		4/17/18	1610	G	GW	2					
7 MRC-MW104B		4/17/18	1525	G	GW	2					
8 MRC-MW07A		4/17/18	1535	G	GW		2		1		

Enter Number of Containers Per Analysis

Performed by: SM
Cooler Temp: 3°C
Therm. ID: 318
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	N	N	N	N	N
3	N	N	N	N	N
4	Y	Y	Y	Y	Y
5	N	N	N	N	N
6	N	N	N	N	N
7	N	N	N	N	N
8	N	N	N	N	N

Custody seals Present?	(if present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to naomi.taintz3@aecom.com + holly.brown

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 AECOM	4/18/18	1650	2	4/18	1650
3	4/18	1650	4		1930
5		2240	6	4/18/18	2240
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
EDDs Required? [X] If yes, format type: Excel + QV
SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
Enter PWSID No:
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

CC 8943

Co. Name: AECOM
Contact (Report to): Ravi Damera + Holly Brown Phone: 301-674-3199
Address: 12420 Milestone Center Dr, Suite 150
Germantown MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

***Container Type	CG	AG	PL	PL	AG	Var.									
***Container Size	40ml	1L	250	250	1L	Var.									
*** Preservative	HCl	–	HNO_3	Buffer	–	Various									

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOC 8260C	1,4-Dioxane 8270D-SIM	Total Metals	Hex Chrom 218.6	PCB Homologs 680	MEE/MNA				
1	MRC-MW34C		4/11/18	1630	G	GW	2									
2	MRC-MW38B		4/12/18	1520	G	GW	2									
3	MRC-MW96A		4/12/18	0900	G	GW	2	2								
4	MRC-MW98B-DUP	DUP	4/12/18	1010	G	GW	2	2								
5	MRC-MW98B	MS/MSD	4/12/18	0957	G	GW	6	6								
6	MRC-MW98A		4/12/18	0837	G	GW	2	2								
7	MRC-MW111A		4/12/18	0807	G	GW	2	2								
8	MRC-MW124B		4/12/18	1355	G	GW	2	2	1	1	2					

Receipt Information (completed by Sample Receiving)
Performed by: [signature]
Cooler Temp: 3°C
Therm. ID: 318
No. of Coolers:
Notes:

Sample Description/Location	Custody seals Present?	(if present) Seals Intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 MRC-MW34C	Y	N	Y	Y	Y
2 MRC-MW38B	Y	N	Y	Y	Y
3 MRC-MW96A	Y	N	Y	Y	Y
4 MRC-MW98B-DUP	Y	N	Y	Y	Y
5 MRC-MW98B	Y	N	Y	Y	Y
6 MRC-MW98A	Y	N	Y	Y	Y
7 MRC-MW111A	Y	N	Y	Y	Y
8 MRC-MW124B	Y	N	Y	Y	Y

Correct containers? Y N
Correct sample volume? Y N
Correct preservation? Y N
Headspace/Volatiles? Y N
Circle appropriate Y or N.

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to naoum.tawntzis@aecom.com + holly.brown

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AECOM	4-13-18	1650	2 [signature]	4/13	1650
3 [signature]	4/13	1650	4 [signature]		1730
5 [signature]		2240	6 [signature]	4/13/18	2240
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS + .CSV
Other
Enter PWS ID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO_3, NaOH, etc.

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

COC# 8943

Co. Name: AECOM
Contact (Report to): Ravi Damera + Holly Brown Phone: 301-674-3199
Address: 12420 Milestone Center Dr, Suite 150
Germantown MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

***Container Type	CG	AG	PL	PL	AG	Var										
***Container Size	40ml	1L	250	250	1L	Var										
*** Preservative	HCl	–	HNO3	Buffer	–	Var										

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOC	1,4-Dioxane	Total Metals	Hex Chrom	PCB Homologs	MEE/MNA				
1	MRC-MW34A		4/12/18	~~1305~~ 1610	G	GW	2									
2	MRC-SWMW-1I		4/12/18	1305	G	GW	2									
3	MRC-SWMW-2I		4/12/18	1115	G	GW	2									
4	MRC-SWMW-3I	MS/MSD	4/12/18	0850	G	GW	6									
5	MRC-SWMW-3I-D	DUP	4/12/18	0855	G	GW	2									
6	MRC-MW93A		4/12/18	1405	G	GW	2									
7	EB-041218-AZ	Eq Blank	4/12/18	1700	G	GW	2	2								
8	MRC-MW119A	add. volume, ran dry	4-12-18	1210	G	GW	1			1						

Receipt Information (completed by Sample Receiving)
Performed by: SW
Cooler Temp: 3°C
Therm. ID: 318
No. of Coolers:
Notes:

Sample Description/Location	Custody seals Present?	(If present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 MRC-MW34A	Y	Y	Y	Y	Y
2 MRC-SWMW-1I	Y	Y	Y	Y	Y
3 MRC-SWMW-2I	Y	Y	Y	Y	Y
4 MRC-SWMW-3I	Y	Y	Y	Y	Y
5 MRC-SWMW-3I-D	Y	Y	Y	Y	Y
6 MRC-MW93A	Y	Y	Y	Y	Y
7 EB-041218-AZ	Y	Y	Y	Y	Y
8 MRC-MW119A	Y	Y	Y	Y	Y

Correct containers? Y N
Correct sample volume? Y N
Correct preservation? Y N
Headspace/Volatiles? Y N
Circle appropriate Y or N.

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to naoum.tavantzis@aecom.com + holly.brown "

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4-13-18	1650	2 [signature]	4/13	1650
3 [signature]	4/13	1650	4 [signature]		1650
5 [signature]		2240	6 [signature]	4/13/18	2240
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
EDDs Required? [X] If yes, format type: EQuIS + CSV Other
Enter PWSID No.
DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 4 of 5

Courier:

Tracking #:

COC: 8943

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs	1,4-Dioxane	TPH Analysis	PCB Homologs							
1 TB-041318-1	trip blank	NA	NA	G	WQ	2										
2 MRC-MW01A	all volume, sandy	4-13-18	0840	G	GW		2									
3 MRC-MW122A	all volume, sandy	4-13-18	0911	G	GW		2									
4 MRC-MW74B		4-13-18	1032	G	GW	2		1	2							
5 MRC-SEMW-7I		4-13-18	1115	G	GW	2	2		2							
6 MRC-MW74A		4-13-18	0921	G	GW	2		1	2							
7 MRC-MW74C		4-13-18	1145	G	GW	2			2							
8 MRC-MW32C		4-13-18	1130	G	GW	2	2		2							

Enter Number of Containers Per Analysis

***Container Type / ***Container Size / *** Preservative

Receipt Information (completed by Sample Receiver)
Received In: SDW
Cooler Temp: 3°C
Therm. ID: 318
No. of Coolers:

Notes:

	Custody seals Present?	(If present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
Correct containers?					Circle appropriate Y or N.
Correct sample volume?					
Correct preservation?					
Headspace/Volatiles?					

SAMPLED BY (Please Print): Holly Brown

Project Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] / AECOM	4-13-18	1650	2 [signature]	4/13	1658
3 [signature]	4/13	1650	4		1950
5 [signature]		2240	6 [signature]	4/13/18	2240
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

SDWA Forms? ⇒ yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS & CSV Other: PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

** Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

*** Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 5 of 5

Courier:

Tracking #:

CO 8943

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150
Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840 ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs	1,4-Dioxane	TAL Metals	Hex chromium	PCB Homologs	MEE/MNA				
1	MRC-MW72B		4-13-18	0935	G	GW	2		1			7				
2	MRC-MW37B		4-13-18	0845	G	GW	2	2			2	7				
3	MRC-SEMW-8I		4-13-18	1257	G	GW	2	2			2					
4	MRC-SEMW-9I		4-13-18	1345	G	GW	2	2			2					
5	MRC-SEMW-9S		4-13-18	1400	G	GW	2	2			2					
6	MRC-MW37A		4-13-18	1349	G	GW	2	2	1		2	7				
7	MRC-SEMW-8S		4-13-18	1340	G	GW	2	2			2					
8	EB-041318-AD	equipment blank	4-13-18	1450	G	GW	2	2	1							

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receipt)
Performed by: SW
Cooler Temp: 3°C
Therm. ID: 318
No. of Coolers:
Notes:

Sample Description/Location	Sample Date	Military Time	*G or C	**Matrix	VOCs	1,4-Dioxane	TAL Metals	Hex chromium	PCB Homologs	MEE/MNA	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1 MRC-MW72B	4-13-18	0935	G	GW	2		1			7	Y	Y	Y	Y	
2 MRC-MW37B	4-13-18	0845	G	GW	2	2			2	7	Y	Y	Y	Y	
3 MRC-SEMW-8I	4-13-18	1257	G	GW	2	2			2		Y	Y	Y	Y	
4 MRC-SEMW-9I	4-13-18	1345	G	GW	2	2			2		Y	Y	Y	Y	
5 MRC-SEMW-9S	4-13-18	1400	G	GW	2	2			2		Y	Y	Y	Y	
6 MRC-MW37A	4-13-18	1349	G	GW	2	2	1		2	7	Y	Y	Y	Y	
7 MRC-SEMW-8S	4-13-18	1340	G	GW	2	2			2		Y	Y	Y	Y	
8 EB-041318-AD	4-13-18	1450	G	GW	2	2	1				Y	Y	Y	Y	

Custody seals Present? (if present) Seals Intact? Received on ice? COC/Labels complete/accurate? Container in good condition?

SAMPLED BY (Please Print): Holly Brown

Project Comments: email data to naoun.tavantzis@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AECOM	4-13-18	1650	2 [signature]	4/13	1650
3 [signature]	4/13	1650	4 [signature]		1530
5 [signature]		2240	6 [signature]	4/13/18	2240
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ___ SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS & CSV Other
Enter PWSID No

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

April 27, 2018 Service Request No:R1803361

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2308943

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 18, 2018
For your reference, these analyses have been assigned our service request number **R1803361.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2308943
Sample Matrix: Water

Service Request: R1803361
Date Received: 04/17/2018 - 04/18/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Fourteen water samples were received for analysis at ALS Environmental on 04/17/2018 - 04/18/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/26/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
Method 680, 04/26/2018: The lower control limit for the spike recovery of the Laboratory Control Sample Duplicate (LCSD) was exceeded for one or more analyte. The Laboratory Control Sample (LCS) was within limits for all analytes. The analytes affected are flagged in the LCS Summary.

Method 680, 04/24/18: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

R1803361-001, RQ1803584-03 (LCSD): The recovery of phenathrene-d10 internal standard was outside control limits. This internal is not used to calculate any targets or surrogates. No further corrective action was appropriate.

Approved by _____ Date 04/27/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2308943 001			Lab ID: R1803361-001			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0050		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.0040	J	0.00059	0.0050	ug/L	680

CLIENT ID: 2308943 004			Lab ID: R1803361-002			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.026		0.0016	0.0050	ug/L	680
Monochlorobiphenyls, Total	0.049		0.00059	0.0050	ug/L	680
Total PCBs as Sum of Homologs	0.074			0.025	ug/L	680

CLIENT ID: 2308943 016			Lab ID: R1803361-003			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0020	J	0.0016	0.0050	ug/L	680

CLIENT ID: 2308943 028			Lab ID: R1803361-004			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Hexachlorobiphenyls, Total	0.0080	J	0.0047	0.010	ug/L	680
Pentachlorobiphenyls, Total	0.065		0.0043	0.010	ug/L	680
Tetrachlorobiphenyls, Total	0.046		0.0023	0.010	ug/L	680
Trichlorobiphenyls, Total	0.0065		0.0022	0.0050	ug/L	680
Total PCBs as Sum of Homologs	0.13			0.025	ug/L	680

CLIENT ID: 2308943 029			Lab ID: R1803361-005			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0038	J	0.0016	0.0048	ug/L	680
Trichlorobiphenyls, Total	0.013		0.0022	0.0048	ug/L	680

CLIENT ID: 2308943 030			Lab ID: R1803361-006			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0020	J	0.0016	0.0050	ug/L	680
Hexachlorobiphenyls, Total	0.013		0.0047	0.010	ug/L	680
Pentachlorobiphenyls, Total	0.067		0.0043	0.010	ug/L	680
Tetrachlorobiphenyls, Total	0.044		0.0023	0.010	ug/L	680
Total PCBs as Sum of Homologs	0.12			0.025	ug/L	680

CLIENT ID: 2308943 031			Lab ID: R1803361-007			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0024	J	0.0016	0.0048	ug/L	680
Heptachlorobiphenyls, Total	0.012	J	0.0090	0.014	ug/L	680
Hexachlorobiphenyls, Total	0.045		0.0047	0.0096	ug/L	680
Pentachlorobiphenyls, Total	0.10		0.0043	0.0096	ug/L	680
Tetrachlorobiphenyls, Total	0.034		0.0023	0.0096	ug/L	680
Total PCBs as Sum of Homologs	0.20			0.024	ug/L	680

SAMPLE DETECTION SUMMARY

CLIENT ID: 2308943 032			Lab ID: R1803361-008			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0020	J	0.0016	0.0049	ug/L	680

CLIENT ID: 2308943 034			Lab ID: R1803361-009			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0019	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2308943 035			Lab ID: R1803361-010			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0045	J	0.0016	0.0050	ug/L	680

CLIENT ID: 2308943 037			Lab ID: R1803361-012			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0025	J	0.0016	0.0050	ug/L	680

CLIENT ID: 2308943 038			Lab ID: R1803361-013			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Hexachlorobiphenyls, Total	0.0065	J	0.0047	0.010	ug/L	680
Pentachlorobiphenyls, Total	0.010		0.0043	0.010	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803361-001	2308943 001	4/12/2018	1400
R1803361-002	2308943 004	4/12/2018	1110
R1803361-003	2308943 016	4/12/2018	1355
R1803361-004	2308943 028	4/13/2018	1022
R1803361-005	2308943 029	4/13/2018	1145
R1803361-006	2308943 030	4/13/2018	0921
R1803361-007	2308943 031	4/13/2018	1145
R1803361-008	2308943 032	4/13/2018	1130
R1803361-009	2308943 034	4/13/2018	0845
R1803361-010	2308943 035	4/13/2018	1257
R1803361-011	2308943 036	4/13/2018	1345
R1803361-012	2308943 037	4/13/2018	1400
R1803361-013	2308943 038	4/13/2018	1349
R1803361-014	2308943 039	4/13/2018	1340

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 2
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2308943

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/26/2018 Approved By:

Email? [ ]-Y

Fax? [ ]-Y No.:

Container Type	AN									
Container Size	1L									
Preservative	None									

ANALYSES/METHOD REQUESTED

Receipt Information (completed by Receiving Lab)

Cooler Temp: ___ Therm ID: ___

No. of Coolers: ___

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
1 2308943 001	4/12/18	1400	G	WT	2	*		
2 2308943 004	4/12/18	1110	G	WT	2	*		Sub to ALS Rochester
3 2308943 016	4/12/18	1355	G	WT	2	*		
4 2308943 028 ~~(MS/MSD)~~	4/13/18	1022	G	WT	8 2	* 4/16/18		
5 2308943 029	4/13/18	1145	G	WT	2	*		
6 2308943 030	4/13/18	0921	G	WT	2	*		
7 2308943 031	4/13/18	1145	G	WT	2	*		
8 2308943 032	4/13/18	1130	G	WT	2	*		
9 2308943 034	4/13/18	0845	G	WT	2	*		
10 2308943 035	4/13/18	1257	G	WT	2	*		

ALS Field Services: [ ]Pickup [ ]Labor
[ ]Composite_Sampling [ ]Rental_Equipment
[ ]Other:

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] ALS	4/16/18	1710	2 [signature]	4/17/18	0920
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE

Special Processing: USACE [ ] Navy [ ]

Reportable to PADEP? Yes [ ]

PWSID # ___

Sample Disposal: Lab [X] Special [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

EDDS: Format Type- EQUIS EDD

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

R1803361 5

ALS Environmental
UR115: 2308943

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	2 of 2
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2308943

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/26/2018 Approved By:

Email? [ ] -Y

Fax? [ ] -Y No.:

Container Type: AN
Container Size: 1 L
Preservative: None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
11 2308943 036	4/13/18	1345	G	WT	2	*		
12 2308943 037	4/13/18	1400	G	WT	2	*		Sub to ALS Rochester
13 2308943 038	4/13/18	1349	G	WT	2	*		
14 2308943 039	4/13/18	1340	G	WT	2	*		
15								
16								
17								
18								
19								
20								

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?	[ ]	[ ]	
(if present) Seals Intact?	[ ]	[ ]	
Received on Ice?	[ ]	[ ]	
COC/Labels Complete/Accurate?	[ ]	[ ]	
Cont. in Good Cond.?	[ ]	[ ]	
Correct Containers?	[ ]	[ ]	
Correct Sample Volumes?	[ ]	[ ]	
Correct Preservation?	[ ]	[ ]	
Headspace/Volatiles?	[ ]	[ ]	

Courier/Tracking #:

ALS Field Services: [ ] Pickup [ ] Labor
[ ] Composite Sampling [ ] Rental Equipment
[ ] Other:

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] ALS	4/16/18	1710	2 [signature]	4/16/18	0920
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ]

Sample Disposal: Lab [X] [illegible] [ ]

PWSID # ____

EDDS: Format Type- EQ

R1803361 5
ALS Environmental
UR116: 2308943

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=W

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Cooler Receipt and Preservation Check Form

Project/Client ALS - MDT Folder Number

Cooler received on 4/17/18 by: @ COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate? ALS/ROC	(CLIENT)
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/17/18 Time: 0927 ID: (IR#7) IR#9 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	1.8	2.0	1.9	1.7			
Correction Factor (°C)	—	—	—	—			
Corrected Temp (°C)	1.8	2.0	1.9	1.7			
Temp from:Type of bottle	—	—	—	—			
Within 0-6°C?	(Y) N	(Y) N	(Y) N	(Y) N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R22 by @ on 4/17/18 at 0930
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 4/17/18 Time: 1300 by: @

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) (NO)
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: MDT

Explain all Discrepancies/ Other Comments:

Xc pass

need 4 bottles for -002 and 1 bottle for -010

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: @

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Cooler Receipt and Preservation Check Form

Project/Client ALS- YOT Folder Number

Cooler received on 4/18/18 by: @

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	Y (N)	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC (CLIENT)
4	Circle: **Wet Ice** **Dry Ice** **Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 4/18/18 Time: 0953 ID: IR#7 (IR#9) From: Temp Blank (Sample Bottle)

Observed Temp (°C)	0.9						
Correction Factor (°C)	—						
Corrected Temp (°C)	0.9						
Temp from:Type of bottle	—						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If<0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-012 by @ on 4/18/18 at 0956
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: _____ Time: _____ by: _____

9.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	YES	NO	
10.	Did all bottle labels and tags agree with custody papers?	YES	NO	
11.	Were correct containers used for the tests indicated?	YES	NO	
12.	Were 5035 vials acceptable (no extra labels, not leaking)?	YES	NO	N/A
13.	Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized		Tedlar® Bags Inflated	N/A

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: _____

Explain all Discrepancies/ Other Comments:

missing coolers from 4/17/18 except 680's

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: _____

PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm ; WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

\# Spike was diluted out

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client: ALS Environmental - US
Project: UR115: 2308943
Service Request: R1803361

Sample Name: 2308943 001
Lab Code: R1803361-001
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 004
Lab Code: R1803361-002
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 016
Lab Code: R1803361-003
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 028
Lab Code: R1803361-004
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 029
Lab Code: R1803361-005
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Client: ALS Environmental - US
Project: UR115: 2308943
Service Request: R1803361

Sample Name: 2308943 030
Lab Code: R1803361-006
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 031
Lab Code: R1803361-007
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 032
Lab Code: R1803361-008
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 034
Lab Code: R1803361-009
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 035
Lab Code: R1803361-010
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Client: ALS Environmental - US
Project: UR115: 2308943
Service Request: R1803361

Sample Name: 2308943 036
Lab Code: R1803361-011
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	BALLGEIER	JMISIUREWICZ

Sample Name: 2308943 037
Lab Code: R1803361-012
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/18/18

Analysis Method	Extracted/Digested By	Analyzed By
680	JMISIUREWICZ	JMISIUREWICZ

Sample Name: 2308943 038
Lab Code: R1803361-013
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/17/18

Analysis Method	Extracted/Digested By	Analyzed By
680	JMISIUREWICZ	JMISIUREWICZ

Sample Name: 2308943 039
Lab Code: R1803361-014
Sample Matrix: Water
Date Collected: 04/13/18
Date Received: 04/18/18

Analysis Method	Extracted/Digested By	Analyzed By
680	JMISIUREWICZ	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
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Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/12/18 14:00
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 001	**Units:**	ug/L
Lab Code:	R1803361-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 22:34	4/17/18	
Dichlorobiphenyls, Total	**0.0050**	0.0050	0.0016	1	04/24/18 22:34	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 22:34	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 22:34	4/17/18	
Monochlorobiphenyls, Total	**0.0040 J**	0.0050	0.00059	1	04/24/18 22:34	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 22:34	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 22:34	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 22:34	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 22:34	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 22:34	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 22:34	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	83	58 - 125	04/24/18 22:34	
4,4'-DDT	108	37 - 166	04/24/18 22:34	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/12/18 11:10
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 004	**Units:**	ug/L
Lab Code:	R1803361-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 23:02	4/17/18	
Dichlorobiphenyls, Total	**0.026**	0.0050	0.0016	1	04/24/18 23:02	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 23:02	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 23:02	4/17/18	
Monochlorobiphenyls, Total	**0.049**	0.0050	0.00059	1	04/24/18 23:02	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 23:02	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 23:02	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 23:02	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 23:02	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 23:02	4/17/18	
Total PCBs as Sum of Homologs	**0.074**	0.025	-	1	04/24/18 23:02	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	98	58 - 125	04/24/18 23:02	
4,4'-DDT	115	37 - 166	04/24/18 23:02	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/12/18 13:55
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 016	**Units:**	ug/L
Lab Code:	R1803361-003	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 23:31	4/17/18	
Dichlorobiphenyls, Total	**0.0020 J**	0.0050	0.0016	1	04/24/18 23:31	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 23:31	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 23:31	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/24/18 23:31	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 23:31	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 23:31	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 23:31	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 23:31	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 23:31	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 23:31	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	93	58 - 125	04/24/18 23:31	
4,4'-DDT	122	37 - 166	04/24/18 23:31	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 10:22
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 028	**Units:**	ug/L
Lab Code:	R1803361-004	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND	U	0.025	0.012	1	04/26/18 17:50	4/17/18	
Dichlorobiphenyls, Total	ND	U	0.0050	0.0016	1	04/26/18 17:50	4/17/18	
Heptachlorobiphenyls, Total	ND	U	0.015	0.0090	1	04/26/18 17:50	4/17/18	
Hexachlorobiphenyls, Total	**0.0080**	**J**	0.010	0.0047	1	04/26/18 17:50	4/17/18	
Monochlorobiphenyls, Total	ND	U	0.0050	0.00059	1	04/26/18 17:50	4/17/18	
Nonachlorobiphenyls, Total	ND	U	0.020	0.0088	1	04/26/18 17:50	4/17/18	
Octachlorobiphenyls, Total	ND	U	0.015	0.0099	1	04/26/18 17:50	4/17/18	
Pentachlorobiphenyls, Total	**0.065**		0.010	0.0043	1	04/26/18 17:50	4/17/18	
Tetrachlorobiphenyls, Total	**0.046**		0.010	0.0023	1	04/26/18 17:50	4/17/18	
Trichlorobiphenyls, Total	**0.0065**		0.0050	0.0022	1	04/26/18 17:50	4/17/18	
Total PCBs as Sum of Homologs	**0.13**		0.025	-	1	04/26/18 17:50	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	84	58 - 125	04/26/18 17:50	
4,4'-DDT	109	37 - 166	04/26/18 17:50	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 11:45
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 029	**Units:**	ug/L
Lab Code:	R1803361-005	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/26/18 18:19	4/17/18	
Dichlorobiphenyls, Total	**0.0038 J**	0.0048	0.0016	1	04/26/18 18:19	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/26/18 18:19	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.0096	0.0047	1	04/26/18 18:19	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0048	0.00059	1	04/26/18 18:19	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/26/18 18:19	4/17/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/26/18 18:19	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.0096	0.0043	1	04/26/18 18:19	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.0096	0.0023	1	04/26/18 18:19	4/17/18	
Trichlorobiphenyls, Total	**0.013**	0.0048	0.0022	1	04/26/18 18:19	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/26/18 18:19	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	77	58 - 125	04/26/18 18:19	
4,4'-DDT	113	37 - 166	04/26/18 18:19	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 09:21
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 030	**Units:**	ug/L
Lab Code:	R1803361-006	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/25/18 00:58	4/17/18	
Dichlorobiphenyls, Total	**0.0020 J**	0.0050	0.0016	1	04/25/18 00:58	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/25/18 00:58	4/17/18	
Hexachlorobiphenyls, Total	**0.013**	0.010	0.0047	1	04/25/18 00:58	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/25/18 00:58	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/25/18 00:58	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/25/18 00:58	4/17/18	
Pentachlorobiphenyls, Total	**0.067**	0.010	0.0048	1	04/25/18 00:58	4/17/18	
Tetrachlorobiphenyls, Total	**0.044**	0.010	0.0023	1	04/25/18 00:58	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/25/18 00:58	4/17/18	
Total PCBs as Sum of Homologs	**0.12**	0.025	-	1	04/25/18 00:58	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	91	58 - 125	04/25/18 00:58	
4,4'-DDT	112	37 - 166	04/25/18 00:58	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 11:45
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 031	**Units:**	ug/L
Lab Code:	R1803361-007	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND	U	0.024	0.012	1	04/25/18 01:27	4/17/18	
Dichlorobiphenyls, Total	**0.0024**	**J**	0.0048	0.0016	1	04/25/18 01:27	4/17/18	
Heptachlorobiphenyls, Total	**0.012**	**J**	0.014	0.0090	1	04/25/18 01:27	4/17/18	
Hexachlorobiphenyls, Total	**0.045**		0.0096	0.0047	1	04/25/18 01:27	4/17/18	
Monochlorobiphenyls, Total	ND	U	0.0048	0.00059	1	04/25/18 01:27	4/17/18	
Nonachlorobiphenyls, Total	ND	U	0.019	0.0088	1	04/25/18 01:27	4/17/18	
Octachlorobiphenyls, Total	ND	U	0.014	0.0099	1	04/25/18 01:27	4/17/18	
Pentachlorobiphenyls, Total	**0.10**		0.0096	0.0048	1	04/25/18 01:27	4/17/18	
Tetrachlorobiphenyls, Total	**0.034**		0.0096	0.0023	1	04/25/18 01:27	4/17/18	
Trichlorobiphenyls, Total	ND	U	0.0048	0.0022	1	04/25/18 01:27	4/17/18	
Total PCBs as Sum of Homologs	**0.20**		0.024	-	1	04/25/18 01:27	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	98	58 - 125	04/25/18 01:27	
4,4'-DDT	109	37 - 166	04/25/18 01:27	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 11:30
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 032	**Units:**	ug/L
Lab Code:	R1803361-008	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/25/18 01:56	4/17/18	
Dichlorobiphenyls, Total	**0.0020 J**	0.0049	0.0016	1	04/25/18 01:56	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/25/18 01:56	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.0098	0.0047	1	04/25/18 01:56	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0049	0.00059	1	04/25/18 01:56	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/25/18 01:56	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/25/18 01:56	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.0098	0.0043	1	04/25/18 01:56	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.0098	0.0023	1	04/25/18 01:56	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0049	0.0022	1	04/25/18 01:56	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/25/18 01:56	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	83	58 - 125	04/25/18 01:56	
4,4'-DDT	102	37 - 166	04/25/18 01:56	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 08:45
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 034	**Units:**	ug/L
Lab Code:	R1803361-009	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/25/18 02:25	4/17/18	
Dichlorobiphenyls, Total	**0.0019 J**	0.0047	0.0016	1	04/25/18 02:25	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/25/18 02:25	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/25/18 02:25	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/25/18 02:25	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/25/18 02:25	4/17/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/25/18 02:25	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/25/18 02:25	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/25/18 02:25	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/25/18 02:25	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/25/18 02:25	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	103	58 - 125	04/25/18 02:25	
4,4'-DDT	119	37 - 166	04/25/18 02:25	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 12:57
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 035	**Units:**	ug/L
Lab Code:	R1803361-010	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/25/18 02:54	4/17/18	
Dichlorobiphenyls, Total	**0.0045 J**	0.0050	0.0016	1	04/25/18 02:54	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/25/18 02:54	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/25/18 02:54	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/25/18 02:54	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/25/18 02:54	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/25/18 02:54	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/25/18 02:54	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/25/18 02:54	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/25/18 02:54	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/25/18 02:54	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	99	58 - 125	04/25/18 02:54	
4,4'-DDT	118	37 - 166	04/25/18 02:54	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 13:45
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 036	**Units:**	ug/L
Lab Code:	R1803361-011	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/26/18 18:48	4/17/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/26/18 18:48	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/26/18 18:48	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/26/18 18:48	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/26/18 18:48	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/26/18 18:48	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/26/18 18:48	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0045	1	04/26/18 18:48	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/26/18 18:48	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/26/18 18:48	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/26/18 18:48	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	90	58 - 125	04/26/18 18:48	
4,4'-DDT	112	37 - 166	04/26/18 18:48	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 14:00
Sample Matrix:	Water	**Date Received:**	04/18/18 09:53
Sample Name:	2308943 037	**Units:**	ug/L
Lab Code:	R1803361-012	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/26/18 19:17	4/19/18	
Dichlorobiphenyls, Total	**0.0025 J**	0.0050	0.0016	1	04/26/18 19:17	4/19/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/26/18 19:17	4/19/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/26/18 19:17	4/19/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/26/18 19:17	4/19/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/26/18 19:17	4/19/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/26/18 19:17	4/19/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/26/18 19:17	4/19/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/26/18 19:17	4/19/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/26/18 19:17	4/19/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/26/18 19:17	4/19/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	77	58 - 125	04/26/18 19:17	
4,4'-DDT	113	37 - 166	04/26/18 19:17	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 13:49
Sample Matrix:	Water	**Date Received:**	04/17/18 09:20
Sample Name:	2308943 038	**Units:**	ug/L
Lab Code:	R1803361-013	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/26/18 19:46	4/19/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/26/18 19:46	4/19/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/26/18 19:46	4/19/18	
Hexachlorobiphenyls, Total	**0.0065** **J**	0.010	0.0047	1	04/26/18 19:46	4/19/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/26/18 19:46	4/19/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/26/18 19:46	4/19/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/26/18 19:46	4/19/18	
Pentachlorobiphenyls, Total	**0.010**	0.010	0.0043	1	04/26/18 19:46	4/19/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/26/18 19:46	4/19/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/26/18 19:46	4/19/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/26/18 19:46	4/19/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	79	58 - 125	04/26/18 19:46	
4,4'-DDT	109	37 - 166	04/26/18 19:46	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	04/13/18 13:40
Sample Matrix:	Water	**Date Received:**	04/18/18 09:53
Sample Name:	2308943 039	**Units:**	ug/L
Lab Code:	R1803361-014	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/26/18 20:15	4/19/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/26/18 20:15	4/19/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/26/18 20:15	4/19/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/26/18 20:15	4/19/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/26/18 20:15	4/19/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/26/18 20:15	4/19/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/26/18 20:15	4/19/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/26/18 20:15	4/19/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/26/18 20:15	4/19/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/26/18 20:15	4/19/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/26/18 20:15	4/19/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	68	58 - 125	04/26/18 20:15	
4,4'-DDT	103	37 - 166	04/26/18 20:15	

QC Summary Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:** R1803361

Project: UR115: 2308943

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680

Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2308943 001	R1803361-001	108	83
2308943 004	R1803361-002	115	98
2308943 016	R1803361-003	122	93
2308943 028	R1803361-004	109	84
2308943 029	R1803361-005	113	77
2308943 030	R1803361-006	112	91
2308943 031	R1803361-007	109	98
2308943 032	R1803361-008	102	83
2308943 034	R1803361-009	119	103
2308943 035	R1803361-010	118	99
2308943 036	R1803361-011	112	90
2308943 037	R1803361-012	113	77
2308943 038	R1803361-013	109	79
2308943 039	R1803361-014	103	68
Method Blank	RQ1803502-01	111	86
Lab Control Sample	RQ1803502-02	106	86
Duplicate Lab Control Sample	RQ1803502-03	106	88
Method Blank	RQ1803584-01	126	99
Lab Control Sample	RQ1803584-02	128	100
Duplicate Lab Control Sample	RQ1803584-03	100	84

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803502-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 15:28	4/17/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 15:28	4/17/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 15:28	4/17/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 15:28	4/17/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/24/18 15:28	4/17/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 15:28	4/17/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 15:28	4/17/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 15:28	4/17/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 15:28	4/17/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 15:28	4/17/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 15:28	4/17/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	86	58 - 125	04/24/18 15:28	
4,4'-DDT	111	37 - 166	04/24/18 15:28	

Client:	ALS Environmental - US	**Service Request:**	R1803361
Project:	UR115: 2308943	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803584-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/24/18 09:20	4/19/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/24/18 09:20	4/19/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/24/18 09:20	4/19/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/24/18 09:20	4/19/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/24/18 09:20	4/19/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/24/18 09:20	4/19/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/24/18 09:20	4/19/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/24/18 09:20	4/19/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/24/18 09:20	4/19/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/24/18 09:20	4/19/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/24/18 09:20	4/19/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	99	58 - 125	04/24/18 09:20	
4,4'-DDT	126	37 - 166	04/24/18 09:20	

Client: ALS Environmental - US
Project: UR115: 2308943
Sample Matrix: Water

Service Request: R1803361
Date Analyzed: 04/24/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803502-02			Duplicate Lab Control Sample RQ1803502-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.468	1.25	37	0.509	1.25	41	29-162	8	30
Dichlorobiphenyls, Total	680	0.186	0.250	74	0.190	0.250	76	37-139	2	30
Heptachlorobiphenyls, Total	680	0.484	0.750	65	0.492	0.750	66	53-120	2	30
Hexachlorobiphenyls, Total	680	0.373	0.500	75	0.368	0.500	74	11-160	1	30
Monochlorobiphenyls, Total	680	0.159	0.250	63	0.172	0.250	69	34-137	8	30
Octachlorobiphenyls, Total	680	0.439	0.750	59	0.445	0.750	59	57-125	1	30
Pentachlorobiphenyls, Total	680	0.418	0.500	84	0.414	0.500	83	10-180	<1	30
Tetrachlorobiphenyls, Total	680	0.360	0.500	72	0.384	0.500	77	14-153	6	30
Trichlorobiphenyls, Total	680	0.180	0.250	72	0.187	0.250	75	10-173	4	30

Client: ALS Environmental - US
Project: UR115: 2308943
Sample Matrix: Water

Service Request: R1803361
Date Analyzed: 04/24/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803584-02			Duplicate Lab Control Sample RQ1803584-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.530	1.25	42	0.462	1.25	37	29-162	14	30
Dichlorobiphenyls, Total	680	0.212	0.250	85	0.178	0.250	71	37-139	18	30
Heptachlorobiphenyls, Total	680	0.506	0.750	67	0.388	0.750	52 *	53-120	27	30
Hexachlorobiphenyls, Total	680	0.388	0.500	78	0.301	0.500	60	11-160	25	30
Monochlorobiphenyls, Total	680	0.190	0.250	76	0.171	0.250	68	34-137	11	30
Octachlorobiphenyls, Total	680	0.469	0.750	63	0.359	0.750	48 *	57-125	27	30
Pentachlorobiphenyls, Total	680	0.433	0.500	87	0.343	0.500	69	10-180	23	30
Tetrachlorobiphenyls, Total	680	0.447	0.500	89	0.355	0.500	71	14-153	23	30
Trichlorobiphenyls, Total	680	0.208	0.250	83	0.184	0.250	73	10-173	13	30

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

May 1, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2309395**
Purchase Order:	**95840ACM**	Workorder ID:	**LMC MRC 4/17/18**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, April 17, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2309395 LMC MRC 4/17/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2309395001	MRC-SW17A	Water	4/16/2018 15:07	4/17/2018 22:00	Collected by Client
2309395002	MRC-SW2A	Water	4/16/2018 16:38	4/17/2018 22:00	Collected by Client
2309395003	MRC-SW1A	Water	4/16/2018 16:20	4/17/2018 22:00	Collected by Client
2309395004	MRC-SW9A	Water	4/17/2018 08:42	4/17/2018 22:00	Collected by Client
2309395005	TB-041718-1	Water	4/17/2018 22:00	4/17/2018 22:00	Collected by Client
2309395006	MRC-SW5A2	Water	4/17/2018 09:24	4/17/2018 22:00	Collected by Client
2309395007	MRC-SW5B	Water	4/17/2018 09:40	4/17/2018 22:00	Collected by Client
2309395008	MRC-SW7A	Water	4/17/2018 08:04	4/17/2018 22:00	Collected by Client
2309395009	MRC-SW7B	Water	4/17/2018 08:37	4/17/2018 22:00	Collected by Client
2309395010	TB-041718-2	Water	4/17/2018 22:00	4/17/2018 22:00	Collected by Client
2309395011	MRC-SW5A1	Water	4/17/2018 09:12	4/17/2018 22:00	Collected by Client
2309395012	MRC-SW9B	Water	4/17/2018 08:06	4/17/2018 22:00	Collected by Client
2309395013	MRC-SW15A	Water	4/17/2018 11:40	4/17/2018 22:00	Collected by Client
2309395014	MRC-SW16A	Water	4/17/2018 11:20	4/17/2018 22:00	Collected by Client
2309395015	TB-041718-3	Water	4/17/2018 22:00	4/17/2018 22:00	Collected by Client
2309395016	MRC-SW13A	Water	4/17/2018 11:44	4/17/2018 22:00	Collected by Client
2309395017	MRC-SW6B	Water	4/17/2018 10:51	4/17/2018 22:00	Collected by Client
2309395018	MRC-SW8B	Water	4/17/2018 11:04	4/17/2018 22:00	Collected by Client
2309395019	TB-041718-4	Water	4/17/2018 22:00	4/17/2018 22:00	Collected by Client
2309395020	MRC-SW8A-D	Water	4/17/2018 10:30	4/17/2018 22:00	Collected by Client
2309395021	MRC-SW6A	Water	4/17/2018 10:02	4/17/2018 22:00	Collected by Client
2309395022	TB-041718-5	Water	4/17/2018 22:00	4/17/2018 22:00	Collected by Client
2309395023	MRC-SW8A	Water	4/17/2018 10:16	4/17/2018 22:00	Collected by Client
2309395024	DM-1-4	Water	4/17/2018 13:20	4/17/2018 22:00	Collected by Client
2309395025	DM-5-8	Water	4/17/2018 13:35	4/17/2018 22:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 2309395 LMC MRC 4/17/18

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2309395 LMC MRC 4/17/18

Workorder Comments

Please see attached subcontracting report from ALS Rochester. VNB 4/30/18

Sample Comments

Lab ID: 2309395024 **Sample ID:** DM-1-4 **Sample Type:** SAMPLE

The percent dry solid per the EPA leaching procedure was less than 0.5%. The sample was filtered to form the leachate.

Lab ID: 2309395025 **Sample ID:** DM-5-8 **Sample Type:** SAMPLE

The percent dry solid per the EPA leaching procedure was less than 0.5%. The sample was filtered to form the leachate.

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395001** Date Collected: 4/16/2018 15:07 Matrix: Water

Sample ID: **MRC-SW17A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 22:29	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 22:29	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 22:29	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 22:29	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 22:29	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 22:29	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 22:29	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 22:29	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 22:29	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 22:29	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 22:29	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 22:29	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:29	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 22:29	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 22:29	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 22:29	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 22:29	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 22:29	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 22:29	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:29	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 22:29	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 22:29	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 22:29	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 22:29	CJG	B
Acetone	11.2		ug/L	10.0	3.1	SW846 8260B		4/24/18 22:29	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 22:29	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:29	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:29	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 22:29	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 22:29	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 22:29	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 22:29	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:29	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 22:29	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 22:29	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395001** Date Collected: 4/16/2018 15:07 Matrix: Water

Sample ID: **MRC-SW17A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 22:29	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:29	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 22:29	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:29	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 22:29	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 22:29	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 22:29	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 22:29	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 22:29	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 22:29	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 22:29	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 22:29	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 22:29	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 22:29	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 22:29	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 22:29	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 22:29	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 22:29	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 22:29	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 22:29	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 22:29	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:29	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:29	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 22:29	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 22:29	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 22:29	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:29	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:29	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:29	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 22:29	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 22:29	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 22:29	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395001** Date Collected: 4/16/2018 15:07 Matrix: Water

Sample ID: **MRC-SW17A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 22:29	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 22:29	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	118		%	62 - 133		SW846 8260B			4/24/18 22:29	CJG	B
4-Bromofluorobenzene (S)	93.6		%	79 - 114		SW846 8260B			4/24/18 22:29	CJG	B
Dibromofluoromethane (S)	98.6		%	78 - 116		SW846 8260B			4/24/18 22:29	CJG	B
Toluene-d8 (S)	98.1		%	76 - 127		SW846 8260B			4/24/18 22:29	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	83.2		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C
Fluoranthene-d10 (S)	118		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 22:31	GEC	C

Vanessa N. Badman

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395002** Date Collected: 4/16/2018 16:38 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 22:52	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 22:52	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 22:52	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 22:52	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 22:52	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 22:52	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 22:52	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 22:52	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 22:52	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 22:52	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 22:52	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 22:52	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:52	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 22:52	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 22:52	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 22:52	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 22:52	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 22:52	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 22:52	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:52	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 22:52	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 22:52	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 22:52	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 22:52	CJG	B
Acetone	13.6		ug/L	10.0	3.1	SW846 8260B		4/24/18 22:52	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 22:52	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:52	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:52	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 22:52	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 22:52	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 22:52	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 22:52	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:52	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 22:52	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 22:52	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395002** Date Collected: 4/16/2018 16:38 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 22:52	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:52	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 22:52	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:52	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 22:52	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 22:52	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 22:52	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 22:52	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 22:52	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 22:52	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 22:52	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 22:52	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 22:52	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 22:52	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 22:52	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 22:52	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 22:52	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 22:52	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 22:52	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 22:52	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 22:52	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:52	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:52	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 22:52	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 22:52	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 22:52	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 22:52	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 22:52	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 22:52	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 22:52	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 22:52	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 22:52	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395002** Date Collected: 4/16/2018 16:38 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 22:52	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 22:52	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	116		%	62 - 133		SW846 8260B			4/24/18 22:52	CJG	B
4-Bromofluorobenzene (S)	94.5		%	79 - 114		SW846 8260B			4/24/18 22:52	CJG	B
Dibromofluoromethane (S)	96.6		%	78 - 116		SW846 8260B			4/24/18 22:52	CJG	B
Toluene-d8 (S)	96.6		%	76 - 127		SW846 8260B			4/24/18 22:52	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	66.4		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C
Fluoranthene-d10 (S)	124		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 23:25	GEC	C

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395003** Date Collected: 4/16/2018 16:20 Matrix: Water
Sample ID: **MRC-SW1A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 23:15	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 23:15	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 23:15	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 23:15	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 23:15	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 23:15	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 23:15	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 23:15	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 23:15	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 23:15	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 23:15	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 23:15	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:15	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 23:15	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 23:15	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 23:15	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 23:15	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 23:15	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 23:15	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:15	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 23:15	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 23:15	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 23:15	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 23:15	CJG	B
Acetone	13.2		ug/L	10.0	3.1	SW846 8260B		4/24/18 23:15	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 23:15	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:15	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:15	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 23:15	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 23:15	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 23:15	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 23:15	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:15	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 23:15	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 23:15	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395003** Date Collected: 4/16/2018 16:20 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 23:15	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:15	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 23:15	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:15	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 23:15	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 23:15	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 23:15	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 23:15	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 23:15	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 23:15	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 23:15	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 23:15	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 23:15	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 23:15	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 23:15	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 23:15	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 23:15	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 23:15	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 23:15	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 23:15	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 23:15	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:15	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:15	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 23:15	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 23:15	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 23:15	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:15	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:15	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:15	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 23:15	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 23:15	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 23:15	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395003** Date Collected: 4/16/2018 16:20 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 23:15	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 23:15	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/24/18 23:15	CJG	B
4-Bromofluorobenzene (S)	93.3		%	79 - 114		SW846 8260B			4/24/18 23:15	CJG	B
Dibromofluoromethane (S)	94.7		%	78 - 116		SW846 8260B			4/24/18 23:15	CJG	B
Toluene-d8 (S)	95.5		%	76 - 127		SW846 8260B			4/24/18 23:15	CJG	B
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.099	0.019	8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	86.2		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C
Fluoranthene-d10 (S)	113		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 22:58	GEC	C

Vanessa N. Badman

Mrs. Vanessa N Badman
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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395004** Date Collected: 4/17/2018 08:42 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 23:37	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 23:37	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 23:37	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 23:37	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 23:37	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 23:37	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 23:37	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 23:37	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 23:37	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 23:37	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 23:37	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 23:37	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:37	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 23:37	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 23:37	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 23:37	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 23:37	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 23:37	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 23:37	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:37	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 23:37	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 23:37	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 23:37	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 23:37	CJG	B
Acetone	12.8		ug/L	10.0	3.1	SW846 8260B		4/24/18 23:37	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 23:37	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:37	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:37	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 23:37	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 23:37	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 23:37	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 23:37	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:37	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 23:37	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 23:37	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395004** Date Collected: 4/17/2018 08:42 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 23:37	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:37	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 23:37	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:37	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 23:37	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 23:37	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 23:37	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 23:37	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 23:37	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 23:37	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 23:37	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 23:37	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 23:37	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 23:37	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 23:37	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 23:37	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 23:37	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 23:37	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 23:37	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 23:37	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 23:37	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:37	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:37	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 23:37	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 23:37	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 23:37	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 23:37	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 23:37	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 23:37	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 23:37	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 23:37	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 23:37	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395004** Date Collected: 4/17/2018 08:42 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 23:37	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 23:37	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	117		%	62 - 133		SW846 8260B			4/24/18 23:37	CJG	B
4-Bromofluorobenzene (S)	92.5		%	79 - 114		SW846 8260B			4/24/18 23:37	CJG	B
Dibromofluoromethane (S)	97.2		%	78 - 116		SW846 8260B			4/24/18 23:37	CJG	B
Toluene-d8 (S)	95.7		%	76 - 127		SW846 8260B			4/24/18 23:37	CJG	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/26/18 23:08	SUB	C

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395005** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-1** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 00:00	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 00:00	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 00:00	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 00:00	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 00:00	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/25/18 00:00	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 00:00	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/25/18 00:00	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:00	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/25/18 00:00	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 00:00	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/25/18 00:00	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:00	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/25/18 00:00	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:00	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:00	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:00	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/25/18 00:00	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:00	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:00	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/25/18 00:00	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/25/18 00:00	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/25/18 00:00	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/25/18 00:00	CJG	B
Acetone	13.0		ug/L	10.0	3.1	SW846 8260B		4/25/18 00:00	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:00	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:00	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:00	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:00	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/25/18 00:00	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/25/18 00:00	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:00	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:00	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 00:00	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 00:00	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395005** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-1** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/25/18 00:00	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:00	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 00:00	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:00	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:00	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 00:00	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 00:00	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 00:00	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/25/18 00:00	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 00:00	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/25/18 00:00	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 00:00	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 00:00	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/25/18 00:00	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:00	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 00:00	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:00	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/25/18 00:00	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:00	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/25/18 00:00	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 00:00	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:00	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:00	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/25/18 00:00	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 00:00	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 00:00	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:00	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:00	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:00	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/25/18 00:00	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/25/18 00:00	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/25/18 00:00	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395005** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-1** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/25/18 00:00	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/25/18 00:00	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	117		%	62 - 133		SW846 8260B			4/25/18 00:00	CJG	B
4-Bromofluorobenzene (S)	93.2		%	79 - 114		SW846 8260B			4/25/18 00:00	CJG	B
Dibromofluoromethane (S)	98.4		%	78 - 116		SW846 8260B			4/25/18 00:00	CJG	B
Toluene-d8 (S)	94.1		%	76 - 127		SW846 8260B			4/25/18 00:00	CJG	B

Vanessa N. Badman

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395006** Date Collected: 4/17/2018 09:24 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 00:23	CJG	
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 00:23	CJG	
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 00:23	CJG	
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 00:23	CJG	
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 00:23	CJG	
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/25/18 00:23	CJG	
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 00:23	CJG	
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/25/18 00:23	CJG	
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:23	CJG	
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/25/18 00:23	CJG	
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 00:23	CJG	
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/25/18 00:23	CJG	
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:23	CJG	
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/25/18 00:23	CJG	
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:23	CJG	
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:23	CJG	
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:23	CJG	
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/25/18 00:23	CJG	
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:23	CJG	
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:23	CJG	
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/25/18 00:23	CJG	
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/25/18 00:23	CJG	
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/25/18 00:23	CJG	
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/25/18 00:23	CJG	
Acetone	ND		ug/L	10.0	3.1	SW846 8260B		4/25/18 00:23	CJG	
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:23	CJG	
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:23	CJG	
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:23	CJG	
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:23	CJG	
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/25/18 00:23	CJG	
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/25/18 00:23	CJG	
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:23	CJG	
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:23	CJG	
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 00:23	CJG	
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 00:23	CJG	

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395006** Date Collected: 4/17/2018 09:24 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/25/18 00:23	CJG	
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:23	CJG	
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 00:23	CJG	
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:23	CJG	
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:23	CJG	
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 00:23	CJG	
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 00:23	CJG	
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 00:23	CJG	
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/25/18 00:23	CJG	
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 00:23	CJG	
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/25/18 00:23	CJG	
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 00:23	CJG	
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 00:23	CJG	
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/25/18 00:23	CJG	
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:23	CJG	
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 00:23	CJG	
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:23	CJG	
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/25/18 00:23	CJG	
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:23	CJG	
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/25/18 00:23	CJG	
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 00:23	CJG	
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:23	CJG	
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:23	CJG	
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/25/18 00:23	CJG	
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 00:23	CJG	
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 00:23	CJG	
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:23	CJG	
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:23	CJG	
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:23	CJG	
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/25/18 00:23	CJG	
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/25/18 00:23	CJG	
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/25/18 00:23	CJG	

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395006** Date Collected: 4/17/2018 09:24 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/25/18 00:23	CJG	
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/25/18 00:23	CJG	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	118		%	62 - 133		SW846 8260B			4/25/18 00:23	CJG	
4-Bromofluorobenzene (S)	95		%	79 - 114		SW846 8260B			4/25/18 00:23	CJG	
Dibromofluoromethane (S)	98.8		%	78 - 116		SW846 8260B			4/25/18 00:23	CJG	
Toluene-d8 (S)	98		%	76 - 127		SW846 8260B			4/25/18 00:23	CJG	
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/30/18 11:06	SUB	C

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395007** Date Collected: 4/17/2018 09:40 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 00:46	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 00:46	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 00:46	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 00:46	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 00:46	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/25/18 00:46	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 00:46	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/25/18 00:46	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:46	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/25/18 00:46	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 00:46	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/25/18 00:46	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:46	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/25/18 00:46	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:46	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:46	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:46	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/25/18 00:46	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:46	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:46	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/25/18 00:46	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/25/18 00:46	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/25/18 00:46	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/25/18 00:46	CJG	B
Acetone	8.3J	J	ug/L	10.0	3.1	SW846 8260B		4/25/18 00:46	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:46	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:46	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:46	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 00:46	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/25/18 00:46	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/25/18 00:46	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:46	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:46	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 00:46	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 00:46	CJG	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395007** Date Collected: 4/17/2018 09:40 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/25/18 00:46	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:46	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 00:46	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:46	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 00:46	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 00:46	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 00:46	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 00:46	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/25/18 00:46	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 00:46	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/25/18 00:46	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 00:46	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 00:46	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/25/18 00:46	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:46	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 00:46	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 00:46	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/25/18 00:46	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 00:46	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/25/18 00:46	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 00:46	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:46	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:46	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/25/18 00:46	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 00:46	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 00:46	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 00:46	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 00:46	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 00:46	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/25/18 00:46	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/25/18 00:46	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/25/18 00:46	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395007** Date Collected: 4/17/2018 09:40 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/25/18 00:46	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/25/18 00:46	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	115		%	62 - 133		SW846 8260B			4/25/18 00:46	CJG	B
4-Bromofluorobenzene (S)	92		%	79 - 114		SW846 8260B			4/25/18 00:46	CJG	B
Dibromofluoromethane (S)	96		%	78 - 116		SW846 8260B			4/25/18 00:46	CJG	B
Toluene-d8 (S)	95.3		%	76 - 127		SW846 8260B			4/25/18 00:46	CJG	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 00:06	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395008** Date Collected: 4/17/2018 08:04 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 01:09	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 01:09	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 01:09	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 01:09	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 01:09	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/25/18 01:09	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 01:09	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/25/18 01:09	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:09	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/25/18 01:09	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 01:09	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/25/18 01:09	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:09	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/25/18 01:09	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:09	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:09	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:09	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/25/18 01:09	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:09	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:09	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/25/18 01:09	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/25/18 01:09	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/25/18 01:09	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/25/18 01:09	CJG	B
Acetone	4.5J	J	ug/L	10.0	3.1	SW846 8260B		4/25/18 01:09	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:09	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:09	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:09	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:09	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/25/18 01:09	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/25/18 01:09	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:09	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:09	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 01:09	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 01:09	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395008** Date Collected: 4/17/2018 08:04 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/25/18 01:09	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:09	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 01:09	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:09	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:09	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 01:09	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 01:09	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 01:09	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/25/18 01:09	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 01:09	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/25/18 01:09	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 01:09	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 01:09	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/25/18 01:09	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:09	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 01:09	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:09	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/25/18 01:09	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:09	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/25/18 01:09	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 01:09	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:09	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:09	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/25/18 01:09	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 01:09	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 01:09	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:09	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:09	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:09	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/25/18 01:09	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/25/18 01:09	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/25/18 01:09	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395008** Date Collected: 4/17/2018 08:04 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/25/18 01:09	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/25/18 01:09	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	115		%	62 - 133		SW846 8260B			4/25/18 01:09	CJG	B
4-Bromofluorobenzene (S)	92.8		%	79 - 114		SW846 8260B			4/25/18 01:09	CJG	B
Dibromofluoromethane (S)	97.5		%	78 - 116		SW846 8260B			4/25/18 01:09	CJG	B
Toluene-d8 (S)	95.3		%	76 - 127		SW846 8260B			4/25/18 01:09	CJG	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 00:35	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395009** Date Collected: 4/17/2018 08:37 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 01:32	CJG	B
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 01:32	CJG	B
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 01:32	CJG	B
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 01:32	CJG	B
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 01:32	CJG	B
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/25/18 01:32	CJG	B
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 01:32	CJG	B
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/25/18 01:32	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:32	CJG	B
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/25/18 01:32	CJG	B
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/25/18 01:32	CJG	B
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/25/18 01:32	CJG	B
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:32	CJG	B
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/25/18 01:32	CJG	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:32	CJG	B
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:32	CJG	B
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:32	CJG	B
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/25/18 01:32	CJG	B
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:32	CJG	B
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:32	CJG	B
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/25/18 01:32	CJG	B
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/25/18 01:32	CJG	B
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/25/18 01:32	CJG	B
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/25/18 01:32	CJG	B
Acetone	13.4		ug/L	10.0	3.1	SW846 8260B		4/25/18 01:32	CJG	B
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:32	CJG	B
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:32	CJG	B
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:32	CJG	B
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/25/18 01:32	CJG	B
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/25/18 01:32	CJG	B
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/25/18 01:32	CJG	B
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:32	CJG	B
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:32	CJG	B
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 01:32	CJG	B
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 01:32	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395009** Date Collected: 4/17/2018 08:37 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/25/18 01:32	CJG	B
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:32	CJG	B
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/25/18 01:32	CJG	B
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:32	CJG	B
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/25/18 01:32	CJG	B
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/25/18 01:32	CJG	B
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/25/18 01:32	CJG	B
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 01:32	CJG	B
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/25/18 01:32	CJG	B
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/25/18 01:32	CJG	B
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/25/18 01:32	CJG	B
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 01:32	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/25/18 01:32	CJG	B
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/25/18 01:32	CJG	B
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:32	CJG	B
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/25/18 01:32	CJG	B
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/25/18 01:32	CJG	B
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/25/18 01:32	CJG	B
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/25/18 01:32	CJG	B
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/25/18 01:32	CJG	B
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/25/18 01:32	CJG	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:32	CJG	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:32	CJG	B
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/25/18 01:32	CJG	B
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/25/18 01:32	CJG	B
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/25/18 01:32	CJG	B
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/25/18 01:32	CJG	B
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/25/18 01:32	CJG	B
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/25/18 01:32	CJG	B
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/25/18 01:32	CJG	B
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/25/18 01:32	CJG	B
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/25/18 01:32	CJG	B

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395009** Date Collected: 4/17/2018 08:37 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/25/18 01:32	CJG	B
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/25/18 01:32	CJG	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	119		%	62 - 133		SW846 8260B			4/25/18 01:32	CJG	B
4-Bromofluorobenzene (S)	93.2		%	79 - 114		SW846 8260B			4/25/18 01:32	CJG	B
Dibromofluoromethane (S)	99.4		%	78 - 116		SW846 8260B			4/25/18 01:32	CJG	B
Toluene-d8 (S)	95.6		%	76 - 127		SW846 8260B			4/25/18 01:32	CJG	B
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 01:03	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395010** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-2** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:38	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:38	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:38	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:38	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:38	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 16:38	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:38	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 16:38	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:38	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 16:38	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:38	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 16:38	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:38	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 16:38	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:38	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:38	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:38	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 16:38	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:38	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:38	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 16:38	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 16:38	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 16:38	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 16:38	DD	A
Acetone	15.5		ug/L	10.0	3.1	SW846 8260B		4/24/18 16:38	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:38	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:38	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:38	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:38	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 16:38	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 16:38	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:38	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:38	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:38	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:38	DD	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395010** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-2** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 16:38	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:38	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:38	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:38	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:38	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:38	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:38	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:38	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 16:38	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:38	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 16:38	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:38	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:38	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 16:38	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:38	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:38	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:38	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 16:38	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:38	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 16:38	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:38	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:38	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:38	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 16:38	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:38	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:38	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:38	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:38	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:38	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 16:38	DD	A
tert-Butyl Alcohol	2.5J	J	ug/L	10.0	2.2	SW846 8260B		4/24/18 16:38	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 16:38	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395010** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-2** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 16:38	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 16:38	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.1		%	62 - 133		SW846 8260B			4/24/18 16:38	DD	A
4-Bromofluorobenzene (S)	98.7		%	79 - 114		SW846 8260B			4/24/18 16:38	DD	A
Dibromofluoromethane (S)	91.6		%	78 - 116		SW846 8260B			4/24/18 16:38	DD	A
Toluene-d8 (S)	82.9		%	76 - 127		SW846 8260B			4/24/18 16:38	DD	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395011** Date Collected: 4/17/2018 09:12 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:43	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:43	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:43	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:43	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:43	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 17:43	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:43	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 17:43	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:43	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 17:43	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:43	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 17:43	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:43	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 17:43	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:43	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:43	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:43	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 17:43	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:43	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:43	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 17:43	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 17:43	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 17:43	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 17:43	DD	A
Acetone	5.0J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 17:43	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:43	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:43	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:43	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:43	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 17:43	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 17:43	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:43	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:43	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:43	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:43	DD	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395011** Date Collected: 4/17/2018 09:12 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 17:43	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:43	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:43	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:43	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:43	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:43	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:43	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:43	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 17:43	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:43	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 17:43	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:43	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:43	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 17:43	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:43	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:43	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:43	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 17:43	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:43	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 17:43	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:43	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:43	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:43	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 17:43	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:43	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:43	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:43	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:43	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:43	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 17:43	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 17:43	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 17:43	DD	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395011** Date Collected: 4/17/2018 09:12 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 17:43	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 17:43	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.7		%	62 - 133		SW846 8260B			4/24/18 17:43	DD	A
4-Bromofluorobenzene (S)	94.1		%	79 - 114		SW846 8260B			4/24/18 17:43	DD	A
Dibromofluoromethane (S)	90.9		%	78 - 116		SW846 8260B			4/24/18 17:43	DD	A
Toluene-d8 (S)	80.7		%	76 - 127		SW846 8260B			4/24/18 17:43	DD	A
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/30/18 11:35	SUB	C

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395012** Date Collected: 4/17/2018 08:06 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:05	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:05	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:05	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:05	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:05	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 18:05	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:05	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 18:05	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:05	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 18:05	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:05	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 18:05	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:05	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 18:05	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:05	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:05	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:05	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 18:05	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:05	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:05	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 18:05	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 18:05	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 18:05	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 18:05	DD	A
Acetone	5.5J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 18:05	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:05	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:05	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:05	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:05	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 18:05	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 18:05	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:05	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:05	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:05	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:05	DD	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395012** Date Collected: 4/17/2018 08:06 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 18:05	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:05	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:05	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:05	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:05	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:05	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:05	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:05	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 18:05	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:05	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 18:05	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:05	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:05	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 18:05	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:05	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:05	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:05	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 18:05	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:05	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 18:05	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:05	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:05	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:05	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 18:05	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:05	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:05	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:05	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:05	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:05	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 18:05	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 18:05	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 18:05	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395012** Date Collected: 4/17/2018 08:06 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 18:05	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 18:05	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93		%	62 - 133		SW846 8260B			4/24/18 18:05	DD	A
4-Bromofluorobenzene (S)	94.5		%	79 - 114		SW846 8260B			4/24/18 18:05	DD	A
Dibromofluoromethane (S)	95.3		%	78 - 116		SW846 8260B			4/24/18 18:05	DD	A
Toluene-d8 (S)	81.4		%	76 - 127		SW846 8260B			4/24/18 18:05	DD	A
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 02:01	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395013** Date Collected: 4/17/2018 11:40 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:27	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:27	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:27	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:27	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:27	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 18:27	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:27	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 18:27	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:27	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 18:27	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:27	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 18:27	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:27	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 18:27	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:27	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:27	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:27	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 18:27	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:27	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:27	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 18:27	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 18:27	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 18:27	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 18:27	DD	A
Acetone	5.5J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 18:27	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:27	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:27	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:27	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:27	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 18:27	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 18:27	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:27	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:27	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:27	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:27	DD	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395013** Date Collected: 4/17/2018 11:40 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 18:27	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:27	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:27	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:27	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:27	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:27	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:27	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:27	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 18:27	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:27	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 18:27	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:27	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:27	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 18:27	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:27	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:27	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:27	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 18:27	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:27	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 18:27	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:27	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:27	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:27	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 18:27	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:27	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:27	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:27	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:27	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:27	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 18:27	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 18:27	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 18:27	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395013** Date Collected: 4/17/2018 11:40 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 18:27	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 18:27	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.7		%	62 - 133		SW846 8260B			4/24/18 18:27	DD	A
4-Bromofluorobenzene (S)	93.8		%	79 - 114		SW846 8260B			4/24/18 18:27	DD	A
Dibromofluoromethane (S)	94.2		%	78 - 116		SW846 8260B			4/24/18 18:27	DD	A
Toluene-d8 (S)	81.5		%	76 - 127		SW846 8260B			4/24/18 18:27	DD	A
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 02:30	SUB	C

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395014** Date Collected: 4/17/2018 11:20 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:48	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:48	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:48	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:48	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:48	DD	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 18:48	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:48	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 18:48	DD	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:48	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 18:48	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:48	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 18:48	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:48	DD	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 18:48	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:48	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:48	DD	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:48	DD	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 18:48	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:48	DD	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:48	DD	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 18:48	DD	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 18:48	DD	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 18:48	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 18:48	DD	A
Acetone	9.0J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 18:48	DD	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:48	DD	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:48	DD	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:48	DD	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:48	DD	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 18:48	DD	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 18:48	DD	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:48	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:48	DD	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:48	DD	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:48	DD	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395014** Date Collected: 4/17/2018 11:20 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 18:48	DD	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:48	DD	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:48	DD	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:48	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:48	DD	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:48	DD	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:48	DD	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:48	DD	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 18:48	DD	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:48	DD	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 18:48	DD	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:48	DD	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:48	DD	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 18:48	DD	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:48	DD	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:48	DD	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:48	DD	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 18:48	DD	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:48	DD	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 18:48	DD	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:48	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:48	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:48	DD	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 18:48	DD	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:48	DD	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:48	DD	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:48	DD	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:48	DD	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:48	DD	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 18:48	DD	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 18:48	DD	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 18:48	DD	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395014** Date Collected: 4/17/2018 11:20 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 18:48	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 18:48	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.7		%	62 - 133		SW846 8260B			4/24/18 18:48	DD	A
4-Bromofluorobenzene (S)	92.9		%	79 - 114		SW846 8260B			4/24/18 18:48	DD	A
Dibromofluoromethane (S)	93.8		%	78 - 116		SW846 8260B			4/24/18 18:48	DD	A
Toluene-d8 (S)	80.4		%	76 - 127		SW846 8260B			4/24/18 18:48	DD	A
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 02:58	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395015** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-3** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 15:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 15:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 15:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 15:50	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 15:50	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 15:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 15:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 15:50	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 15:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 15:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 15:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 15:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 15:50	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 15:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 15:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 15:50	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 15:50	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 15:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 15:50	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 15:50	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 15:50	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 15:50	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 15:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 15:50	TMP	A
Acetone	11.5		ug/L	10.0	3.1	SW846 8260B		4/24/18 15:50	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 15:50	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 15:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 15:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 15:50	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 15:50	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 15:50	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 15:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 15:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 15:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 15:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395015** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-3** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 15:50	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 15:50	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 15:50	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 15:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 15:50	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 15:50	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 15:50	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 15:50	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 15:50	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 15:50	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 15:50	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 15:50	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 15:50	TMP	A
Naphthalene	0.49J	J	ug/L	2.0	0.34	SW846 8260B		4/24/18 15:50	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 15:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 15:50	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 15:50	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 15:50	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 15:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 15:50	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 15:50	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 15:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 15:50	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 15:50	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 15:50	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 15:50	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 15:50	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 15:50	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 15:50	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 15:50	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 15:50	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 15:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395015** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-3** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 15:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 15:50	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/24/18 15:50	TMP	A
4-Bromofluorobenzene (S)	96.5		%	79 - 114		SW846 8260B			4/24/18 15:50	TMP	A
Dibromofluoromethane (S)	96.7		%	78 - 116		SW846 8260B			4/24/18 15:50	TMP	A
Toluene-d8 (S)	99.6		%	76 - 127		SW846 8260B			4/24/18 15:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395016** Date Collected: 4/17/2018 11:44 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:58	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:58	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:58	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:58	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:58	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 16:58	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:58	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 16:58	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:58	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 16:58	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:58	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 16:58	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:58	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 16:58	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:58	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:58	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:58	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 16:58	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:58	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:58	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 16:58	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 16:58	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 16:58	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 16:58	TMP	A
Acetone	8.1J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 16:58	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:58	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:58	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:58	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:58	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 16:58	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 16:58	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:58	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:58	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:58	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:58	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395016** Date Collected: 4/17/2018 11:44 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 16:58	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:58	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:58	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:58	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:58	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:58	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:58	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:58	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 16:58	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:58	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 16:58	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:58	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:58	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 16:58	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:58	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:58	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:58	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 16:58	TMP	A
Trichloroethene	1.6		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:58	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 16:58	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:58	TMP	A
cis-1,2-Dichloroethene	0.37J	J	ug/L	1.0	0.32	SW846 8260B		4/24/18 16:58	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:58	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 16:58	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:58	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:58	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:58	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:58	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:58	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 16:58	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 16:58	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 16:58	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395016** Date Collected: 4/17/2018 11:44 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 16:58	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 16:58	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	117		%	62 - 133		SW846 8260B			4/24/18 16:58	TMP	A
4-Bromofluorobenzene (S)	91.4		%	79 - 114		SW846 8260B			4/24/18 16:58	TMP	A
Dibromofluoromethane (S)	95.1		%	78 - 116		SW846 8260B			4/24/18 16:58	TMP	A
Toluene-d8 (S)	93.9		%	76 - 127		SW846 8260B			4/24/18 16:58	TMP	A
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 03:27	SUB	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395017** Date Collected: 4/17/2018 10:51 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:21	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:21	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:21	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:21	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:21	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 17:21	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:21	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 17:21	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:21	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 17:21	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:21	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 17:21	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:21	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 17:21	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:21	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:21	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:21	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 17:21	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:21	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:21	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 17:21	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 17:21	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 17:21	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 17:21	TMP	A
Acetone	7.8J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 17:21	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:21	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:21	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:21	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:21	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 17:21	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 17:21	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:21	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:21	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:21	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:21	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395017** Date Collected: 4/17/2018 10:51 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 17:21	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:21	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:21	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:21	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:21	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:21	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:21	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:21	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 17:21	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:21	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 17:21	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:21	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:21	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 17:21	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:21	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:21	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:21	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 17:21	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:21	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 17:21	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:21	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:21	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:21	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 17:21	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:21	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:21	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:21	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:21	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:21	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 17:21	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 17:21	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 17:21	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395017** Date Collected: 4/17/2018 10:51 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 17:21	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 17:21	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	116		%	62 - 133		SW846 8260B			4/24/18 17:21	TMP	A
4-Bromofluorobenzene (S)	93		%	79 - 114		SW846 8260B			4/24/18 17:21	TMP	A
Dibromofluoromethane (S)	95.4		%	78 - 116		SW846 8260B			4/24/18 17:21	TMP	A
Toluene-d8 (S)	94.4		%	76 - 127		SW846 8260B			4/24/18 17:21	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	85.1		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
Fluoranthene-d10 (S)	128		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/23/18 23:53	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 03:56	SUB	E

Vanessa N. Badman

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395018** Date Collected: 4/17/2018 11:04 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:44	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:44	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:44	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:44	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:44	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 17:44	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:44	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 17:44	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:44	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 17:44	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 17:44	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 17:44	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:44	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 17:44	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:44	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:44	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:44	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 17:44	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:44	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:44	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 17:44	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 17:44	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 17:44	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 17:44	TMP	A
Acetone	12.6		ug/L	10.0	3.1	SW846 8260B		4/24/18 17:44	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:44	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:44	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:44	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 17:44	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 17:44	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 17:44	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:44	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:44	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:44	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:44	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395018** Date Collected: 4/17/2018 11:04 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 17:44	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:44	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 17:44	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:44	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 17:44	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 17:44	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 17:44	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:44	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 17:44	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 17:44	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 17:44	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:44	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 17:44	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 17:44	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:44	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 17:44	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 17:44	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 17:44	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 17:44	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 17:44	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 17:44	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:44	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:44	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 17:44	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 17:44	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 17:44	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 17:44	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 17:44	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 17:44	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 17:44	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 17:44	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 17:44	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395018** Date Collected: 4/17/2018 11:04 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 17:44	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 17:44	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	118		%	62 - 133		SW846 8260B			4/24/18 17:44	TMP	A
4-Bromofluorobenzene (S)	93		%	79 - 114		SW846 8260B			4/24/18 17:44	TMP	A
Dibromofluoromethane (S)	99.2		%	78 - 116		SW846 8260B			4/24/18 17:44	TMP	A
Toluene-d8 (S)	94.9		%	76 - 127		SW846 8260B			4/24/18 17:44	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.049J	J	ug/L	0.093	0.018	8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	86.2		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
Fluoranthene-d10 (S)	117		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/24/18 00:19	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 04:25	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395019** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-4** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:13	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:13	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:13	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:13	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:13	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 16:13	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:13	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 16:13	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:13	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 16:13	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:13	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 16:13	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:13	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 16:13	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:13	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:13	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:13	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 16:13	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:13	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:13	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 16:13	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 16:13	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 16:13	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 16:13	TMP	A
Acetone	13.6		ug/L	10.0	3.1	SW846 8260B		4/24/18 16:13	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:13	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:13	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:13	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:13	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 16:13	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 16:13	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:13	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:13	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:13	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:13	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395019** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-4** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 16:13	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:13	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:13	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:13	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:13	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:13	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:13	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:13	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 16:13	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:13	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 16:13	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:13	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:13	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 16:13	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:13	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:13	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:13	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 16:13	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:13	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 16:13	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:13	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:13	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:13	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 16:13	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:13	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:13	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:13	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:13	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:13	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 16:13	TMP	A
tert-Butyl Alcohol	2.5J	J	ug/L	10.0	2.2	SW846 8260B		4/24/18 16:13	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 16:13	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395019** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-4** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 16:13	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 16:13	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	62 - 133		SW846 8260B			4/24/18 16:13	TMP	A
4-Bromofluorobenzene (S)	91.9		%	79 - 114		SW846 8260B			4/24/18 16:13	TMP	A
Dibromofluoromethane (S)	93.8		%	78 - 116		SW846 8260B			4/24/18 16:13	TMP	A
Toluene-d8 (S)	97.5		%	76 - 127		SW846 8260B			4/24/18 16:13	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395020** Date Collected: 4/17/2018 10:30 Matrix: Water

Sample ID: **MRC-SW8A-D** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:07	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:07	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:07	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:07	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:07	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 18:07	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:07	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 18:07	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:07	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 18:07	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:07	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 18:07	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:07	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 18:07	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:07	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:07	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:07	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 18:07	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:07	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:07	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 18:07	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 18:07	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 18:07	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 18:07	TMP	A
Acetone	8.3J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 18:07	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:07	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:07	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:07	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:07	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 18:07	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 18:07	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:07	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:07	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:07	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395020** Date Collected: 4/17/2018 10:30 Matrix: Water

Sample ID: **MRC-SW8A-D** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 18:07	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:07	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:07	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:07	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:07	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:07	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:07	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:07	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 18:07	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:07	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 18:07	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:07	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:07	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 18:07	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:07	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:07	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:07	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 18:07	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:07	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 18:07	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:07	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:07	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:07	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 18:07	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:07	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:07	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:07	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:07	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:07	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 18:07	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 18:07	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 18:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395020** Date Collected: 4/17/2018 10:30 Matrix: Water

Sample ID: **MRC-SW8A-D** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 18:07	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 18:07	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/24/18 18:07	TMP	A
4-Bromofluorobenzene (S)	91.9		%	79 - 114		SW846 8260B			4/24/18 18:07	TMP	A
Dibromofluoromethane (S)	94.8		%	78 - 116		SW846 8260B			4/24/18 18:07	TMP	A
Toluene-d8 (S)	95.2		%	76 - 127		SW846 8260B			4/24/18 18:07	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	78.3		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
Fluoranthene-d10 (S)	113		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/24/18 00:48	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 04:53	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395021** Date Collected: 4/17/2018 10:02 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:30	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:30	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:30	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:30	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:30	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 18:30	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:30	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 18:30	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:30	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 18:30	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:30	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 18:30	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:30	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 18:30	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:30	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:30	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:30	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 18:30	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:30	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:30	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 18:30	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 18:30	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 18:30	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 18:30	TMP	A
Acetone	11.4		ug/L	10.0	3.1	SW846 8260B		4/24/18 18:30	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:30	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:30	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:30	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:30	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 18:30	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 18:30	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:30	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:30	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:30	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:30	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395021** Date Collected: 4/17/2018 10:02 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 18:30	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:30	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:30	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:30	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:30	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:30	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:30	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:30	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 18:30	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:30	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 18:30	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:30	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:30	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 18:30	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:30	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:30	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:30	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 18:30	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:30	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 18:30	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:30	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:30	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:30	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 18:30	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:30	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:30	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:30	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:30	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:30	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 18:30	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 18:30	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 18:30	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395021** Date Collected: 4/17/2018 10:02 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 18:30	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 18:30	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/24/18 18:30	TMP	A
4-Bromofluorobenzene (S)	92.3		%	79 - 114		SW846 8260B			4/24/18 18:30	TMP	A
Dibromofluoromethane (S)	96		%	78 - 116		SW846 8260B			4/24/18 18:30	TMP	A
Toluene-d8 (S)	94.5		%	76 - 127		SW846 8260B			4/24/18 18:30	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	71.1		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
Fluoranthene-d10 (S)	116		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/24/18 01:15	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 05:22	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395022** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-5** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:36	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:36	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:36	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:36	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:36	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 16:36	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:36	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 16:36	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:36	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 16:36	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 16:36	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 16:36	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:36	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 16:36	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:36	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:36	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:36	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 16:36	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:36	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:36	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 16:36	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 16:36	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 16:36	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 16:36	TMP	A
Acetone	8.3J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 16:36	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:36	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:36	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:36	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 16:36	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 16:36	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 16:36	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:36	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:36	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:36	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:36	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395022** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-5** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 16:36	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:36	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 16:36	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:36	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 16:36	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 16:36	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 16:36	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:36	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 16:36	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 16:36	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 16:36	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:36	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 16:36	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 16:36	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:36	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 16:36	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 16:36	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 16:36	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 16:36	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 16:36	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 16:36	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:36	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:36	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 16:36	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 16:36	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 16:36	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 16:36	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 16:36	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 16:36	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 16:36	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 16:36	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 16:36	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395022** Date Collected: 4/17/2018 22:00 Matrix: Water

Sample ID: **TB-041718-5** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 16:36	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 16:36	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114		%	62 - 133		SW846 8260B			4/24/18 16:36	TMP	A
4-Bromofluorobenzene (S)	93		%	79 - 114		SW846 8260B			4/24/18 16:36	TMP	A
Dibromofluoromethane (S)	96.4		%	78 - 116		SW846 8260B			4/24/18 16:36	TMP	A
Toluene-d8 (S)	97.4		%	76 - 127		SW846 8260B			4/24/18 16:36	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395023** Date Collected: 4/17/2018 10:16 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:53	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:53	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:53	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:53	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:53	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		4/24/18 18:53	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:53	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		4/24/18 18:53	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:53	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		4/24/18 18:53	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		4/24/18 18:53	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		4/24/18 18:53	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:53	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		4/24/18 18:53	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:53	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:53	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:53	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		4/24/18 18:53	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:53	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:53	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		4/24/18 18:53	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		4/24/18 18:53	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		4/24/18 18:53	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		4/24/18 18:53	TMP	A
Acetone	8.0J	J	ug/L	10.0	3.1	SW846 8260B		4/24/18 18:53	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:53	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:53	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:53	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		4/24/18 18:53	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		4/24/18 18:53	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		4/24/18 18:53	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:53	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:53	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:53	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:53	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395023** Date Collected: 4/17/2018 10:16 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		4/24/18 18:53	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:53	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		4/24/18 18:53	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:53	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		4/24/18 18:53	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		4/24/18 18:53	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		4/24/18 18:53	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:53	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		4/24/18 18:53	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		4/24/18 18:53	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		4/24/18 18:53	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:53	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		4/24/18 18:53	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		4/24/18 18:53	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:53	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		4/24/18 18:53	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		4/24/18 18:53	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		4/24/18 18:53	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		4/24/18 18:53	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		4/24/18 18:53	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		4/24/18 18:53	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:53	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:53	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		4/24/18 18:53	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		4/24/18 18:53	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		4/24/18 18:53	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		4/24/18 18:53	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		4/24/18 18:53	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		4/24/18 18:53	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		4/24/18 18:53	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		4/24/18 18:53	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		4/24/18 18:53	TMP	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395023** Date Collected: 4/17/2018 10:16 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			4/24/18 18:53	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			4/24/18 18:53	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	116		%	62 - 133		SW846 8260B			4/24/18 18:53	TMP	A
4-Bromofluorobenzene (S)	92.9		%	79 - 114		SW846 8260B			4/24/18 18:53	TMP	A
Dibromofluoromethane (S)	97.1		%	78 - 116		SW846 8260B			4/24/18 18:53	TMP	A
Toluene-d8 (S)	94.1		%	76 - 127		SW846 8260B			4/24/18 18:53	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
Chrysene-d12	0.0		ug/L			8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	81.5		%	29 - 112		8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
Fluoranthene-d10 (S)	129		%	45 - 130		8270 SIM	4/20/18 09:35	MXL	4/24/18 01:42	GEC	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			4/27/18 05:51	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395024** Date Collected: 4/17/2018 13:20 Matrix: Water

Sample ID: **DM-1-4** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Polychlorinated Biphenyl	ND		ug/L	1.8	1.8	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
TCLP VOLATILE ORGANICS											
Benzene	ND		ug/L	100	40.0	SW846 8260B			4/23/18 10:26	DD	A
2-Butanone	ND		ug/L	1000	300	SW846 8260B			4/23/18 10:26	DD	A
Carbon Tetrachloride	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:26	DD	A
Chlorobenzene	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:26	DD	A
Chloroform	38.7J	J	ug/L	100	20.0	SW846 8260B			4/23/18 10:26	DD	A
1,2-Dichloroethane	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:26	DD	A
1,1-Dichloroethene	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:26	DD	A
Tetrachloroethene	ND		ug/L	100	40.0	SW846 8260B			4/23/18 10:26	DD	A
Trichloroethene	136		ug/L	100	20.0	SW846 8260B			4/23/18 10:26	DD	A
Vinyl Chloride	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:26	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	79.4		%	62 - 133		SW846 8260B			4/23/18 10:26	DD	A
4-Bromofluorobenzene (S)	114		%	79 - 114		SW846 8260B			4/23/18 10:26	DD	A
Dibromofluoromethane (S)	76.5	1	%	78 - 116		SW846 8260B			4/23/18 10:26	DD	A
Toluene-d8 (S)	82.2		%	76 - 127		SW846 8260B			4/23/18 10:26	DD	A
PCBs											
Aroclor-1016	ND		ug/L	1.8	0.21	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1221	ND		ug/L	1.8	0.25	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1232	ND		ug/L	1.8	0.67	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1242	ND		ug/L	1.8	0.84	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1248	ND		ug/L	1.8	0.49	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1254	ND		ug/L	1.8	0.35	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1260	ND		ug/L	1.8	0.25	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1262	ND		ug/L	1.8	0.35	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Aroclor-1268	ND		ug/L	1.8	0.60	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	50.1		%	30 - 140		SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
Tetrachloro-m-xylene (S)	62.1		%	30 - 133		SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:43	EGO	A
WET CHEMISTRY											
Corrosivity as pH	7.33	4	pH_Units			SW846 9040C			4/19/18 14:17	MSA	A
Cyanide, Reactive	ND		ppm	10	0.011	SW-846 7.3CN	4/25/18 14:10	VXF	4/26/18 09:26	MNP	A
Flashpoint/Ignitability	See comment	2,3	Deg. F			SW-846 1010A			4/28/18 06:00	SDL	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395024** Date Collected: 4/17/2018 13:20 Matrix: Water

Sample ID: **DM-1-4** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfide, Reactive	3.2J	J	ppm	6.2	1.2	SW846 7.3	4/25/18 14:10	VXF	4/25/18 20:15	VXF	A
TCLP METALS											
Arsenic, Total	ND		mg/L	0.14	0.046	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:11	SRT	A2
Barium, Total	ND		mg/L	2.8	0.94	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:11	SRT	A2
Cadmium, Total	ND		mg/L	0.011	0.0037	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:11	SRT	A2
Chromium, Total	ND		mg/L	0.028	0.010	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:11	SRT	A2
Lead, Total	ND		mg/L	0.033	0.011	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:11	SRT	A2
Mercury, Total	ND		mg/L	0.0020	0.00066	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:19	AXC	A1
Selenium, Total	ND		mg/L	0.11	0.037	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:11	SRT	A2
Silver, Total	ND		mg/L	0.022	0.0070	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:11	SRT	A2
TCLP SEMI-VOLATILES											
mp-Cresol	ND		ug/L	60.0	3.2	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
o-Cresol	ND		ug/L	60.0	5.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
1,4-Dichlorobenzene	ND		ug/L	60.0	3.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
2,4-Dinitrotoluene	ND		ug/L	60.0	2.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Hexachlorobenzene	ND		ug/L	60.0	4.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Hexachlorobutadiene	ND		ug/L	60.0	3.8	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Hexachloroethane	ND		ug/L	60.0	6.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Nitrobenzene	ND		ug/L	60.0	5.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Pentachlorophenol	ND		ug/L	120	24.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Pyridine	ND		ug/L	60.0	14.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
2,4,5-Trichlorophenol	ND		ug/L	60.0	11.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
2,4,6-Trichlorophenol	ND		ug/L	60.0	11.4	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	85.5		%	47 - 128	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
2-Fluorobiphenyl (S)	80.7		%	52 - 118	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
2-Fluorophenol (S)	49.5		%	20 - 87	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Nitrobenzene-d5 (S)	78.4		%	27 - 139	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Phenol-d5 (S)	31.2		%	10 - 81	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A
Terphenyl-d14 (S)	95.5		%	46 - 133	SW846 8270D	4/23/18 14:25	TXC	4/25/18 16:42	DHF	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395025** Date Collected: 4/17/2018 13:35 Matrix: Water

Sample ID: **DM-5-8** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Polychlorinated Biphenyl	ND		ug/L	1.7	1.7	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
TCLP VOLATILE ORGANICS											
Benzene	ND		ug/L	100	40.0	SW846 8260B			4/23/18 10:48	DD	A
2-Butanone	ND		ug/L	1000	300	SW846 8260B			4/23/18 10:48	DD	A
Carbon Tetrachloride	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:48	DD	A
Chlorobenzene	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:48	DD	A
Chloroform	47.6J	J	ug/L	100	20.0	SW846 8260B			4/23/18 10:48	DD	A
1,2-Dichloroethane	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:48	DD	A
1,1-Dichloroethene	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:48	DD	A
Tetrachloroethene	ND		ug/L	100	40.0	SW846 8260B			4/23/18 10:48	DD	A
Trichloroethene	268		ug/L	100	20.0	SW846 8260B			4/23/18 10:48	DD	A
Vinyl Chloride	ND		ug/L	100	20.0	SW846 8260B			4/23/18 10:48	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81		%	62 - 133		SW846 8260B			4/23/18 10:48	DD	A
4-Bromofluorobenzene (S)	104		%	79 - 114		SW846 8260B			4/23/18 10:48	DD	A
Dibromofluoromethane (S)	85.7		%	78 - 116		SW846 8260B			4/23/18 10:48	DD	A
Toluene-d8 (S)	78		%	76 - 127		SW846 8260B			4/23/18 10:48	DD	A
PCBs											
Aroclor-1016	ND		ug/L	1.7	0.21	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1221	ND		ug/L	1.7	0.24	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1232	ND		ug/L	1.7	0.66	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1242	ND		ug/L	1.7	0.83	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1248	ND		ug/L	1.7	0.48	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1254	ND		ug/L	1.7	0.34	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1260	ND		ug/L	1.7	0.24	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1262	ND		ug/L	1.7	0.34	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Aroclor-1268	ND		ug/L	1.7	0.59	SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	73.5		%	30 - 140		SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
Tetrachloro-m-xylene (S)	57.7		%	30 - 133		SW846 8082A	4/23/18 20:50	AXS	4/24/18 17:55	EGO	A
WET CHEMISTRY											
Corrosivity as pH	7.15	3	pH_Units			SW846 9040C			4/19/18 14:17	MSA	A
Cyanide, Reactive	ND		ppm	10	0.011	SW-846 7.3CN	4/25/18 14:10	VXF	4/26/18 09:26	MNP	A
Flashpoint/Ignitability	See comment	1,2	Deg. F			SW-846 1010A			4/28/18 06:00	SDL	A

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

Lab ID: **2309395025** Date Collected: 4/17/2018 13:35 Matrix: Water

Sample ID: **DM-5-8** Date Received: 4/17/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfide, Reactive	4.4J	J	ppm	6.2	1.2	SW846 7.3	4/25/18 14:10	VXF	4/25/18 20:15	VXF	A
TCLP METALS											
Arsenic, Total	ND		mg/L	0.14	0.046	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:15	SRT	A2
Barium, Total	ND		mg/L	2.8	0.94	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:15	SRT	A2
Cadmium, Total	ND		mg/L	0.011	0.0037	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:15	SRT	A2
Chromium, Total	ND		mg/L	0.028	0.010	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:15	SRT	A2
Lead, Total	ND		mg/L	0.033	0.011	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:15	SRT	A2
Mercury, Total	ND		mg/L	0.0020	0.00066	SW846 7470A	4/24/18 11:15	AXC	4/24/18 16:20	AXC	A1
Selenium, Total	ND		mg/L	0.11	0.037	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:15	SRT	A2
Silver, Total	ND		mg/L	0.022	0.0070	SW846 6010C	4/24/18 22:14	DAG	4/25/18 03:15	SRT	A2
TCLP SEMI-VOLATILES											
mp-Cresol	ND		ug/L	60.0	3.2	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
o-Cresol	ND		ug/L	60.0	5.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
1,4-Dichlorobenzene	ND		ug/L	60.0	3.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
2,4-Dinitrotoluene	ND		ug/L	60.0	2.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Hexachlorobenzene	ND		ug/L	60.0	4.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Hexachlorobutadiene	ND		ug/L	60.0	3.8	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Hexachloroethane	ND		ug/L	60.0	6.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Nitrobenzene	ND		ug/L	60.0	5.6	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Pentachlorophenol	ND		ug/L	120	24.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Pyridine	ND		ug/L	60.0	14.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
2,4,5-Trichlorophenol	ND		ug/L	60.0	11.0	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
2,4,6-Trichlorophenol	ND		ug/L	60.0	11.4	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	70		%	47 - 128	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
2-Fluorobiphenyl (S)	79.9		%	52 - 118	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
2-Fluorophenol (S)	48.9		%	20 - 87	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Nitrobenzene-d5 (S)	81.6		%	27 - 139	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Phenol-d5 (S)	35.5		%	10 - 81	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A
Terphenyl-d14 (S)	102		%	46 - 133	SW846 8270D	4/23/18 14:25	TXC	4/25/18 17:09	DHF	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2309395 LMC MRC 4/17/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2309395024	1	DM-1-4	SW846 8260B	Dibromofluoromethane
The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 76.5 and the control limits were 78 to 116. This result was reported at a dilution of 100.				
2309395024	2	DM-1-4	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2309395024	3	DM-1-4	SW-846 1010A	Flashpoint/Ignitability
Sample did not flash up to 200 degrees F				
2309395024	4	DM-1-4	SW846 9040C	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2309395025	1	DM-5-8	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2309395025	2	DM-5-8	SW-846 1010A	Flashpoint/Ignitability
Sample did not flash up to 200 degrees F				
2309395025	3	DM-5-8	SW846 9040C	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: EXTR/51837 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2309395001, 2309395002, 2309395003, 2309395017, 2309395018, 2309395020, 2309395021, 2309395023

METHOD BLANK: 2726699

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	82.6	%	29 - 112
Fluoranthene-d10 (S)	123	%	45 - 130

LABORATORY CONTROL SAMPLE: 2726700

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	57.3	ug/L	1	0.57	22 - 75
2-Methylnapthalene-d10 (S)	96	%			29 - 112
Fluoranthene-d10 (S)	127	%			45 - 130

MATRIX SPIKE SAMPLE: 2726701 ORIGINAL: 2308943035

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,4-Dioxane	.13783	ug/L	1	.59422	44.7	22 - 75
2-Methylnapthalene-d10 (S)	78.6	%				29 - 112
Fluoranthene-d10 (S)	113	%				45 - 130

SAMPLE DUPLICATE: 2726702 ORIGINAL: 2308943036

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,4-Dioxane	.17347	ug/L	.15205	13.2	

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QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: EXTR/51862 **Analysis Method:** SW846 8270D

QC Batch Method: SW846 3510C

Associated Lab Samples: 2309395024, 2309395025

METHOD BLANK: 2727634

Parameter	Blank Result	Units	Reporting Limit
mp-Cresol	ND	ug/L	3.0
o-Cresol	ND	ug/L	3.0
1,4-Dichlorobenzene	ND	ug/L	3.0
2,4-Dinitrotoluene	ND	ug/L	3.0
Hexachlorobenzene	ND	ug/L	3.0
Hexachlorobutadiene	ND	ug/L	3.0
Hexachloroethane	ND	ug/L	3.0
Nitrobenzene	ND	ug/L	3.0
Pentachlorophenol	ND	ug/L	6.0
Pyridine	ND	ug/L	3.0
2,4,5-Trichlorophenol	ND	ug/L	3.0
2,4,6-Trichlorophenol	ND	ug/L	3.0
2,4,6-Tribromophenol (S)	77.3	%	47 - 128
2-Fluorobiphenyl (S)	76.8	%	52 - 118
2-Fluorophenol (S)	51.4	%	20 - 87
Nitrobenzene-d5 (S)	84.9	%	27 - 139
Phenol-d5 (S)	37.8	%	10 - 81
Terphenyl-d14 (S)	96.2	%	46 - 133

LABORATORY CONTROL SAMPLE: 2727635

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
mp-Cresol	84.2	ug/L	100	84.2	28 - 128
o-Cresol	89.6	ug/L	100	89.6	34 - 136
1,4-Dichlorobenzene	63.6	ug/L	50	31.8	5 - 116
2,4-Dinitrotoluene	107	ug/L	50	53.5	49 - 138
Hexachlorobenzene	99.5	ug/L	50	49.7	59 - 109
Hexachlorobutadiene	55.6	ug/L	50	27.8	5 - 126
Hexachloroethane	50.4	ug/L	50	25.2	5 - 111
Nitrobenzene	92.3	ug/L	50	46.1	41 - 128
Pentachlorophenol	93.4	ug/L	100	93.4	41 - 149
Pyridine	65.3	ug/L	50	32.7	5 - 115
2,4,5-Trichlorophenol	98.5	ug/L	100	98.5	44 - 148
2,4,6-Trichlorophenol	98.7	ug/L	100	98.7	41 - 148
2,4,6-Tribromophenol (S)	101	%			47 - 128

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

2-Fluorobiphenyl (S)	80	%	52 - 118
2-Fluorophenol (S)	64.1	%	20 - 87
Nitrobenzene-d5 (S)	89.2	%	27 - 139
Phenol-d5 (S)	42.6	%	10 - 81
Terphenyl-d14 (S)	98.9	%	46 - 133

MATRIX SPIKE: 2727637 DUPLICATE: 2727636 ORIGINAL: 2309329002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
mp-Cresol	0	ug/L	2000	1427.48	1563.2	71.4	78.2	28 - 128	9.08	20
o-Cresol	0	ug/L	2000	1536.46	1656.41	76.8	82.8	34 - 136	7.51	23
1,4-Dichlorobenzene	0	ug/L	1000	525.676	523.574	52.6	52.4	5 - 116	.4	30
2,4-Dinitrotoluene	0	ug/L	1000	967.011	1023.28	96.7	102	49 - 138	5.65	22
Hexachlorobenzene	0	ug/L	1000	930.028	959.56	93	96	59 - 109	3.13	21
Hexachlorobutadiene	0	ug/L	1000	468.304	482.438	46.8	48.2	5 - 126	2.97	30
Hexachloroethane	0	ug/L	1000	455.339	453.769	45.5	45.4	5 - 111	.35	30
Nitrobenzene	0	ug/L	1000	809.428	842.543	80.9	84.3	41 - 128	4.01	19
Pentachlorophenol	0	ug/L	2000	1382.13	1092.69	69.1	54.6	41 - 149	23.4	28
Pyridine	0	ug/L	1000	535.289	628.219	53.5	62.8	5 - 115	16	30
2,4,5-Trichlorophenol	0	ug/L	2000	1732.39	1573.64	86.6	78.7	44 - 148	9.6	23
2,4,6-Trichlorophenol	0	ug/L	2000	1616.51	1334.12	80.8	66.7	41 - 148	19.1	23
2,4,6-Tribromophenol (S)	88.7	%				88.7	83	47 - 128		
2-Fluorobiphenyl (S)	50.6	%				50.6*	64.8	52 - 118		
2-Fluorophenol (S)	46.2	%				46.2	50	20 - 87		
Nitrobenzene-d5 (S)	71.6	%				71.6	81.6	27 - 139		
Phenol-d5 (S)	30	%				30	39.2	10 - 81		
Terphenyl-d14 (S)	96.4	%				96.4	101	46 - 133		

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: EXTR/51866 **Analysis Method:** SW846 8082A

QC Batch Method: SW846 3510C

Associated Lab Samples: 2309395024, 2309395025

METHOD BLANK: 2727803

Parameter	Blank Result	Units	Reporting Limit
Aroclor-1016	ND	ug/L	0.50
Aroclor-1221	ND	ug/L	0.50
Aroclor-1232	ND	ug/L	0.50
Aroclor-1242	ND	ug/L	0.50
Aroclor-1248	ND	ug/L	0.50
Aroclor-1254	ND	ug/L	0.50
Aroclor-1260	ND	ug/L	0.50
Aroclor-1262	ND	ug/L	0.50
Aroclor-1268	ND	ug/L	0.50
Decachlorobiphenyls (S)	75.6	%	30 - 140
Tetrachloro-m-xylene (S)	68.5	%	30 - 133

LABORATORY CONTROL SAMPLE: 2727804

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Aroclor-1016	86.3	ug/L	5	4.3	43 - 132
Aroclor-1260	78.8	ug/L	5	3.9	49 - 130
Decachlorobiphenyls (S)	71	%			30 - 140
Tetrachloro-m-xylene (S)	81.9	%			30 - 133

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QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: MDIG/71348 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2309395024, 2309395025

METHOD BLANK: 2728349

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.0020

LABORATORY CONTROL SAMPLE: 2728350

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	97.5	mg/L	.002	0.0020J	85 - 115

MATRIX SPIKE: 2728353 DUPLICATE: 2728354 ORIGINAL: 2308943040

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00492	.00496	98.4	99.2	70 - 130	.81	20

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QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: MDIG/71363 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2309395024, 2309395025

METHOD BLANK: 2728713

Parameter	Blank Result	Units	Reporting Limit
Arsenic, Total	ND	mg/L	0.028
Barium, Total	ND	mg/L	0.56
Cadmium, Total	ND	mg/L	0.0022
Chromium, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0067
Selenium, Total	ND	mg/L	0.022
Silver, Total	ND	mg/L	0.0044

LABORATORY CONTROL SAMPLE: 2728714

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Arsenic, Total	104	mg/L	.11	0.12	80 - 120
Barium, Total	104	mg/L	1.1	1.2	80 - 120
Cadmium, Total	105	mg/L	.11	0.12	80 - 120
Chromium, Total	107	mg/L	.11	0.12	80 - 120
Lead, Total	106	mg/L	.11	0.12	80 - 120
Selenium, Total	102	mg/L	1.1	1.1	80 - 120
Silver, Total	98.8	mg/L	.11	0.11	80 - 120

MATRIX SPIKE: 2728715 DUPLICATE: 2728716 ORIGINAL: 2310174028

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Arsenic, Total	.00833	mg/L	5	5.12495	5.09495	102	102	50 - 150	.59	20
Barium, Total	.92666	mg/L	10	10.73878	10.81656	98.1	98.9	50 - 150	.72	20
Cadmium, Total	.01	mg/L	1	.99055	.98777	98.1	97.8	50 - 150	.28	20
Chromium, Total	.00056	mg/L	5	4.89717	4.91606	97.9	98.3	50 - 150	.38	20
Lead, Total	.24111	mg/L	5	5.24606	5.22495	100	99.7	50 - 150	.4	20
Selenium, Total	.00444	mg/L	1	1.0561	1.03888	105	103	50 - 150	1.64	20
Silver, Total	0	mg/L	1	1.01499	1.00777	101	101	50 - 150	.71	20

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QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: VOMS/46598 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2309395024, 2309395025

METHOD BLANK: 2727340

Parameter	Blank Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
Vinyl Chloride	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	82.3	%	62 - 133
4-Bromofluorobenzene (S)	114	%	79 - 114
Dibromofluoromethane (S)	88.2	%	78 - 116
Toluene-d8 (S)	84.5	%	76 - 127

LABORATORY CONTROL SAMPLE: 2727341

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Benzene	104	ug/L	20	20.7	80 - 124
2-Butanone	102	ug/L	100	102	50 - 152
Carbon Tetrachloride	117	ug/L	20	23.4	62 - 132
Chlorobenzene	102	ug/L	20	20.5	85 - 117
Chloroform	102	ug/L	20	20.3	78 - 122
1,2-Dichloroethane	98.9	ug/L	20	19.8	70 - 133
1,1-Dichloroethene	116	ug/L	20	23.3	63 - 128
Tetrachloroethene	107	ug/L	20	21.4	72 - 124
Trichloroethene	101	ug/L	20	20.2	77 - 124
Vinyl Chloride	69.4	ug/L	20	13.9	27 - 138
1,2-Dichloroethane-d4 (S)	76	%			62 - 133
4-Bromofluorobenzene (S)	109	%			79 - 114
Dibromofluoromethane (S)	89.7	%			78 - 116
Toluene-d8 (S)	82.8	%			76 - 127

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QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

MATRIX SPIKE: 2728501 DUPLICATE: 2728502 ORIGINAL: 2308943013

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	0	ug/L	200	220.47	218.41	110	109	80 - 124	.94	26
2-Butanone	0	ug/L	1000	944.779	1046.68	94.5	105	50 - 152	10.2	16
Carbon Tetrachloride	0	ug/L	200	253.151	247.17	127	124	62 - 132	2.39	17
Chlorobenzene	0	ug/L	200	209.225	212.238	105	106	85 - 117	1.43	15
Chloroform	4.38989	ug/L	200	221.107	216.182	108	106	78 - 122	2.25	16
1,2-Dichloroethane	0	ug/L	200	203.508	207.901	102	104	70 - 133	2.14	19
1,1-Dichloroethene	195.054	ug/L	200	411.567	407.195	108	106	63 - 128	1.07	21
Tetrachloroethene	4.28829	ug/L	200	223.391	222.226	110	109	72 - 124	.52	38
Trichloroethene	413.674	ug/L	200	556.643	538.511	71.5*	62.4*	77 - 124	3.31	18
Vinyl Chloride	0	ug/L	200	148.678	151.645	74.3	75.8	27 - 138	1.98	40
1,2-Dichloroethane-d4 (S)	82.2	%				82.2	81.5	62 - 133		
4-Bromofluorobenzene (S)	85.7	%				85.7	87.5	79 - 114		
Dibromofluoromethane (S)	88.6	%				88.6	86.8	78 - 116		
Toluene-d8 (S)	73.4	%				73.4*	75.3*	76 - 127		

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: VOMS/46615 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2309395015, 2309395016, 2309395017, 2309395018, 2309395019, 2309395020, 2309395021, 2309395022, 2309395023

METHOD BLANK: 2728332

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	112	%	62 - 133
4-Bromofluorobenzene (S)	94.6	%	79 - 114
Dibromofluoromethane (S)	96.2	%	78 - 116
Toluene-d8 (S)	97.1	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

LABORATORY CONTROL SAMPLE: 2728333

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	99	ug/L	20	19.8	78 - 121
1,1,1-Trichloroethane	106	ug/L	20	21.2	66 - 130
1,1,2,2-Tetrachloroethane	95	ug/L	20	19.0	74 - 135
1,1,2-Trichloroethane	95.8	ug/L	20	19.2	82 - 126
1,1-Dichloroethane	107	ug/L	20	21.3	78 - 124
1,1-Dichloroethene	119	ug/L	20	23.7	63 - 128
1,2,3-Trichlorobenzene	91	ug/L	20	18.2	61 - 126
1,2,3-Trichloropropane	96	ug/L	20	19.2	75 - 132
1,2,4-Trichlorobenzene	94.5	ug/L	20	18.9	67 - 123
1,2,4-Trimethylbenzene	99.5	ug/L	20	19.9	76 - 125
1,2-Dibromo-3-chloropropane	98.9	ug/L	20	19.8	59 - 133
1,2-Dibromoethane	97.6	ug/L	20	19.5	80 - 124
1,2-Dichlorobenzene	96.4	ug/L	20	19.3	82 - 118
1,2-Dichloroethane	100	ug/L	20	20.0	70 - 133
1,2-Dichloroethene, Total	108	ug/L	40	43.3	78 - 125
1,2-Dichloropropane	102	ug/L	20	20.5	81 - 127
1,3-Dichlorobenzene	97.9	ug/L	20	19.6	81 - 118
1,3-Dichloropropane	97.9	ug/L	20	19.6	82 - 126
1,3-Dichloropropene, Total	103	ug/L	40	41.3	80 - 123
1,4-Dichlorobenzene	93.8	ug/L	20	18.8	81 - 116
2,2-Dichloropropane	96.4	ug/L	20	19.3	64 - 129
2-Butanone	108	ug/L	100	108	50 - 152
2-Chloroethylvinyl ether	93.7	ug/L	20	18.7	1 - 150
2-Hexanone	95.8	ug/L	100	95.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	110	ug/L	100	110	71 - 146
Acetone	116	ug/L	100	116	40 - 151
Benzene	102	ug/L	20	20.4	80 - 124
Bromobenzene	99.3	ug/L	20	19.9	81 - 119
Bromochloromethane	96.8	ug/L	20	19.4	73 - 117
Bromodichloromethane	96.6	ug/L	20	19.3	79 - 126
Bromoform	99.2	ug/L	20	19.8	70 - 123
Bromomethane	101	ug/L	20	20.3	45 - 148
Carbon Disulfide	126	ug/L	20	25.1	57 - 131
Carbon Tetrachloride	110	ug/L	20	22.1	62 - 132
Chlorobenzene	99.2	ug/L	20	19.8	85 - 117
Chlorodibromomethane	98.9	ug/L	20	19.8	77 - 122
Chloroethane	99.8	ug/L	20	20.0	51 - 142
Chloroform	108	ug/L	20	21.5	78 - 122
Chloromethane	81.2	ug/L	20	16.2	38 - 156
Cyclohexane	120	ug/L	20	23.9	66 - 130
Dibromomethane	93.6	ug/L	20	18.7	81 - 125

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Dichlorodifluoromethane	69.4	ug/L	20	13.9	17 - 166
Diisopropyl ether	115	ug/L	20	23.0	74 - 131
Ethyl tert-butyl ether	112	ug/L	20	22.4	75 - 123
Ethylbenzene	100	ug/L	20	20.0	80 - 124
Freon 113	118	ug/L	20	23.6	50 - 130
Hexachlorobutadiene	94.6	ug/L	20	18.9	55 - 128
Isopropylbenzene	110	ug/L	20	22.1	73 - 129
Methyl acetate	112	ug/L	20	22.3	70 - 130
Methyl cyclohexane	110	ug/L	20	22.1	70 - 130
Methyl t-Butyl Ether	105	ug/L	20	21.1	69 - 115
Methylene Chloride	113	ug/L	20	22.5	76 - 121
Naphthalene	92.6	ug/L	20	18.5	56 - 134
Styrene	106	ug/L	20	21.2	79 - 123
Tetrachloroethene	101	ug/L	20	20.2	72 - 124
Toluene	106	ug/L	20	21.2	80 - 125
Total Xylenes	105	ug/L	60	62.8	79 - 125
Trichloroethene	108	ug/L	20	21.7	77 - 124
Trichlorofluoromethane	93.6	ug/L	20	18.7	38 - 123
Vinyl Acetate	104	ug/L	20	20.8	58 - 136
Vinyl Chloride	86.9	ug/L	20	17.4	27 - 138
cis-1,2-Dichloroethene	103	ug/L	20	20.6	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.1	81 - 121
mp-Xylene	104	ug/L	40	41.6	79 - 125
n-Butylbenzene	89.9	ug/L	20	18.0	71 - 130
n-Propylbenzene	106	ug/L	20	21.1	74 - 122
o-Chlorotoluene	104	ug/L	20	20.8	78 - 126
o-Xylene	106	ug/L	20	21.2	79 - 124
p-Chlorotoluene	104	ug/L	20	20.8	78 - 125
p-Isopropyltoluene	94.9	ug/L	20	19.0	72 - 123
sec-Butylbenzene	105	ug/L	20	21.1	72 - 127
tert-Amyl methyl ether	94.6	ug/L	20	18.9	75 - 121
tert-Butyl Alcohol	114	ug/L	100	114	17 - 168
tert-Butylbenzene	95.3	ug/L	20	19.1	72 - 124
trans-1,2-Dichloroethene	113	ug/L	20	22.6	71 - 122
trans-1,3-Dichloropropene	106	ug/L	20	21.2	78 - 126
1,2-Dichloroethane-d4 (S)	114	%			62 - 133
4-Bromofluorobenzene (S)	92.5	%			79 - 114
Dibromofluoromethane (S)	91.3	%			78 - 116
Toluene-d8 (S)	94.7	%			76 - 127

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: VOMS/46617 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2309395010, 2309395011, 2309395012, 2309395013, 2309395014

METHOD BLANK: 2728421

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.3	%	62 - 133
4-Bromofluorobenzene (S)	93.7	%	79 - 114
Dibromofluoromethane (S)	90.4	%	78 - 116
Toluene-d8 (S)	80.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

LABORATORY CONTROL SAMPLE: 2728422

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	110	ug/L	20	22.0	78 - 121
1,1,1-Trichloroethane	115	ug/L	20	23.0	66 - 130
1,1,2,2-Tetrachloroethane	105	ug/L	20	21.1	74 - 135
1,1,2-Trichloroethane	108	ug/L	20	21.6	82 - 126
1,1-Dichloroethane	112	ug/L	20	22.4	78 - 124
1,1-Dichloroethene	124	ug/L	20	24.8	63 - 128
1,2,3-Trichlorobenzene	87.7	ug/L	20	17.5	61 - 126
1,2,3-Trichloropropane	105	ug/L	20	21.0	75 - 132
1,2,4-Trichlorobenzene	74.7	ug/L	20	14.9	67 - 123
1,2,4-Trimethylbenzene	102	ug/L	20	20.5	76 - 125
1,2-Dibromo-3-chloropropane	74.6	ug/L	20	14.9	59 - 133
1,2-Dibromoethane	107	ug/L	20	21.5	80 - 124
1,2-Dichlorobenzene	106	ug/L	20	21.2	82 - 118
1,2-Dichloroethane	104	ug/L	20	20.7	70 - 133
1,2-Dichloroethene, Total	113	ug/L	40	45.2	78 - 125
1,2-Dichloropropane	113	ug/L	20	22.6	81 - 127
1,3-Dichlorobenzene	107	ug/L	20	21.3	81 - 118
1,3-Dichloropropane	107	ug/L	20	21.3	82 - 126
1,3-Dichloropropene, Total	88.7	ug/L	40	35.5	80 - 123
1,4-Dichlorobenzene	103	ug/L	20	20.5	81 - 116
2,2-Dichloropropane	83.3	ug/L	20	16.7	64 - 129
2-Butanone	98.5	ug/L	100	98.5	50 - 152
2-Chloroethylvinyl ether	61	ug/L	20	12.2	1 - 150
2-Hexanone	78.4	ug/L	100	78.4	65 - 154
4-Methyl-2-Pentanone(MIBK)	87.3	ug/L	100	87.3	71 - 146
Acetone	87.9	ug/L	100	87.9	40 - 151
Benzene	106	ug/L	20	21.2	80 - 124
Bromobenzene	114	ug/L	20	22.8	81 - 119
Bromochloromethane	106	ug/L	20	21.2	73 - 117
Bromodichloromethane	105	ug/L	20	21.1	79 - 126
Bromoform	87.9	ug/L	20	17.6	70 - 123
Bromomethane	70.6	ug/L	20	14.1	45 - 148
Carbon Disulfide	109	ug/L	20	21.8	57 - 131
Carbon Tetrachloride	120	ug/L	20	24.0	62 - 132
Chlorobenzene	103	ug/L	20	20.7	85 - 117
Chlorodibromomethane	95.8	ug/L	20	19.2	77 - 122
Chloroethane	69.7	ug/L	20	13.9	51 - 142
Chloroform	109	ug/L	20	21.8	78 - 122
Chloromethane	91.4	ug/L	20	18.3	38 - 156
Cyclohexane	130	ug/L	20	25.9	66 - 130
Dibromomethane	101	ug/L	20	20.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Dichlorodifluoromethane	68.6	ug/L	20	13.7	17 - 166
Diisopropyl ether	101	ug/L	20	20.3	74 - 131
Ethyl tert-butyl ether	91.3	ug/L	20	18.3	75 - 123
Ethylbenzene	110	ug/L	20	22.0	80 - 124
Freon 113	129	ug/L	20	25.9	50 - 130
Hexachlorobutadiene	100	ug/L	20	20.0	55 - 128
Isopropylbenzene	122	ug/L	20	24.3	73 - 129
Methyl acetate	94.8	ug/L	20	19.0	70 - 130
Methyl cyclohexane	120	ug/L	20	24.1	70 - 130
Methyl t-Butyl Ether	102	ug/L	20	20.4	69 - 115
Methylene Chloride	106	ug/L	20	21.2	76 - 121
Naphthalene	104	ug/L	20	20.8	56 - 134
Styrene	104	ug/L	20	20.8	79 - 123
Tetrachloroethene	112	ug/L	20	22.4	72 - 124
Toluene	118	ug/L	20	23.5	80 - 125
Total Xylenes	106	ug/L	60	63.7	79 - 125
Trichloroethene	103	ug/L	20	20.6	77 - 124
Trichlorofluoromethane	72.7	ug/L	20	14.5	38 - 123
Vinyl Acetate	78.9	ug/L	20	15.8	58 - 136
Vinyl Chloride	71.3	ug/L	20	14.3	27 - 138
cis-1,2-Dichloroethene	108	ug/L	20	21.6	78 - 125
cis-1,3-Dichloropropene	85.2	ug/L	20	17.0	81 - 121
mp-Xylene	113	ug/L	40	45.0	79 - 125
n-Butylbenzene	86.4	ug/L	20	17.3	71 - 130
n-Propylbenzene	105	ug/L	20	21.0	74 - 122
o-Chlorotoluene	118	ug/L	20	23.7	78 - 126
o-Xylene	93.4	ug/L	20	18.7	79 - 124
p-Chlorotoluene	118	ug/L	20	23.5	78 - 125
p-Isopropyltoluene	96.9	ug/L	20	19.4	72 - 123
sec-Butylbenzene	102	ug/L	20	20.3	72 - 127
tert-Amyl methyl ether	87.4	ug/L	20	17.5	75 - 121
tert-Butyl Alcohol	47.6	ug/L	100	47.6	17 - 168
tert-Butylbenzene	102	ug/L	20	20.5	72 - 124
trans-1,2-Dichloroethene	118	ug/L	20	23.6	71 - 122
trans-1,3-Dichloropropene	92.2	ug/L	20	18.4	78 - 126
1,2-Dichloroethane-d4 (S)	82.9	%			62 - 133
4-Bromofluorobenzene (S)	92.7	%			79 - 114
Dibromofluoromethane (S)	93.7	%			78 - 116
Toluene-d8 (S)	80.4	%			76 - 127

MATRIX SPIKE: 2728934 DUPLICATE: 2728935 ORIGINAL: 2308629006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

1,1,1,2-Tetrachloroethane	0	ug/L	200	227.214	227.236	114	114	78 - 121	.01	16
1,1,1-Trichloroethane	0	ug/L	200	242.924	240.61	121	120	66 - 130	.96	20
1,1,2,2-Tetrachloroethane	0	ug/L	200	215.429	213.171	108	107	74 - 135	1.05	16
1,1,2-Trichloroethane	0	ug/L	200	217.44	218.916	109	109	82 - 126	.68	15
1,1-Dichloroethane	0	ug/L	200	231.837	229.585	116	115	78 - 124	.98	15
1,1-Dichloroethene	0	ug/L	200	258.616	254.213	129*	127	63 - 128	1.72	21
1,2,3-Trichlorobenzene	0	ug/L	200	196.48	212.093	98.2	106	61 - 126	7.64	36
1,2,3-Trichloropropane	0	ug/L	200	220.249	210.987	110	105	75 - 132	4.3	19
1,2,4-Trichlorobenzene	0	ug/L	200	162.396	181.906	81.2	91	67 - 123	11.3	22
1,2,4-Trimethylbenzene	8.30985	ug/L	200	228.199	240.462	110	116	76 - 125	5.23	24
1,2-Dibromo-3-chloropropane	0	ug/L	200	160.199	163.526	80.1	81.8	59 - 133	2.06	26
1,2-Dibromoethane	0	ug/L	200	214.091	215.077	107	108	80 - 124	.46	19
1,2-Dichlorobenzene	0	ug/L	200	214.611	222.493	107	111	82 - 118	3.61	15
1,2-Dichloroethane	0	ug/L	200	206.828	202.804	103	101	70 - 133	1.96	19
1,2-Dichloroethene, Total	11.0077	ug/L	400	486.346	480.68	119	117	78 - 125	1.17	40
1,2-Dichloropropane	0	ug/L	200	225.074	233.185	113	117	81 - 127	3.54	15
1,3-Dichlorobenzene	0	ug/L	200	222.346	228.485	111	114	81 - 118	2.72	16
1,3-Dichloropropane	0	ug/L	200	210.032	213.18	105	107	82 - 126	1.49	15
1,3-Dichloropropene, Total	0	ug/L	400	362.809	369.596	90.7	92.4	80 - 123	1.85	16
1,4-Dichlorobenzene	0	ug/L	200	213.457	220.415	107	110	81 - 116	3.21	15
2,2-Dichloropropane	0	ug/L	200	213.384	212.184	107	106	64 - 129	.56	18
2-Butanone	0	ug/L	1000	1013.77	958.345	101	95.8	50 - 152	5.62	16
2-Chloroethylvinyl ether	0	ug/L	200	1.22314	.86182	.61*	.43*	1 - 150	34.7	40
2-Hexanone	0	ug/L	1000	787.665	776.266	78.8	77.6	65 - 154	1.46	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	1000	875.069	864.491	87.5	86.4	71 - 146	1.22	16
Acetone	0	ug/L	1000	900.501	849.055	90.1	84.9	40 - 151	5.88	40
Benzene	526.573	ug/L	200	751.484	745.801	112	110	80 - 124	.76	26
Bromobenzene	0	ug/L	200	232.154	234.346	116	117	81 - 119	.94	17
Bromochloromethane	0	ug/L	200	208.37	204.364	104	102	73 - 117	1.94	19
Bromodichloromethane	0	ug/L	200	215.345	213.491	108	107	79 - 126	.86	16
Bromoform	0	ug/L	200	171.995	173.56	86	86.8	70 - 123	.91	16
Bromomethane	0	ug/L	200	139.041	136.539	69.5	68.3	45 - 148	1.82	26
Carbon Disulfide	0	ug/L	200	226.82	218.34	113	109	57 - 131	3.81	28
Carbon Tetrachloride	0	ug/L	200	253.045	253.625	127	127	62 - 132	.23	17
Chlorobenzene	0	ug/L	200	211.484	215.408	106	108	85 - 117	1.84	15
Chlorodibromomethane	0	ug/L	200	184.507	192.981	92.3	96.5	77 - 122	4.49	15
Chloroethane	0	ug/L	200	153.658	151.074	76.8	75.5	51 - 142	1.7	24
Chloroform	4.36504	ug/L	200	221.843	223.206	109	109	78 - 122	.61	16
Chloromethane	0	ug/L	200	210.817	207.81	105	104	38 - 156	1.44	27
Cyclohexane	6.92514	ug/L	200	275.874	281.448	134*	137*	66 - 130	2	20
Dibromomethane	0	ug/L	200	204.557	203.09	102	102	81 - 125	.72	16
Dichlorodifluoromethane	0	ug/L	200	166.091	165.2	83	82.6	17 - 166	.54	24
Diisopropyl ether	0	ug/L	200	200.587	201.359	100	101	74 - 131	.38	15
Ethyl tert-butyl ether	0	ug/L	200	178.742	179.56	89.4	89.8	75 - 123	.46	16
Ethylbenzene	4.90095	ug/L	200	231.96	241.086	114	118	80 - 124	3.86	19
Freon 113	0	ug/L	200	267.536	268.063	134*	134*	50 - 130	.2	26

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Hexachlorobutadiene	0	ug/L	200	227.952	225.087	114	113	55 - 128	1.26	35
Isopropylbenzene	7.8548	ug/L	200	265.349	276.009	129	134*	73 - 129	3.94	18
Methyl acetate	0	ug/L	200	184.323	177.989	92.2	89	70 - 130	3.5	18
Methyl cyclohexane	0	ug/L	200	262.023	275.72	131*	138*	70 - 130	5.09	18
Methyl t-Butyl Ether	24.9342	ug/L	200	226.37	227.109	101	101	69 - 115	.33	20
Methylene Chloride	0	ug/L	200	215.417	211.711	108	106	76 - 121	1.74	17
Naphthalene	0	ug/L	200	249.004	262.176	125	131	56 - 134	5.15	40
Styrene	0	ug/L	200	216.868	218.222	108	109	79 - 123	.62	16
Tetrachloroethene	0	ug/L	200	223.019	229.641	112	115	72 - 124	2.93	38
Toluene	0	ug/L	200	240.535	244.727	120	122	80 - 125	1.73	20
Total Xylenes	74.6573	ug/L	600	744.727	769.777	112	116	79 - 125	3.31	35
Trichloroethene	14.7491	ug/L	200	229.05	224.567	107	105	77 - 124	1.98	18
Trichlorofluoromethane	0	ug/L	200	167.007	165.226	83.5	82.6	38 - 123	1.07	23
Vinyl Acetate	0	ug/L	200	165.038	162.618	82.5	81.3	58 - 136	1.48	17
Vinyl Chloride	0	ug/L	200	163.096	163.185	81.5	81.6	27 - 138	.05	40
cis-1,2-Dichloroethene	11.0077	ug/L	200	240.345	236.848	115	113	78 - 125	1.47	21
cis-1,3-Dichloropropene	0	ug/L	200	171.664	175.712	85.8	87.9	81 - 121	2.33	16
mp-Xylene	23.2991	ug/L	400	491.393	505.957	117	121	79 - 125	2.92	21
n-Butylbenzene	0	ug/L	200	197.128	208.904	98.6	104	71 - 130	5.8	20
n-Propylbenzene	0	ug/L	200	226.673	242.556	113	121	74 - 122	6.77	20
o-Chlorotoluene	0	ug/L	200	247.008	254.613	124	127*	78 - 126	3.03	17
o-Xylene	51.3581	ug/L	200	253.334	263.821	101	106	79 - 124	4.06	19
p-Chlorotoluene	0	ug/L	200	244.327	248.621	122	124	78 - 125	1.74	16
p-Isopropyltoluene	0	ug/L	200	207.307	219.636	104	110	72 - 123	5.78	17
sec-Butylbenzene	0	ug/L	200	222.009	231.639	111	116	72 - 127	4.25	17
tert-Amyl methyl ether	0	ug/L	200	176.85	179.059	88.4	89.5	75 - 121	1.24	40
tert-Butyl Alcohol	0	ug/L	1000	549.856	491.124	55	49.1	17 - 168	11.3	40
tert-Butylbenzene	0	ug/L	200	218.449	233.33	109	117	72 - 124	6.59	17
trans-1,2-Dichloroethene	0	ug/L	200	246.001	243.832	123*	122	71 - 122	.89	22
trans-1,3-Dichloropropene	0	ug/L	200	191.145	193.884	95.6	96.9	78 - 126	1.42	18
1,2-Dichloroethane-d4 (S)	91.3	%				91.3	90.9	62 - 133		
4-Bromofluorobenzene (S)	92	%				92	92.9	79 - 114		
Dibromofluoromethane (S)	95.3	%				95.3	94.4	78 - 116		
Toluene-d8 (S)	79.9	%				79.9	81	76 - 127		

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: VOMS/46623 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2309395001, 2309395002, 2309395003, 2309395004, 2309395005, 2309395006, 2309395007, 2309395008, 2309395009

METHOD BLANK: 2728888

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	113	%	62 - 133
4-Bromofluorobenzene (S)	92.1	%	79 - 114
Dibromofluoromethane (S)	97.4	%	78 - 116
Toluene-d8 (S)	95.4	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

LABORATORY CONTROL SAMPLE: 2728889

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	95.6	ug/L	20	19.1	78 - 121
1,1,1-Trichloroethane	99.3	ug/L	20	19.9	66 - 130
1,1,2,2-Tetrachloroethane	91.2	ug/L	20	18.2	74 - 135
1,1,2-Trichloroethane	92.1	ug/L	20	18.4	82 - 126
1,1-Dichloroethane	98.6	ug/L	20	19.7	78 - 124
1,1-Dichloroethene	128	ug/L	20	25.6	63 - 128
1,2,3-Trichlorobenzene	82.6	ug/L	20	16.5	61 - 126
1,2,3-Trichloropropane	90.5	ug/L	20	18.1	75 - 132
1,2,4-Trichlorobenzene	88.6	ug/L	20	17.7	67 - 123
1,2,4-Trimethylbenzene	96.2	ug/L	20	19.2	76 - 125
1,2-Dibromo-3-chloropropane	89.5	ug/L	20	17.9	59 - 133
1,2-Dibromoethane	91.7	ug/L	20	18.3	80 - 124
1,2-Dichlorobenzene	93.3	ug/L	20	18.7	82 - 118
1,2-Dichloroethane	97.1	ug/L	20	19.4	70 - 133
1,2-Dichloroethene, Total	100	ug/L	40	40.1	78 - 125
1,2-Dichloropropane	96.9	ug/L	20	19.4	81 - 127
1,3-Dichlorobenzene	94.9	ug/L	20	19.0	81 - 118
1,3-Dichloropropane	92.3	ug/L	20	18.5	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.1	80 - 123
1,4-Dichlorobenzene	91.5	ug/L	20	18.3	81 - 116
2,2-Dichloropropane	105	ug/L	20	21.0	64 - 129
2-Butanone	101	ug/L	100	101	50 - 152
2-Chloroethylvinyl ether	88.2	ug/L	20	17.6	1 - 150
2-Hexanone	89.3	ug/L	100	89.3	65 - 154
4-Methyl-2-Pentanone(MIBK)	94.5	ug/L	100	94.5	71 - 146
Acetone	139	ug/L	100	139	40 - 151
Benzene	99.5	ug/L	20	19.9	80 - 124
Bromobenzene	97.2	ug/L	20	19.4	81 - 119
Bromochloromethane	93.9	ug/L	20	18.8	73 - 117
Bromodichloromethane	96.5	ug/L	20	19.3	79 - 126
Bromoform	90.4	ug/L	20	18.1	70 - 123
Bromomethane	83.3	ug/L	20	16.7	45 - 148
Carbon Disulfide	138*	ug/L	20	27.7	57 - 131
Carbon Tetrachloride	106	ug/L	20	21.3	62 - 132
Chlorobenzene	94.7	ug/L	20	18.9	85 - 117
Chlorodibromomethane	96.8	ug/L	20	19.4	77 - 122
Chloroethane	88.3	ug/L	20	17.7	51 - 142
Chloroform	103	ug/L	20	20.5	78 - 122
Chloromethane	78.5	ug/L	20	15.7	38 - 156
Cyclohexane	117	ug/L	20	23.3	66 - 130
Dibromomethane	90.4	ug/L	20	18.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Dichlorodifluoromethane	69.7	ug/L	20	13.9	17 - 166
Diisopropyl ether	106	ug/L	20	21.2	74 - 131
Ethyl tert-butyl ether	103	ug/L	20	20.6	75 - 123
Ethylbenzene	95.8	ug/L	20	19.2	80 - 124
Freon 113	134*	ug/L	20	26.7	50 - 130
Hexachlorobutadiene	95	ug/L	20	19.0	55 - 128
Isopropylbenzene	105	ug/L	20	21.0	73 - 129
Methyl acetate	94	ug/L	20	18.8	70 - 130
Methyl cyclohexane	109	ug/L	20	21.7	70 - 130
Methyl t-Butyl Ether	96.2	ug/L	20	19.2	69 - 115
Methylene Chloride	126*	ug/L	20	25.2	76 - 121
Naphthalene	82.4	ug/L	20	16.5	56 - 134
Styrene	101	ug/L	20	20.2	79 - 123
Tetrachloroethene	97.3	ug/L	20	19.5	72 - 124
Toluene	101	ug/L	20	20.2	80 - 125
Total Xylenes	99.6	ug/L	60	59.7	79 - 125
Trichloroethene	103	ug/L	20	20.5	77 - 124
Trichlorofluoromethane	85.8	ug/L	20	17.2	38 - 123
Vinyl Acetate	93.1	ug/L	20	18.6	58 - 136
Vinyl Chloride	76.8	ug/L	20	15.4	27 - 138
cis-1,2-Dichloroethene	95.4	ug/L	20	19.1	78 - 125
cis-1,3-Dichloropropene	98	ug/L	20	19.6	81 - 121
mp-Xylene	99.6	ug/L	40	39.9	79 - 125
n-Butylbenzene	88.3	ug/L	20	17.7	71 - 130
n-Propylbenzene	102	ug/L	20	20.5	74 - 122
o-Chlorotoluene	99.9	ug/L	20	20.0	78 - 126
o-Xylene	99.5	ug/L	20	19.9	79 - 124
p-Chlorotoluene	99.7	ug/L	20	19.9	78 - 125
p-Isopropyltoluene	90.7	ug/L	20	18.1	72 - 123
sec-Butylbenzene	101	ug/L	20	20.3	72 - 127
tert-Amyl methyl ether	88.7	ug/L	20	17.7	75 - 121
tert-Butyl Alcohol	87.2	ug/L	100	87.2	17 - 168
tert-Butylbenzene	91.2	ug/L	20	18.2	72 - 124
trans-1,2-Dichloroethene	105	ug/L	20	21.1	71 - 122
trans-1,3-Dichloropropene	102	ug/L	20	20.4	78 - 126
1,2-Dichloroethane-d4 (S)	108	%			62 - 133
4-Bromofluorobenzene (S)	90.6	%			79 - 114
Dibromofluoromethane (S)	94	%			78 - 116
Toluene-d8 (S)	93.7	%			76 - 127

MATRIX SPIKE: 2728943 DUPLICATE: 2728944 ORIGINAL: 2308943020

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	19.804	19.8791	99	99.4	78 - 121	.38	16
1,1,1-Trichloroethane	0	ug/L	20	20.4502	20.1874	102	101	66 - 130	1.29	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	19.7645	19.4404	98.8	97.2	74 - 135	1.65	16
1,1,2-Trichloroethane	0	ug/L	20	19.3824	19.1417	96.9	95.7	82 - 126	1.25	15
1,1-Dichloroethane	1.11124	ug/L	20	21.679	21.1496	103	100	78 - 124	2.47	15
1,1-Dichloroethene	.38634	ug/L	20	21.2526	19.8649	104	97.4	63 - 128	6.75	21
1,2,3-Trichlorobenzene	0	ug/L	20	17.8009	20.0233	89	100	61 - 126	11.8	36
1,2,3-Trichloropropane	0	ug/L	20	19.9673	19.6925	99.8	98.5	75 - 132	1.39	19
1,2,4-Trichlorobenzene	0	ug/L	20	18.3545	20.0129	91.8	100	67 - 123	8.64	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.5649	19.8268	97.8	99.1	76 - 125	1.33	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	19.2486	19.2299	96.2	96.1	59 - 133	.1	26
1,2-Dibromoethane	0	ug/L	20	19.5969	19.1475	98	95.7	80 - 124	2.32	19
1,2-Dichlorobenzene	0	ug/L	20	19.5548	19.5729	97.8	97.9	82 - 118	.09	15
1,2-Dichloroethane	0	ug/L	20	20.2115	19.874	101	99.4	70 - 133	1.68	19
1,2-Dichloroethene, Total	1.04477	ug/L	40	42.5345	42.0757	104	103	78 - 125	1.08	40
1,2-Dichloropropane	0	ug/L	20	20.6019	21.0575	103	105	81 - 127	2.19	15
1,3-Dichlorobenzene	0	ug/L	20	19.6525	19.8578	98.3	99.3	81 - 118	1.04	16
1,3-Dichloropropane	0	ug/L	20	19.4544	19.1872	97.3	95.9	82 - 126	1.38	15
1,3-Dichloropropene, Total	0	ug/L	40	40.7372	40.4682	102	101	80 - 123	.66	16
1,4-Dichlorobenzene	0	ug/L	20	19.118	19.3154	95.6	96.6	81 - 116	1.03	15
2,2-Dichloropropane	0	ug/L	20	19.5027	18.716	97.5	93.6	64 - 129	4.12	18
2-Butanone	0	ug/L	100	106.054	108.454	106	108	50 - 152	2.24	16
2-Chloroethylvinyl ether	0	ug/L	20	.12582	.08564	.63*	.43*	1 - 150	38	40
2-Hexanone	0	ug/L	100	99.5593	104.13	99.6	104	65 - 154	4.49	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	108.428	109.46	108	109	71 - 146	.95	16
Acetone	7.23321	ug/L	100	110.633	117.314	103	110	40 - 151	5.86	40
Benzene	0	ug/L	20	20.1779	20.047	101	100	80 - 124	.65	26
Bromobenzene	0	ug/L	20	19.7594	20.0698	98.8	100	81 - 119	1.56	17
Bromochloromethane	0	ug/L	20	19.8437	19.472	99.2	97.4	73 - 117	1.89	19
Bromodichloromethane	0	ug/L	20	20.2158	20.1284	101	101	79 - 126	.43	16
Bromoform	0	ug/L	20	19.5272	19.2934	97.6	96.5	70 - 123	1.2	16
Bromomethane	0	ug/L	20	17.309	11.743	86.5	58.7	45 - 148	38.3	26
Carbon Disulfide	0	ug/L	20	22.1844	20.2877	111	101	57 - 131	8.93	28
Carbon Tetrachloride	0	ug/L	20	21.5385	21.4685	108	107	62 - 132	.33	17
Chlorobenzene	0	ug/L	20	20.0955	19.6495	100	98.2	85 - 117	2.24	15
Chlorodibromomethane	0	ug/L	20	20.3144	19.7982	102	99	77 - 122	2.57	15
Chloroethane	0	ug/L	20	19.4635	14.0781	97.3	70.4	51 - 142	32.1	24
Chloroform	0	ug/L	20	21.0431	20.4965	105	102	78 - 122	2.63	16
Chloromethane	0	ug/L	20	16.935	14.3097	84.7	71.5	38 - 156	16.8	27
Cyclohexane	0	ug/L	20	21.4571	21.3828	107	107	66 - 130	.35	20
Dibromomethane	0	ug/L	20	19.4894	18.6052	97.4	93	81 - 125	4.64	16
Dichlorodifluoromethane	0	ug/L	20	13.7824	12.5034	68.9	62.5	17 - 166	9.73	24
Diisopropyl ether	0	ug/L	20	21.2732	21.5216	106	108	74 - 131	1.16	15
Ethyl tert-butyl ether	0	ug/L	20	21.2419	21.3919	106	107	75 - 123	.7	16
Ethylbenzene	0	ug/L	20	19.8015	19.6274	99	98.1	80 - 124	.88	19
Freon 113	0	ug/L	20	20.0899	19.5474	100	97.7	50 - 130	2.74	26

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Hexachlorobutadiene	0	ug/L	20	19.1198	19.0328	95.6	95.2	55 - 128	.46	35
Isopropylbenzene	0	ug/L	20	21.6226	21.644	108	108	73 - 129	.1	18
Methyl acetate	0	ug/L	20	16.8128	17.1224	84.1	85.6	70 - 130	1.82	18
Methyl cyclohexane	0	ug/L	20	20.091	23.6507	100	118	70 - 130	16.3	18
Methyl t-Butyl Ether	0	ug/L	20	19.5665	19.9155	97.8	99.6	69 - 115	1.77	20
Methylene Chloride	0	ug/L	20	20.6345	20.9205	103	105	76 - 121	1.38	17
Naphthalene	0	ug/L	20	17.9386	19.9877	89.7	99.9	56 - 134	10.8	40
Styrene	0	ug/L	20	21.1336	21.0213	106	105	79 - 123	.53	16
Tetrachloroethene	0	ug/L	20	19.7349	18.6285	98.7	93.1	72 - 124	5.77	38
Toluene	0	ug/L	20	20.8713	19.9655	104	99.8	80 - 125	4.44	20
Total Xylenes	0	ug/L	60	62.2308	61.4417	104	102	79 - 125	1.28	35
Trichloroethene	1.06609	ug/L	20	22.7875	21.6578	109	103	77 - 124	5.08	18
Trichlorofluoromethane	0	ug/L	20	17.4876	14.1272	87.4	70.6	38 - 123	21.3	23
Vinyl Acetate	0	ug/L	20	17.9898	16.9383	89.9	84.7	58 - 136	6.02	17
Vinyl Chloride	.37244	ug/L	20	16.7986	13.3553	82.1	64.9	27 - 138	22.8	40
cis-1,2-Dichloroethene	1.04477	ug/L	20	21.0542	20.7318	100	98.4	78 - 125	1.54	21
cis-1,3-Dichloropropene	0	ug/L	20	19.4878	19.3168	97.4	96.6	81 - 121	.88	16
mp-Xylene	0	ug/L	40	41.6616	40.9489	104	102	79 - 125	1.73	21
n-Butylbenzene	0	ug/L	20	17.8233	18.8399	89.1	94.2	71 - 130	5.55	20
n-Propylbenzene	0	ug/L	20	21.0389	21.4096	105	107	74 - 122	1.75	20
o-Chlorotoluene	0	ug/L	20	20.4998	20.6855	102	103	78 - 126	.9	17
o-Xylene	0	ug/L	20	20.5693	20.4928	103	102	79 - 124	.37	19
p-Chlorotoluene	0	ug/L	20	20.533	20.6703	103	103	78 - 125	.67	16
p-Isopropyltoluene	0	ug/L	20	18.2645	19.5715	91.3	97.9	72 - 123	6.91	17
sec-Butylbenzene	0	ug/L	20	20.4519	21.592	102	108	72 - 127	5.42	17
tert-Amyl methyl ether	0	ug/L	20	18.2452	18.2839	91.2	91.4	75 - 121	.21	40
tert-Butyl Alcohol	5.64563	ug/L	100	128.453	144.122	123	138	17 - 168	11.5	40
tert-Butylbenzene	0	ug/L	20	18.4525	19.3618	92.3	96.8	72 - 124	4.81	17
trans-1,2-Dichloroethene	0	ug/L	20	21.4803	21.3439	107	107	71 - 122	.64	22
trans-1,3-Dichloropropene	0	ug/L	20	21.2493	21.1515	106	106	78 - 126	.46	18
1,2-Dichloroethane-d4 (S)	110	%				110	107	62 - 133		
4-Bromofluorobenzene (S)	88.5	%				88.5	90.3	79 - 114		
Dibromofluoromethane (S)	93.4	%				93.4	92.4	78 - 116		
Toluene-d8 (S)	93.2	%				93.2	92.5	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: WCPR/43365 **Analysis Method:** SW-846 7.3CN

QC Batch Method: SW-846 7.3CN

Associated Lab Samples: 2309395024, 2309395025

METHOD BLANK: 2729578

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	ppm	10

LABORATORY CONTROL SAMPLE: 2729579

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Cyanide, Reactive	12.3	ppm	10	1.2J	0 - 92

SAMPLE DUPLICATE: 2729580 ORIGINAL: 2310442001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Cyanide, Reactive	.01493	ppm	.01497	.25	20

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QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: WCPR/43366 **Analysis Method:** SW846 7.3

QC Batch Method: SW846 7.3

Associated Lab Samples: 2309395024, 2309395025

METHOD BLANK: 2729581

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	4.0J	ppm	6.2

LABORATORY CONTROL SAMPLE: 2729582

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Sulfide, Reactive	81.5	ppm	568	463	49 - 148

SAMPLE DUPLICATE: 2729583 ORIGINAL: 2310442001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Sulfide, Reactive	1.99104	ppm	3.19361	46.4*	20

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: WETC/203549 **Analysis Method:** SW846 7.3

QC Batch Method: SW846 7.3

Associated Lab Samples:

METHOD BLANK: 2729677

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

METHOD BLANK: 2729679

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

METHOD BLANK: 2729681

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

METHOD BLANK: 2729683

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

QC Batch: WETC/203584 **Analysis Method:** SW-846 7.3CN

QC Batch Method: SW-846 7.3CN

Associated Lab Samples:

METHOD BLANK: 2730127

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	0.0010	mg/L	0.00010

METHOD BLANK: 2730129

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	0.0040	mg/L	0.00010

METHOD BLANK: 2730131

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	0.0030	mg/L	0.00010

METHOD BLANK: 2730133

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	0.0030	mg/L	0.00010

METHOD BLANK: 2730135

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	0.0020	mg/L	0.00010

METHOD BLANK: 2730137

Parameter	Blank Result	Units	Reporting Limit

QUALITY CONTROL DATA

Workorder: 2309395 LMC MRC 4/17/18

Cyanide, Reactive	0.0040	mg/L	0.00010

METHOD BLANK: 2730139

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	0.0010	mg/L	0.00010

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2309395 LMC MRC 4/17/18

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2728889	1	Lab Control Standard	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 126 and the control limits were 76 to 121.				
2728889	2	Lab Control Standard	SW846 8260B	Carbon Disulfide
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 138 and the control limits were 57 to 131.				
2728889	3	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 134 and the control limits were 50 to 130.				
2731434	4	Duplicate	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2731434	5	Duplicate	SW-846 1010A	Flashpoint/Ignitability
Sample did not flash up to 200 degrees F				

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2309395 LMC MRC 4/17/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2309395024	DM-1-4			SW846 9040C	WETC/203183
2309395025	DM-5-8			SW846 9040C	WETC/203183
2309395001	MRC-SW17A	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395002	MRC-SW2A	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395003	MRC-SW1A	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395017	MRC-SW6B	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395018	MRC-SW8B	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395020	MRC-SW8A-D	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395021	MRC-SW6A	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395023	MRC-SW8A	SW846 3510C	EXTR/51837	8270 SIM	SVMS/30492
2309395024	DM-1-4			SW846 8260B	VOMS/46598
2309395025	DM-5-8			SW846 8260B	VOMS/46598
2309395024	DM-1-4	SW846 3510C	EXTR/51862	SW846 8270D	SVMS/30490
2309395025	DM-5-8	SW846 3510C	EXTR/51862	SW846 8270D	SVMS/30490
2309395024	DM-1-4	SW846 3510C	EXTR/51866	SW846 8082A	SVGC/48950
2309395025	DM-5-8	SW846 3510C	EXTR/51866	SW846 8082A	SVGC/48950
2309395015	TB-041718-3			SW846 8260B	VOMS/46615
2309395016	MRC-SW13A			SW846 8260B	VOMS/46615
2309395017	MRC-SW6B			SW846 8260B	VOMS/46615
2309395018	MRC-SW8B			SW846 8260B	VOMS/46615
2309395019	TB-041718-4			SW846 8260B	VOMS/46615
2309395020	MRC-SW8A-D			SW846 8260B	VOMS/46615
2309395021	MRC-SW6A			SW846 8260B	VOMS/46615
2309395022	TB-041718-5			SW846 8260B	VOMS/46615
2309395023	MRC-SW8A			SW846 8260B	VOMS/46615

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2309395 LMC MRC 4/17/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2309395024	DM-1-4	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2309395025	DM-5-8	SW846 7470A	MDIG/71348	SW846 7470A	META/61764
2309395010	TB-041718-2			SW846 8260B	VOMS/46617
2309395011	MRC-SW5A1			SW846 8260B	VOMS/46617
2309395012	MRC-SW9B			SW846 8260B	VOMS/46617
2309395013	MRC-SW15A			SW846 8260B	VOMS/46617
2309395014	MRC-SW16A			SW846 8260B	VOMS/46617
2309395024	DM-1-4	SW846 3015	MDIG/71363	SW846 6010C	META/61765
2309395025	DM-5-8	SW846 3015	MDIG/71363	SW846 6010C	META/61765
2309395001	MRC-SW17A			SW846 8260B	VOMS/46623
2309395002	MRC-SW2A			SW846 8260B	VOMS/46623
2309395003	MRC-SW1A			SW846 8260B	VOMS/46623
2309395004	MRC-SW9A			SW846 8260B	VOMS/46623
2309395005	TB-041718-1			SW846 8260B	VOMS/46623
2309395006	MRC-SW5A2			SW846 8260B	VOMS/46623
2309395007	MRC-SW5B			SW846 8260B	VOMS/46623
2309395008	MRC-SW7A			SW846 8260B	VOMS/46623
2309395009	MRC-SW7B			SW846 8260B	VOMS/46623
2309395024	DM-1-4	SW-846 7.3CN	WCPR/43365	SW-846 7.3CN	WETC/203584
2309395025	DM-5-8	SW-846 7.3CN	WCPR/43365	SW-846 7.3CN	WETC/203584
2309395024	DM-1-4	SW846 7.3	WCPR/43366	SW846 7.3	WETC/203549
2309395025	DM-5-8	SW846 7.3	WCPR/43366	SW846 7.3	WETC/203549

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Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 4

Courier:

Tracking #:

2309395

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840AEM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? [ ] -Y No.:

***Container Type	G	A	A												
***Container Size	40mL	1L	1L												
***Preservative	HCL														

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	1,4-Dioxane	PCB Homologs							
1	MRC-SW17A		4-16-18	1507	G		2	2								
2	MRC-SW2A		4/16/18	1638	G		2	2								
3	MRC-SW1A		4/16/18	1620	G		2	2								
4	MRC-SW9A		4/17/18	0842	G		2		2							
5	TB-041718-1	trip blank	NA	NA	G		2									
6	MRC-SW5A2		4/17/18	0924	G		2		2							
7	MRC-SW5B		4/17/18	0940	G		2		2 DNN 4/18/18							
8	MRC-SW7A		4/17/18	0804	G		2		2							

Enter Number of Containers Per Analysis

Circle appropriate Y or N.

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y

Correct containers? Y N
Correct sample volume? Y N
Correct preservation? Y N
Headspace/Volatiles? Y N

Notes:

Cooler Temp: 1°C
Therm. ID: 318
No. of Coolers:

SAMPLED BY (Please Print): Zach Neigh

Project Comments: email naam.tavantzis@aecom.com & holly.brown@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AECOM	4/17/18	1400	2 [signature] ALS	4/17	1400
3 [signature]			4 [signature]		1830
5 [signature]		2200	6 [signature]	4/17/18	2200
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: FDUSS & ACSV Other

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

ALS Environmental

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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Page 2 of 4

Courier:

Tracking #:

COC# 2909 395

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3497

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840 AECM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? [ ] -Y No.:

***Container Type	G	A	A													
***Container Size	40mL	1L	1L													
*** Preservative	HCL															

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	14-Dioxane	PCB Homologs							
1	MRC-SW7B		4/17/18	0837	G	SW	2		2							
2	TB-041718-2	trip blank	NA	NA	G	SW	2									
3	MRC-SW5A1		4/17/18	0912	G	SW	2		2							
4	MRC-SW9B		4/17/18	0886	G	SW	2		2							
5	MRC-SW15A		4/17/18	1140	G	SW	2		2							
6	MRC-SW16A		4/17/18	1120	G	SW	2		2							
7	TB-041718-3 Head Space	trip blank	NA	NA	G	WQ	2									
8	MRC-SW13A DNM 4/18/18		4-17-18	1144	G	SW	2		2							

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: INITIAL HERE

Cooler Temp: 1°C

Therm. ID: 318

No. of Coolers:

Notes:

Sample Description/Location	Custody seals Present?	(if present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?	Circle appropriate Y or N
1 MRC-SW7B	Y	Y	Y	Y	Y	
2 TB-041718-2	Y	Y	N	N	N	
3 MRC-SW5A1	Y	Y	Y	Y	Y	
4 MRC-SW9B	Y	Y	N	N	N	
5 MRC-SW15A	Y	Y	N	N	N	
6 MRC-SW16A	Y	Y	N	N	N	
7 TB-041718-3 Head Space	Y	Y	N	N	N	
8 MRC-SW13A DNM 4/18/18	Y	Y	N	N	N	

SAMPLED BY (Please Print): Zach Neigh

Project Comments: email: holly.brown@aecom.com & naam.tavantzis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] / AECOM	4-17-18	1400	2	[signature]	4/17	1400
3	[signature]			4	[signature]		1500
5	[signature]		2200	6	[signature]	4/17/18	2200
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ___

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: Other

EQuIS & CSV

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 3 of 4

Courier:

Tracking #:

COC# 2309395

Co. Name: AECOM

Contact (Report to): Ravi Damera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Damera PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? -Y No.:

***Container Type	G	A	A	G											
***Container Size	40mL	1L	1L	32oz											
*** Preservative	HCL														

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs	1,4-Dioxane	PCB Homologs	TCLP-RIC Analyses						Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	MRC-SW6B		4/17/18	1051	G	SW	2	2	2							Y	Y	Y	Y	
2	MRC-SW8B		4/17/18	1104	G	SW	2	2	2							N	N	N	N	N
3	TB-041718-4 Head space DNN 4/17/18	trip blank	NA	NA	G	WQ	2									Y	Y	Y	Y	Y
4	MRC-SW8A-D	dup.	4/17/18	1030	G	SW	2	2	2											
5	MRC-SW6A		4/17/18	1002	G	SW	2	2	2											
6	TB-041718-5 Head space DNN 4/17/18	trip blank	NA	NA	G	WQ	2													
7	MRC-SW8A		4/17/18	1016	G	SW	2	2	2											
8	DM-1-4	drums	4/17/18	1320	C	GW				10										

SAMPLED BY (Please Print): Zach Neigh

Project Comments: email raoumtacontis@aecom.com & holly.brown@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] / AECOM	4/17/18	1400	2	[signature]	4/17	1400
3	[signature]			4	[signature]		1530
5	[signature]		TZW	6	[signature]	4/17/18	2200
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] Other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Edits Required? [X] If yes, format type: FQuts & CSV Other

DOD Criteria Required?

Receipt Information (completed by Sample Receiving): Performed by: INITIAL HERE

Cooler Temp: 1°C

Therm. ID: 318

No. of Coolers:

Notes:

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 4 of 4

Courier:

Tracking #:

COC# Z309395

Co. Name: AECOM

Contact (Report to): Ravi Panera & Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): Ravi Panera PO#: 95846ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y Ravi.Panera@aecom.com

Fax? -Y No.:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	TCLP + RIC Analyses
1	DM-5-8	drums	4-17-18	1335	C	GW	10
2							
3							
4							
5							
6							
7							
8							

Enter Number of Containers Per Analysis

	Receipt Information (completed by Sample Receiving)
Performed by	DNN
Cooler Temp:	1°C
Therm. ID:	318
No. of Coolers:	
Notes:	

Sample Description/Location	Custody seals Present?	(If present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1	Y	Y	Y	Y	Y
2	N	N	N	N	N
3	Y	Y	Y	Y	Y
4					
5					
6					
7					
8					

Correct containers? Y N
Correct sample volume? Y N
Correct preservation? Y N
Headspace/Volatiles? Y N
Circle appropriate Y or N.

SAMPLED BY (Please Print): Zach Neigh

Project Comments: Also email data to holly.brown@aecom.com & ndaum.tavantzis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] / AECOM	4-17-18	1400	2	[signature]	4/17	1400
3	[signature]			4	[signature]		1800
5	[signature]		2200	6	[signature]	4/17/18	2200
7				8			
9				10			

Data Deliverables: [X] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ___ ___

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other

Files Required? [X] If yes, format type: EQ.JS d.csv

Enter CFWS ID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

April 30, 2018 Service Request No:R1803542

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2309395

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory April 19, 2018
For your reference, these analyses have been assigned our service request number **R1803542.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2309395
Sample Matrix: Water

Service Request: R1803542
Date Received: 04/19/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Fifteen water samples were received for analysis at ALS Environmental on 04/19/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 04/27/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.

Method 680, 04/27/2018: The lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. The analytes affected are flagged in the LCS Summary.

Method 680, 04/27/2018: The control limits were exceeded for analytes in the closing Continuing Calibration Verification (CCV). The QC failure was most likely due to the composition of the sample(s) immediately preceding the failing CCV. Samples run multiple times with the same result.

Approved by _____ Date 04/30/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2309395 004			Lab ID: R1803542-001			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0042	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 006			Lab ID: R1803542-002			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0033	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 007			Lab ID: R1803542-003			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0042	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 008			Lab ID: R1803542-004			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0066		0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 009			Lab ID: R1803542-005			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0038	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 011			Lab ID: R1803542-006			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0028	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 012			Lab ID: R1803542-007			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0028	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 013			Lab ID: R1803542-008			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0047		0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 014			Lab ID: R1803542-009			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0042	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 016			Lab ID: R1803542-010			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0019	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 017			Lab ID: R1803542-011			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0042	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 018			Lab ID: R1803542-012			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0038	J	0.0016	0.0047	ug/L	680

SAMPLE DETECTION SUMMARY

CLIENT ID: 2309395 020			Lab ID: R1803542-013			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0047		0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 021			Lab ID: R1803542-014			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0038	J	0.0016	0.0047	ug/L	680

CLIENT ID: 2309395 023			Lab ID: R1803542-015			
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0033	J	0.0016	0.0047	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1803542-001	2309395 004	4/17/2018	0842
R1803542-002	2309395 006	4/17/2018	0924
R1803542-003	2309395 007	4/17/2018	0940
R1803542-004	2309395 008	4/17/2018	0804
R1803542-005	2309395 009	4/17/2018	0837
R1803542-006	2309395 011	4/17/2018	2200
R1803542-007	2309395 012	4/17/2018	0912
R1803542-008	2309395 013	4/17/2018	1140
R1803542-009	2309395 014	4/17/2018	1120
R1803542-010	2309395 016	4/17/2018	1144
R1803542-011	2309395 017	4/17/2018	1051
R1803542-012	2309395 018	4/17/2018	1104
R1803542-013	2309395 020	4/17/2018	1030
R1803542-014	2309395 021	4/17/2018	1002
R1803542-015	2309395 023	4/17/2018	1016

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 2
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2309395

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/30/2018 Approved By:

Email? [ ] -Y

Fax? [ ] -Y No.:

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.								Sample/COC Comments
					Container Type	AN								
					Container Size	1L								
					Preservative	None								
					Enter Number of Containers Per Sample or Field Results Below.									
1 2309395 004	4/17/18	0842	G	WT	2	*								
2 2309395 006	4/17/18	0924	G	WT	2	*								Sub to ALS Rochester
3 2309395 007	4/17/18	0940	G	WT	2	*								
4 2309395 008	4/17/18	0804	G	WT	6	*								
5 2309395 009	4/17/18	0837	G	WT	2	*								
6 2309395 011	4/17/18	2200	G	WT	2	*								
7 2309395 012	4/17/18	0912	G	WT	2	*								
8 2309395 013	4/17/18	1140	G	WT	2	*								
9 2309395 014	4/17/18	1120	G	WT	2	*								
10 2309395 016	4/17/18	1144	G	WT	2	*								

ALS Field Services: ☐Pickup ☐Labor ☐Composite_Sampling ☐Rental_Equipment ☐Other:

Project Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible]	4/18/18	1630	2 [signature]	4/19/18	0900
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ] [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] MD

Reportable to PADEP? Yes [ ] PWSID #

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type:

R1803542 5
ALS Environmental
UR115: 2309395

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	2 of 2
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2309395

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 4/30/2018 Approved By: ____

Email? [ ] Y ____

Fax? [ ] Y No.: ____

Container Type	AN	1
Container Size	1 L	
Preservative	None	

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.	Sample/COC Comments
11 2309395 017	4/17/18	1051	G	WT	2	*	
12 2309395 018	4/17/18	1104	G	WT	2	*	Sub to ALS Rochester
13 2309395 020	4/17/18	1030	G	WT	2	*	
14 2309395 021	4/17/18	1002	G	WT	2	*	
15 2309395 023	4/17/18	1016	G	WT	2	*	
16							
17							
18							
19							
20							

Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ALS Field Services: [ ] Pickup [ ] Labor
[ ] Composite Sampling [ ] Rental Equipment
[ ] Other: ____

Project Comments:

LOGGED BY(signature): ____ Date: ____ Time: ____

REVIEWED BY(signature): ____ Date: ____ Time: ____

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	4/18/18	1630	2	4/18/18	0900
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ]

PWSID # ____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- EQUIS EDD ____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Waste

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

R1803542 5

ALS Environmental
UB116: 2309395

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

\# Spike was diluted out

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client: ALS Environmental - US
Project: UR115: 2309395
Service Request: R1803542

Sample Name: 2309395 004
Lab Code: R1803542-001
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 006
Lab Code: R1803542-002
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 007
Lab Code: R1803542-003
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 008
Lab Code: R1803542-004
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 009
Lab Code: R1803542-005
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Client: ALS Environmental - US
Project: UR115: 2309395
Service Request: R1803542

Sample Name: 2309395 011
Lab Code: R1803542-006
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 012
Lab Code: R1803542-007
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 013
Lab Code: R1803542-008
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 014
Lab Code: R1803542-009
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 016
Lab Code: R1803542-010
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Client: ALS Environmental - US
Project: UR115: 2309395
Service Request: R1803542

Sample Name: 2309395 017
Lab Code: R1803542-011
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 018
Lab Code: R1803542-012
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 020
Lab Code: R1803542-013
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 021
Lab Code: R1803542-014
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2309395 023
Lab Code: R1803542-015
Sample Matrix: Water
Date Collected: 04/17/18
Date Received: 04/19/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-C
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 08:42
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 004	**Units:**	ug/L
Lab Code:	R1803542-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/26/18 23:08	4/20/18	
Dichlorobiphenyls, Total	**0.0042 J**	0.0047	0.0016	1	04/26/18 23:08	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/26/18 23:08	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/26/18 23:08	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/26/18 23:08	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/26/18 23:08	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/26/18 23:08	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/26/18 23:08	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/26/18 23:08	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/26/18 23:08	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/26/18 23:08	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	80	58 - 125	04/26/18 23:08	
4,4'-DDT	86	37 - 166	04/26/18 23:08	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 09:24
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 006	**Units:**	ug/L
Lab Code:	R1803542-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/30/18 11:06	4/20/18	
Dichlorobiphenyls, Total	**0.0033 J**	0.0047	0.0016	1	04/30/18 11:06	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/30/18 11:06	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/30/18 11:06	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/30/18 11:06	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/30/18 11:06	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/30/18 11:06	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/30/18 11:06	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/30/18 11:06	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/30/18 11:06	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/30/18 11:06	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	63	58 - 125	04/30/18 11:06	
4,4'-DDT	56	37 - 166	04/30/18 11:06	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 09:40
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 007	**Units:**	ug/L
Lab Code:	R1803542-003	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 00:06	4/20/18	
Dichlorobiphenyls, Total	**0.0042 J**	0.0047	0.0016	1	04/27/18 00:06	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 00:06	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 00:06	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 00:06	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 00:06	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 00:06	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 00:06	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 00:06	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 00:06	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 00:06	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	73	58 - 125	04/27/18 00:06	
4,4'-DDT	77	37 - 166	04/27/18 00:06	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 08:04
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 008	**Units:**	ug/L
Lab Code:	R1803542-004	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 00:35	4/20/18	
Dichlorobiphenyls, Total	**0.0066**	0.0047	0.0016	1	04/27/18 00:35	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 00:35	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 00:35	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 00:35	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 00:35	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 00:35	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 00:35	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 00:35	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 00:35	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 00:35	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	70	58 - 125	04/27/18 00:35	
4,4'-DDT	61	37 - 166	04/27/18 00:35	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 08:37
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 009	**Units:**	ug/L
Lab Code:	R1803542-005	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND	U	0.024	0.012	1	04/27/18 01:03	4/20/18	
Dichlorobiphenyls, Total	**0.0038**	**J**	0.0047	0.0016	1	04/27/18 01:03	4/20/18	
Heptachlorobiphenyls, Total	ND	U	0.014	0.0090	1	04/27/18 01:03	4/20/18	
Hexachlorobiphenyls, Total	ND	U	0.0094	0.0047	1	04/27/18 01:03	4/20/18	
Monochlorobiphenyls, Total	ND	U	0.0047	0.00059	1	04/27/18 01:03	4/20/18	
Nonachlorobiphenyls, Total	ND	U	0.019	0.0088	1	04/27/18 01:03	4/20/18	
Octachlorobiphenyls, Total	ND	U	0.014	0.0099	1	04/27/18 01:03	4/20/18	
Pentachlorobiphenyls, Total	ND	U	0.0094	0.0046	1	04/27/18 01:03	4/20/18	
Tetrachlorobiphenyls, Total	ND	U	0.0094	0.0023	1	04/27/18 01:03	4/20/18	
Trichlorobiphenyls, Total	ND	U	0.0047	0.0022	1	04/27/18 01:03	4/20/18	
Total PCBs as Sum of Homologs	ND	U	0.024	-	1	04/27/18 01:03	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	62	58 - 125	04/27/18 01:03	
4,4'-DDT	57	37 - 166	04/27/18 01:03	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 22:00
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 011	**Units:**	ug/L
Lab Code:	R1803542-006	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/30/18 11:35	4/20/18	
Dichlorobiphenyls, Total	**0.0028 J**	0.0047	0.0016	1	04/30/18 11:35	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/30/18 11:35	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/30/18 11:35	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/30/18 11:35	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/30/18 11:35	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/30/18 11:35	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/30/18 11:35	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/30/18 11:35	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/30/18 11:35	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/30/18 11:35	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	77	58 - 125	04/30/18 11:35	
4,4'-DDT	66	37 - 166	04/30/18 11:35	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 09:12
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 012	**Units:**	ug/L
Lab Code:	R1803542-007	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND	U	0.024	0.012	1	04/27/18 02:01	4/20/18	
Dichlorobiphenyls, Total	**0.0028**	**J**	0.0047	0.0016	1	04/27/18 02:01	4/20/18	
Heptachlorobiphenyls, Total	ND	U	0.014	0.0090	1	04/27/18 02:01	4/20/18	
Hexachlorobiphenyls, Total	ND	U	0.0094	0.0047	1	04/27/18 02:01	4/20/18	
Monochlorobiphenyls, Total	ND	U	0.0047	0.00059	1	04/27/18 02:01	4/20/18	
Nonachlorobiphenyls, Total	ND	U	0.019	0.0088	1	04/27/18 02:01	4/20/18	
Octachlorobiphenyls, Total	ND	U	0.014	0.0099	1	04/27/18 02:01	4/20/18	
Pentachlorobiphenyls, Total	ND	U	0.0094	0.0046	1	04/27/18 02:01	4/20/18	
Tetrachlorobiphenyls, Total	ND	U	0.0094	0.0023	1	04/27/18 02:01	4/20/18	
Trichlorobiphenyls, Total	ND	U	0.0047	0.0022	1	04/27/18 02:01	4/20/18	
Total PCBs as Sum of Homologs	ND	U	0.024	-	1	04/27/18 02:01	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	59	58 - 125	04/27/18 02:01	
4,4'-DDT	48	37 - 166	04/27/18 02:01	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 11:40
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 013	**Units:**	ug/L
Lab Code:	R1803542-008	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 02:30	4/20/18	
Dichlorobiphenyls, Total	**0.0047**	0.0047	0.0016	1	04/27/18 02:30	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 02:30	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 02:30	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 02:30	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 02:30	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 02:30	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 02:30	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 02:30	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 02:30	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 02:30	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	58	58 - 125	04/27/18 02:30	
4,4'-DDT	50	37 - 166	04/27/18 02:30	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 11:20
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 014	**Units:**	ug/L
Lab Code:	R1803542-009	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 02:58	4/20/18	
Dichlorobiphenyls, Total	**0.0042 J**	0.0047	0.0016	1	04/27/18 02:58	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 02:58	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 02:58	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 02:58	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 02:58	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 02:58	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 02:58	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 02:58	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 02:58	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 02:58	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	61	58 - 125	04/27/18 02:58	
4,4'-DDT	38	37 - 166	04/27/18 02:58	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 11:44
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 016	**Units:**	ug/L
Lab Code:	R1803542-010	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 03:27	4/20/18	
Dichlorobiphenyls, Total	**0.0019 J**	0.0047	0.0016	1	04/27/18 03:27	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 03:27	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 03:27	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 03:27	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 03:27	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 03:27	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 03:27	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 03:27	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 03:27	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 03:27	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	58	58 - 125	04/27/18 03:27	
4,4'-DDT	47	37 - 166	04/27/18 03:27	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 10:51
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 017	**Units:**	ug/L
Lab Code:	R1803542-011	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 03:56	4/20/18	
Dichlorobiphenyls, Total	**0.0042 J**	0.0047	0.0016	1	04/27/18 03:56	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 03:56	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 03:56	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 03:56	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 03:56	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 03:56	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 03:56	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 03:56	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 03:56	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 03:56	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	64	58 - 125	04/27/18 03:56	
4,4'-DDT	66	37 - 166	04/27/18 03:56	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 11:04
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 018	**Units:**	ug/L
Lab Code:	R1803542-012	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 04:25	4/20/18	
Dichlorobiphenyls, Total	**0.0038 J**	0.0047	0.0016	1	04/27/18 04:25	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 04:25	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 04:25	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 04:25	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 04:25	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 04:25	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 04:25	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 04:25	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 04:25	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 04:25	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	63	58 - 125	04/27/18 04:25	
4,4'-DDT	51	37 - 166	04/27/18 04:25	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 10:30
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 020	**Units:**	ug/L
Lab Code:	R1803542-013	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 04:53	4/20/18	
Dichlorobiphenyls, Total	**0.0047**	0.0047	0.0016	1	04/27/18 04:53	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 04:53	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 04:53	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 04:53	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 04:53	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 04:53	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0043	1	04/27/18 04:53	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 04:53	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 04:53	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 04:53	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	63	58 - 125	04/27/18 04:53	
4,4'-DDT	41	37 - 166	04/27/18 04:53	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 10:02
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 021	**Units:**	ug/L
Lab Code:	R1803542-014	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 05:22	4/20/18	
Dichlorobiphenyls, Total	**0.0038 J**	0.0047	0.0016	1	04/27/18 05:22	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 05:22	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 05:22	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 05:22	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 05:22	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 05:22	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 05:22	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 05:22	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 05:22	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 05:22	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	70	58 - 125	04/27/18 05:22	
4,4'-DDT	43	37 - 166	04/27/18 05:22	

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	04/17/18 10:16
Sample Matrix:	Water	**Date Received:**	04/19/18 09:00
Sample Name:	2309395 023	**Units:**	ug/L
Lab Code:	R1803542-015	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.024	0.012	1	04/27/18 05:51	4/20/18	
Dichlorobiphenyls, Total	**0.0033 J**	0.0047	0.0016	1	04/27/18 05:51	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.014	0.0090	1	04/27/18 05:51	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.0094	0.0047	1	04/27/18 05:51	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0047	0.00059	1	04/27/18 05:51	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.019	0.0088	1	04/27/18 05:51	4/20/18	
Octachlorobiphenyls, Total	ND U	0.014	0.0099	1	04/27/18 05:51	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.0094	0.0046	1	04/27/18 05:51	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.0094	0.0023	1	04/27/18 05:51	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0047	0.0022	1	04/27/18 05:51	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.024	-	1	04/27/18 05:51	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	59	58 - 125	04/27/18 05:51	
4,4'-DDT	46	37 - 166	04/27/18 05:51	

QC Summary Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US **Service Request:** R1803542

Project: UR115: 2309395

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680

Extraction Method: EPA 3510C

Sample Name	Lab Code	4,4'-DDT 37 - 166	gamma-BHC (Lindane) 58 - 125
2309395 004	R1803542-001	86	80
2309395 006	R1803542-002	56	63
2309395 007	R1803542-003	77	73
2309395 008	R1803542-004	61	70
2309395 009	R1803542-005	57	62
2309395 011	R1803542-006	66	77
2309395 012	R1803542-007	48	59
2309395 013	R1803542-008	50	58
2309395 014	R1803542-009	38	61
2309395 016	R1803542-010	47	58
2309395 017	R1803542-011	66	64
2309395 018	R1803542-012	51	63
2309395 020	R1803542-013	41	63
2309395 021	R1803542-014	43	70
2309395 023	R1803542-015	46	59
Method Blank	RQ1803678-01	112	85
Lab Control Sample	RQ1803678-02	96	75
Duplicate Lab Control Sample	RQ1803678-03	103	82

Client:	ALS Environmental - US	**Service Request:**	R1803542
Project:	UR115: 2309395	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1803678-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	ND U	0.025	0.012	1	04/30/18 09:22	4/20/18	
Dichlorobiphenyls, Total	ND U	0.0050	0.0016	1	04/30/18 09:22	4/20/18	
Heptachlorobiphenyls, Total	ND U	0.015	0.0090	1	04/30/18 09:22	4/20/18	
Hexachlorobiphenyls, Total	ND U	0.010	0.0047	1	04/30/18 09:22	4/20/18	
Monochlorobiphenyls, Total	ND U	0.0050	0.00059	1	04/30/18 09:22	4/20/18	
Nonachlorobiphenyls, Total	ND U	0.020	0.0088	1	04/30/18 09:22	4/20/18	
Octachlorobiphenyls, Total	ND U	0.015	0.0099	1	04/30/18 09:22	4/20/18	
Pentachlorobiphenyls, Total	ND U	0.010	0.0048	1	04/30/18 09:22	4/20/18	
Tetrachlorobiphenyls, Total	ND U	0.010	0.0023	1	04/30/18 09:22	4/20/18	
Trichlorobiphenyls, Total	ND U	0.0050	0.0022	1	04/30/18 09:22	4/20/18	
Total PCBs as Sum of Homologs	ND U	0.025	-	1	04/30/18 09:22	4/20/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	85	58 - 125	04/30/18 09:22	
4,4'-DDT	112	37 - 166	04/30/18 09:22	

Client: ALS Environmental - US
Project: UR115: 2309395
Sample Matrix: Water

Service Request: R1803542
Date Analyzed: 04/30/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1803678-02			Duplicate Lab Control Sample RQ1803678-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.361	1.25	29	0.383	1.25	31	29-162	6	30
Dichlorobiphenyls, Total	680	0.159	0.250	64	0.187	0.250	75	37-139	16	30
Heptachlorobiphenyls, Total	680	0.317	0.750	42 *	0.397	0.750	53	53-120	23	30
Hexachlorobiphenyls, Total	680	0.247	0.500	49	0.312	0.500	62	11-160	23	30
Monochlorobiphenyls, Total	680	0.152	0.250	61	0.177	0.250	71	34-137	15	30
Octachlorobiphenyls, Total	680	0.288	0.750	38 *	0.345	0.750	46 *	57-125	18	30
Pentachlorobiphenyls, Total	680	0.293	0.500	59	0.354	0.500	71	10-180	19	30
Tetrachlorobiphenyls, Total	680	0.288	0.500	58	0.339	0.500	68	14-153	16	30
Trichlorobiphenyls, Total	680	0.159	0.250	63	0.185	0.250	74	10-173	15	30

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 9, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2322628**
Purchase Order:	**95840ACM**	Workorder ID:	**ALG001|LMC MRC 06/25/18**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Monday, June 25, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2322628001	MRC-SW13B	Water	6/25/2018 13:35	6/25/2018 22:40	Ms. Victoria
2322628002	MRC-SW6B	Water	6/25/2018 12:35	6/25/2018 22:40	Ms. Victoria
2322628003	MRC-SW13A	Water	6/25/2018 13:25	6/25/2018 22:40	Ms. Victoria
2322628004	MRC-SW8A	Water	6/25/2018 12:50	6/25/2018 22:40	Ms. Victoria
2322628005	MRC-SW8B	Water	6/25/2018 13:05	6/25/2018 22:40	Ms. Victoria
2322628006	MRC-SW7B	Water	6/25/2018 11:35	6/25/2018 22:40	Ms. Victoria
2322628007	MRC-SW9B	Water	6/25/2018 12:05	6/25/2018 22:40	Ms. Victoria
2322628008	MRC-SW7A	Water	6/25/2018 11:20	6/25/2018 22:40	Ms. Victoria
2322628009	MRC-SW9A	Water	6/25/2018 11:50	6/25/2018 22:40	Ms. Victoria
2322628010	MRC-SW6A	Water	6/25/2018 12:20	6/25/2018 22:40	Ms. Victoria
2322628011	MRC-SW13BDUP	Water	6/25/2018 13:40	6/25/2018 22:40	Ms. Victoria
2322628012	TB-062518	Water	6/25/2018 22:40	6/25/2018 22:40	Ms. Victoria

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628001** Date Collected: 6/25/2018 13:35 Matrix: Water

Sample ID: **MRC-SW13B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 06:49	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 06:49	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 06:49	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 06:49	PDK	A
1,1-Dichloroethene	ND	3	ug/L	1.0	0.29	SW846 8260B		7/4/18 06:49	PDK	A
1,2,3-Trichlorobenzene	ND	16	ug/L	2.0	0.93	SW846 8260B		7/4/18 06:49	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 06:49	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/4/18 06:49	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 06:49	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/4/18 06:49	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 06:49	PDK	A
1,2-Dichlorobenzene	ND	12	ug/L	1.0	0.38	SW846 8260B		7/4/18 06:49	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 06:49	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/4/18 06:49	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 06:49	PDK	A
1,3-Dichlorobenzene	ND	10	ug/L	1.0	0.25	SW846 8260B		7/4/18 06:49	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 06:49	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/4/18 06:49	PDK	A
1,4-Dichlorobenzene	ND	11	ug/L	1.0	0.27	SW846 8260B		7/4/18 06:49	PDK	A
2,2-Dichloropropane	ND	7,8	ug/L	1.0	0.32	SW846 8260B		7/4/18 06:49	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/4/18 06:49	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/4/18 06:49	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/4/18 06:49	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/4/18 06:49	PDK	A
Acetone	10J	J	ug/L	10.0	3.1	SW846 8260B		7/4/18 06:49	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 06:49	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 06:49	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 06:49	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 06:49	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/4/18 06:49	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/4/18 06:49	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 06:49	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 06:49	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 06:49	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 06:49	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628001** Date Collected: 6/25/2018 13:35 Matrix: Water

Sample ID: **MRC-SW13B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/4/18 06:49	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 06:49	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 06:49	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 06:49	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 06:49	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 06:49	PDK	A
Ethylbenzene	ND	9	ug/L	1.0	0.34	SW846 8260B		7/4/18 06:49	PDK	A
Freon 113	ND	4,5	ug/L	1.0	0.26	SW846 8260B		7/4/18 06:49	PDK	A
Hexachlorobutadiene	ND	14,15	ug/L	5.0	1.0	SW846 8260B		7/4/18 06:49	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 06:49	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/4/18 06:49	PDK	A
Methyl cyclohexane	ND	17,18	ug/L	1.0	0.30	SW846 8260B		7/4/18 06:49	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 06:49	PDK	A
Naphthalene	ND	13	ug/L	2.0	0.34	SW846 8260B		7/4/18 06:49	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 06:49	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 06:49	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 06:49	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/4/18 06:49	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
Trichlorofluoromethane	ND	1,2	ug/L	1.0	0.24	SW846 8260B		7/4/18 06:49	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/4/18 06:49	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 06:49	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 06:49	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 06:49	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/4/18 06:49	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 06:49	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 06:49	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 06:49	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 06:49	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 06:49	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/4/18 06:49	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/4/18 06:49	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628001** Date Collected: 6/25/2018 13:35 Matrix: Water

Sample ID: **MRC-SW13B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			7/4/18 06:49	PDK	A
trans-1,2-Dichloroethene	ND	6	ug/L	1.0	0.26	SW846 8260B			7/4/18 06:49	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/4/18 06:49	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	118		%	62 - 133		SW846 8260B			7/4/18 06:49	PDK	A
4-Bromofluorobenzene (S)	138	19	%	79 - 114		SW846 8260B			7/4/18 06:49	PDK	A
Dibromofluoromethane (S)	94.2		%	78 - 116		SW846 8260B			7/4/18 06:49	PDK	A
Toluene-d8 (S)	94.6		%	76 - 127		SW846 8260B			7/4/18 06:49	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.099	0.019	8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G
Fluoranthene-d10 (S)	92.3		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 10:32	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628002** Date Collected: 6/25/2018 12:35 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:11	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:11	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:11	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:11	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:11	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/4/18 07:11	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:11	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/4/18 07:11	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/4/18 07:11	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:11	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:11	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:11	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/4/18 07:11	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:11	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/4/18 07:11	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/4/18 07:11	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/4/18 07:11	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/4/18 07:11	PDK	A
Acetone	8.3J	J	ug/L	10.0	3.1	SW846 8260B		7/4/18 07:11	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:11	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:11	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/4/18 07:11	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/4/18 07:11	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:11	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:11	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:11	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628002** Date Collected: 6/25/2018 12:35 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/4/18 07:11	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:11	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:11	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:11	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:11	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:11	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/4/18 07:11	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:11	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:11	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:11	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/4/18 07:11	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:11	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:11	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:11	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/4/18 07:11	PDK	A
Trichloroethene	0.59J	J	ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:11	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/4/18 07:11	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:11	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/4/18 07:11	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:11	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:11	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:11	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:11	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:11	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/4/18 07:11	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/4/18 07:11	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/4/18 07:11	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628002** Date Collected: 6/25/2018 12:35 Matrix: Water

Sample ID: **MRC-SW6B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/4/18 07:11	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/4/18 07:11	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	121		%	62 - 133		SW846 8260B			7/4/18 07:11	PDK	A
4-Bromofluorobenzene (S)	129	1	%	79 - 114		SW846 8260B			7/4/18 07:11	PDK	A
Dibromofluoromethane (S)	97.1		%	78 - 116		SW846 8260B			7/4/18 07:11	PDK	A
Toluene-d8 (S)	96.4		%	76 - 127		SW846 8260B			7/4/18 07:11	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	38.8		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G
Fluoranthene-d10 (S)	96.3		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 11:51	CGS	G

Vanessa N. Badman

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628003** Date Collected: 6/25/2018 13:25 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:33	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:33	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:33	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:33	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:33	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/4/18 07:33	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:33	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/4/18 07:33	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/4/18 07:33	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:33	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:33	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:33	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/4/18 07:33	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:33	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/4/18 07:33	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/4/18 07:33	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/4/18 07:33	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/4/18 07:33	PDK	A
Acetone	9.5J	J	ug/L	10.0	3.1	SW846 8260B		7/4/18 07:33	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:33	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 07:33	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/4/18 07:33	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/4/18 07:33	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:33	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:33	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:33	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628003** Date Collected: 6/25/2018 13:25 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/4/18 07:33	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 07:33	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 07:33	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 07:33	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 07:33	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:33	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/4/18 07:33	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 07:33	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:33	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 07:33	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/4/18 07:33	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:33	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 07:33	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 07:33	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/4/18 07:33	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 07:33	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/4/18 07:33	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 07:33	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/4/18 07:33	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 07:33	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 07:33	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 07:33	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 07:33	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 07:33	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/4/18 07:33	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/4/18 07:33	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/4/18 07:33	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628003** Date Collected: 6/25/2018 13:25 Matrix: Water

Sample ID: **MRC-SW13A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/4/18 07:33	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/4/18 07:33	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	120		%	62 - 133		SW846 8260B			7/4/18 07:33	PDK	A
4-Bromofluorobenzene (S)	117	1	%	79 - 114		SW846 8260B			7/4/18 07:33	PDK	A
Dibromofluoromethane (S)	95.1		%	78 - 116		SW846 8260B			7/4/18 07:33	PDK	A
Toluene-d8 (S)	95.9		%	76 - 127		SW846 8260B			7/4/18 07:33	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	35.9		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G
Fluoranthene-d10 (S)	85.6		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:17	CGS	G

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628004** Date Collected: 6/25/2018 12:50 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:50	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:50	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:50	TMP	A
1,2,4-Trimethylbenzene	0.61J	J	ug/L	1.0	0.25	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 17:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:50	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:50	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:50	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:50	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 17:50	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:50	TMP	A
Acetone	12.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:50	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:50	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:50	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:50	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 17:50	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:50	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628004** Date Collected: 6/25/2018 12:50 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 17:50	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:50	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:50	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:50	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:50	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:50	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 17:50	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:50	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:50	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:50	TMP	A
Naphthalene	0.53J	J	ug/L	2.0	0.34	SW846 8260B		7/6/18 17:50	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:50	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:50	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:50	TMP	A
Trichloroethene	0.60J	J	ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:50	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:50	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:50	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:50	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:50	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:50	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:50	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:50	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 17:50	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 17:50	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 17:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628004** Date Collected: 6/25/2018 12:50 Matrix: Water

Sample ID: **MRC-SW8A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 17:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:50	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93		%	62 - 133		SW846 8260B			7/6/18 17:50	TMP	A
4-Bromofluorobenzene (S)	91.3		%	79 - 114		SW846 8260B			7/6/18 17:50	TMP	A
Dibromofluoromethane (S)	81.8		%	78 - 116		SW846 8260B			7/6/18 17:50	TMP	A
Toluene-d8 (S)	96.5		%	76 - 127		SW846 8260B			7/6/18 17:50	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.095	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	42.6		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G
Fluoranthene-d10 (S)	78.6		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 12:43	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628005** Date Collected: 6/25/2018 13:05 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:12	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:12	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:12	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:12	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:12	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 18:12	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:12	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 18:12	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 18:12	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:12	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:12	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:12	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 18:12	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:12	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 18:12	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 18:12	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 18:12	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 18:12	TMP	A
Acetone	13.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 18:12	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:12	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:12	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 18:12	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 18:12	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:12	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:12	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:12	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628005** Date Collected: 6/25/2018 13:05 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 18:12	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:12	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:12	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:12	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:12	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:12	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 18:12	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:12	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:12	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:12	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 18:12	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:12	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:12	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:12	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 18:12	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:12	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 18:12	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:12	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 18:12	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:12	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:12	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:12	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:12	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:12	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 18:12	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 18:12	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 18:12	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628005** Date Collected: 6/25/2018 13:05 Matrix: Water

Sample ID: **MRC-SW8B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 18:12	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 18:12	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.7		%	62 - 133		SW846 8260B			7/6/18 18:12	TMP	A
4-Bromofluorobenzene (S)	98.2		%	79 - 114		SW846 8260B			7/6/18 18:12	TMP	A
Dibromofluoromethane (S)	81.9		%	78 - 116		SW846 8260B			7/6/18 18:12	TMP	A
Toluene-d8 (S)	91.1		%	76 - 127		SW846 8260B			7/6/18 18:12	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	43.7		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G
Fluoranthene-d10 (S)	81.7		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:09	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628006** Date Collected: 6/25/2018 11:35 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:34	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:34	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:34	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:34	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:34	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 18:34	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:34	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 18:34	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 18:34	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:34	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:34	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:34	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 18:34	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:34	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 18:34	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 18:34	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 18:34	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 18:34	TMP	A
Acetone	9.2J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 18:34	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:34	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:34	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 18:34	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 18:34	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:34	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:34	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:34	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628006** Date Collected: 6/25/2018 11:35 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 18:34	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:34	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:34	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:34	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:34	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:34	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 18:34	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:34	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:34	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:34	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 18:34	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:34	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:34	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:34	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 18:34	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:34	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 18:34	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:34	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 18:34	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:34	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:34	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:34	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:34	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:34	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 18:34	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 18:34	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 18:34	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628006** Date Collected: 6/25/2018 11:35 Matrix: Water

Sample ID: **MRC-SW7B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 18:34	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 18:34	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.7		%	62 - 133		SW846 8260B			7/6/18 18:34	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114		SW846 8260B			7/6/18 18:34	TMP	A
Dibromofluoromethane (S)	81.9		%	78 - 116		SW846 8260B			7/6/18 18:34	TMP	A
Toluene-d8 (S)	90.5		%	76 - 127		SW846 8260B			7/6/18 18:34	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	43.6		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G
Fluoranthene-d10 (S)	85.7		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 13:36	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628007** Date Collected: 6/25/2018 12:05 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:56	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:56	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:56	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:56	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:56	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 18:56	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:56	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 18:56	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 18:56	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:56	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:56	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:56	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 18:56	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:56	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 18:56	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 18:56	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 18:56	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 18:56	TMP	A
Acetone	12.6		ug/L	10.0	3.1	SW846 8260B		7/6/18 18:56	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:56	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 18:56	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 18:56	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 18:56	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:56	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:56	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:56	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628007** Date Collected: 6/25/2018 12:05 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 18:56	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 18:56	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 18:56	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 18:56	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 18:56	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:56	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 18:56	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 18:56	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:56	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 18:56	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 18:56	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:56	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 18:56	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 18:56	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 18:56	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 18:56	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 18:56	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 18:56	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 18:56	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 18:56	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 18:56	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 18:56	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 18:56	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 18:56	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 18:56	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 18:56	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 18:56	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628007** Date Collected: 6/25/2018 12:05 Matrix: Water

Sample ID: **MRC-SW9B** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 18:56	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 18:56	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	94.3		%	62 - 133		SW846 8260B			7/6/18 18:56	TMP	A
4-Bromofluorobenzene (S)	87.7		%	79 - 114		SW846 8260B			7/6/18 18:56	TMP	A
Dibromofluoromethane (S)	82.2		%	78 - 116		SW846 8260B			7/6/18 18:56	TMP	A
Toluene-d8 (S)	90.9		%	76 - 127		SW846 8260B			7/6/18 18:56	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.096	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	44.1		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G
Fluoranthene-d10 (S)	84.7		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:03	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628008** Date Collected: 6/25/2018 11:20 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:18	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:18	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:18	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:18	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:18	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:18	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:18	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:18	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:18	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:18	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:18	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:18	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:18	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:18	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:18	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:18	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:18	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:18	TMP	A
Acetone	8.1J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 19:18	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:18	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:18	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:18	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 19:18	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:18	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:18	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:18	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628008** Date Collected: 6/25/2018 11:20 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:18	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:18	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:18	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:18	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:18	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:18	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:18	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:18	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:18	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:18	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:18	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:18	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:18	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:18	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:18	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:18	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:18	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:18	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:18	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:18	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:18	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:18	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:18	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:18	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:18	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:18	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:18	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628008** Date Collected: 6/25/2018 11:20 Matrix: Water

Sample ID: **MRC-SW7A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:18	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:18	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	95.4		%	62 - 133		SW846 8260B			7/6/18 19:18	TMP	A
4-Bromofluorobenzene (S)	95.8		%	79 - 114		SW846 8260B			7/6/18 19:18	TMP	A
Dibromofluoromethane (S)	83.9		%	78 - 116		SW846 8260B			7/6/18 19:18	TMP	A
Toluene-d8 (S)	94.9		%	76 - 127		SW846 8260B			7/6/18 19:18	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	46.7		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G
Fluoranthene-d10 (S)	86.4		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:29	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628009** Date Collected: 6/25/2018 11:50 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:39	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:39	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:39	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:39	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:39	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:39	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:39	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:39	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:39	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:39	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:39	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:39	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:39	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:39	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:39	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:39	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:39	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:39	TMP	A
Acetone	7.5J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 19:39	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:39	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:39	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:39	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 19:39	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:39	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:39	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:39	TMP	A

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628009** Date Collected: 6/25/2018 11:50 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:39	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:39	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:39	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:39	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:39	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:39	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:39	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:39	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:39	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:39	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:39	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:39	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:39	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:39	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:39	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:39	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:39	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:39	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:39	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:39	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:39	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:39	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:39	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:39	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:39	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:39	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:39	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628009** Date Collected: 6/25/2018 11:50 Matrix: Water

Sample ID: **MRC-SW9A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:39	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:39	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.5		%	62 - 133		SW846 8260B			7/6/18 19:39	TMP	A
4-Bromofluorobenzene (S)	93.6		%	79 - 114		SW846 8260B			7/6/18 19:39	TMP	A
Dibromofluoromethane (S)	84.3		%	78 - 116		SW846 8260B			7/6/18 19:39	TMP	A
Toluene-d8 (S)	87.5		%	76 - 127		SW846 8260B			7/6/18 19:39	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.099	0.019	8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52.7		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G
Fluoranthene-d10 (S)	91.5		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 14:56	CGS	G

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628010** Date Collected: 6/25/2018 12:20 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:21	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:21	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:21	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:21	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:21	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:21	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:21	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:21	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 17:21	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:21	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:21	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:21	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:21	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:21	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:21	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 17:21	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:21	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:21	TMP	A
Acetone	11.8		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:21	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:21	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:21	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:21	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 17:21	TMP	A
Carbon Disulfide	0.38J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:21	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:21	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:21	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628010** Date Collected: 6/25/2018 12:20 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 17:21	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:21	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:21	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:21	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:21	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:21	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 17:21	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:21	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:21	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:21	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 17:21	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:21	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:21	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:21	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:21	TMP	A
Trichloroethene	1.1		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:21	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:21	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:21	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:21	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:21	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:21	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:21	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:21	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:21	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 17:21	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 17:21	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 17:21	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628010** Date Collected: 6/25/2018 12:20 Matrix: Water

Sample ID: **MRC-SW6A** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 17:21	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:21	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105		%	62 - 133		SW846 8260B			7/6/18 17:21	TMP	A
4-Bromofluorobenzene (S)	109		%	79 - 114		SW846 8260B			7/6/18 17:21	TMP	A
Dibromofluoromethane (S)	99.3		%	78 - 116		SW846 8260B			7/6/18 17:21	TMP	A
Toluene-d8 (S)	100		%	76 - 127		SW846 8260B			7/6/18 17:21	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.094	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	59.2		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C
Fluoranthene-d10 (S)	87.4		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 15:23	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628011** Date Collected: 6/25/2018 13:40 Matrix: Water

Sample ID: **MRC-SW13BDUP** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:43	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:43	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:43	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:43	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:43	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:43	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:43	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:43	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:43	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:43	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:43	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:43	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:43	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 17:43	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:43	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:43	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:43	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:43	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:43	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:43	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:43	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 17:43	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:43	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:43	TMP	A
Acetone	10.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:43	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:43	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:43	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:43	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:43	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:43	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 17:43	TMP	A
Carbon Disulfide	0.33J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:43	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:43	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:43	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:43	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628011** Date Collected: 6/25/2018 13:40 Matrix: Water

Sample ID: **MRC-SW13BDUP** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 17:43	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:43	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:43	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:43	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:43	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:43	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:43	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:43	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 17:43	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:43	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:43	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:43	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:43	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 17:43	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:43	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:43	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:43	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:43	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:43	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:43	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:43	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:43	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:43	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:43	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:43	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:43	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:43	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:43	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:43	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 17:43	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 17:43	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 17:43	TMP	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628011** Date Collected: 6/25/2018 13:40 Matrix: Water

Sample ID: **MRC-SW13BDUP** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 17:43	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:43	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106		%	62 - 133		SW846 8260B			7/6/18 17:43	TMP	A
4-Bromofluorobenzene (S)	110		%	79 - 114		SW846 8260B			7/6/18 17:43	TMP	A
Dibromofluoromethane (S)	101		%	78 - 116		SW846 8260B			7/6/18 17:43	TMP	A
Toluene-d8 (S)	98.6		%	76 - 127		SW846 8260B			7/6/18 17:43	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.093	0.018	8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	52.1		%	29 - 112		8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C
Fluoranthene-d10 (S)	85.6		%	45 - 130		8270 SIM	6/26/18 15:00	MXL	6/27/18 15:49	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628012** Date Collected: 6/25/2018 22:40 Matrix: Water

Sample ID: **TB-062518** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 04:37	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 04:37	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 04:37	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 04:37	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 04:37	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/4/18 04:37	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 04:37	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/4/18 04:37	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/4/18 04:37	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 04:37	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 04:37	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 04:37	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/4/18 04:37	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 04:37	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/4/18 04:37	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/4/18 04:37	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/4/18 04:37	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/4/18 04:37	PDK	A
Acetone	9.0J	J	ug/L	10.0	3.1	SW846 8260B		7/4/18 04:37	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 04:37	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/4/18 04:37	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/4/18 04:37	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/4/18 04:37	PDK	A
Carbon Disulfide	0.31J	J	ug/L	1.0	0.23	SW846 8260B		7/4/18 04:37	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 04:37	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 04:37	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628012** Date Collected: 6/25/2018 22:40 Matrix: Water

Sample ID: **TB-062518** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/4/18 04:37	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/4/18 04:37	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/4/18 04:37	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/4/18 04:37	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/4/18 04:37	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 04:37	PDK	A
Hexachlorobutadiene	1.7J	J,2	ug/L	5.0	1.0	SW846 8260B		7/4/18 04:37	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/4/18 04:37	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 04:37	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/4/18 04:37	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/4/18 04:37	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 04:37	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/4/18 04:37	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/4/18 04:37	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/4/18 04:37	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/4/18 04:37	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/4/18 04:37	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/4/18 04:37	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/4/18 04:37	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/4/18 04:37	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/4/18 04:37	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/4/18 04:37	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/4/18 04:37	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/4/18 04:37	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/4/18 04:37	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/4/18 04:37	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/4/18 04:37	PDK	A

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ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID: **2322628012** Date Collected: 6/25/2018 22:40 Matrix: Water

Sample ID: **TB-062518** Date Received: 6/25/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/4/18 04:37	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/4/18 04:37	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	121		%	62 - 133		SW846 8260B			7/4/18 04:37	PDK	A
4-Bromofluorobenzene (S)	142	1	%	79 - 114		SW846 8260B			7/4/18 04:37	PDK	A
Dibromofluoromethane (S)	93.7		%	78 - 116		SW846 8260B			7/4/18 04:37	PDK	A
Toluene-d8 (S)	94.3		%	76 - 127		SW846 8260B			7/4/18 04:37	PDK	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2322628001	1	MRC-SW13B	SW846 8260B	Trichlorofluoromethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 126 and the control limits were 38 to 123.				
2322628001	2	MRC-SW13B	SW846 8260B	Trichlorofluoromethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 124 and the control limits were 38 to 123.				
2322628001	3	MRC-SW13B	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 129 and the control limits were 63 to 128.				
2322628001	4	MRC-SW13B	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 148 and the control limits were 50 to 130.				
2322628001	5	MRC-SW13B	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 143 and the control limits were 50 to 130.				
2322628001	6	MRC-SW13B	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 126 and the control limits were 71 to 122.				
2322628001	7	MRC-SW13B	SW846 8260B	2,2-Dichloropropane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 140 and the control limits were 64 to 129.				
2322628001	8	MRC-SW13B	SW846 8260B	2,2-Dichloropropane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 138 and the control limits were 64 to 129.				
2322628001	9	MRC-SW13B	SW846 8260B	Ethylbenzene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Ethylbenzene. The % Recovery was reported as 125 and the control limits were 80 to 124.				
2322628001	10	MRC-SW13B	SW846 8260B	1,3-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,3-Dichlorobenzene. The % Recovery was reported as 123 and the control limits were 81 to 118.				
2322628001	11	MRC-SW13B	SW846 8260B	1,4-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,4-Dichlorobenzene. The % Recovery was reported as 118 and the control limits were 81 to 116.				
2322628001	12	MRC-SW13B	SW846 8260B	1,2-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,2-Dichlorobenzene. The % Recovery was reported as 119 and the control limits were 82 to 118.				
2322628001	13	MRC-SW13B	SW846 8260B	Naphthalene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 49.1 and the control limits were 56 to 134.				
2322628001	14	MRC-SW13B	SW846 8260B	Hexachlorobutadiene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 147 and the control limits were 55 to 128.				

ANALYTICAL RESULTS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

2322628001	15	MRC-SW13B	SW846 8260B	Hexachlorobutadiene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.

2322628001	16	MRC-SW13B	SW846 8260B	1,2,3-Trichlorobenzene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2,3-Trichlorobenzene. The % Recovery was reported as 55.9 and the control limits were 61 to 126.

2322628001	17	MRC-SW13B	SW846 8260B	Methyl cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 141 and the control limits were 70 to 130.

2322628001	18	MRC-SW13B	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 145 and the control limits were 70 to 130.

2322628001	19	MRC-SW13B	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 138 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628002	1	MRC-SW6B	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 129 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628003	1	MRC-SW13A	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 117 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628012	1	TB-062518	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 142 and the control limits were 79 to 114. This result was reported at a dilution of 1.

2322628012	2	TB-062518	SW846 8260B	Hexachlorobutadiene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID	Sample ID	Analysis Method	Prep Method
2322628001	MRC-SW13B	8270 SIM	SW846 3510C
2322628001	MRC-SW13B	SW846 8260B	
2322628002	MRC-SW6B	8270 SIM	SW846 3510C
2322628002	MRC-SW6B	SW846 8260B	
2322628003	MRC-SW13A	8270 SIM	SW846 3510C
2322628003	MRC-SW13A	SW846 8260B	
2322628004	MRC-SW8A	8270 SIM	SW846 3510C
2322628004	MRC-SW8A	SW846 8260B	
2322628005	MRC-SW8B	8270 SIM	SW846 3510C
2322628005	MRC-SW8B	SW846 8260B	
2322628006	MRC-SW7B	8270 SIM	SW846 3510C
2322628006	MRC-SW7B	SW846 8260B	
2322628007	MRC-SW9B	8270 SIM	SW846 3510C
2322628007	MRC-SW9B	SW846 8260B	
2322628008	MRC-SW7A	8270 SIM	SW846 3510C
2322628008	MRC-SW7A	SW846 8260B	
2322628009	MRC-SW9A	8270 SIM	SW846 3510C
2322628009	MRC-SW9A	SW846 8260B	
2322628010	MRC-SW6A	8270 SIM	SW846 3510C
2322628010	MRC-SW6A	SW846 8260B	
2322628011	MRC-SW13BDUP	8270 SIM	SW846 3510C
2322628011	MRC-SW13BDUP	SW846 8260B	
2322628012	TB-062518	SW846 8260B	

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: EXTR/52730 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2322628001, 2322628002, 2322628003, 2322628004, 2322628005, 2322628006, 2322628007, 2322628008, 2322628009, 2322628010, 2322628011

METHOD BLANK: 2764660

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	ND	ug/L	0.10
2-Methylnapthalene-d10 (S)	60.7	%	29 - 112
Fluoranthene-d10 (S)	89.1	%	45 - 130

LABORATORY CONTROL SAMPLE: 2764661

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	40.3	ug/L	1	0.40	22 - 75
2-Methylnapthalene-d10 (S)	63	%			29 - 112
Fluoranthene-d10 (S)	86.7	%			45 - 130

MATRIX SPIKE: 2764662 DUPLICATE: 2764663 ORIGINAL: 2322628001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	0	ug/L	.93	.28017	.28111	30.1	30.1	22 - 75	.34	
2-Methylnapthalene-d10 (S)	52.2	%				52.2	49.4	29 - 112		
Fluoranthene-d10 (S)	83.9	%				83.9	81.1	45 - 130		

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: VOMS/47303 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2322628001, 2322628002, 2322628003, 2322628012

METHOD BLANK: 2769175

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Chloroform	0.42J	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	4.4J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	116	%	62 - 133
4-Bromofluorobenzene (S)	132	%	79 - 114
Dibromofluoromethane (S)	92.4	%	78 - 116
Toluene-d8 (S)	94.9	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

LABORATORY CONTROL SAMPLE: 2769176

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	114	ug/L	20	22.9	78 - 121
1,1,1-Trichloroethane	120	ug/L	20	24.1	66 - 130
1,1,2,2-Tetrachloroethane	109	ug/L	20	21.8	74 - 135
1,1,2-Trichloroethane	112	ug/L	20	22.3	82 - 126
1,1-Dichloroethane	114	ug/L	20	22.8	78 - 124
1,1-Dichloroethene	128	ug/L	20	25.6	63 - 128
1,2,3-Trichlorobenzene	75.5	ug/L	20	15.1	61 - 126
1,2,3-Trichloropropane	107	ug/L	20	21.4	75 - 132
1,2,4-Trichlorobenzene	92.2	ug/L	20	18.4	67 - 123
1,2,4-Trimethylbenzene	105	ug/L	20	21.0	76 - 125
1,2-Dibromo-3-chloropropane	97.9	ug/L	20	19.6	59 - 133
1,2-Dibromoethane	114	ug/L	20	22.8	80 - 124
1,2-Dichlorobenzene	108	ug/L	20	21.6	82 - 118
1,2-Dichloroethane	111	ug/L	20	22.2	70 - 133
1,2-Dichloroethene, Total	118	ug/L	40	47.1	78 - 125
1,2-Dichloropropane	113	ug/L	20	22.5	81 - 127
1,3-Dichlorobenzene	117	ug/L	20	23.4	81 - 118
1,3-Dichloropropane	112	ug/L	20	22.3	82 - 126
1,3-Dichloropropene, Total	103	ug/L	40	41.2	80 - 123
1,4-Dichlorobenzene	111	ug/L	20	22.3	81 - 116
2,2-Dichloropropane	133*	ug/L	20	26.7	64 - 129
2-Butanone	101	ug/L	100	101	50 - 152
2-Chloroethylvinyl ether	95	ug/L	20	19.0	1 - 150
2-Hexanone	86.5	ug/L	100	86.5	65 - 154
4-Methyl-2-Pentanone(MIBK)	91.3	ug/L	100	91.3	71 - 146
Acetone	93.7	ug/L	100	93.7	40 - 151
Benzene	114	ug/L	20	22.7	80 - 124
Bromobenzene	114	ug/L	20	22.7	81 - 119
Bromochloromethane	113	ug/L	20	22.7	73 - 117
Bromodichloromethane	101	ug/L	20	20.2	79 - 126
Bromoform	97.7	ug/L	20	19.5	70 - 123
Bromomethane	89.1	ug/L	20	17.8	45 - 148
Carbon Disulfide	119	ug/L	20	23.8	57 - 131
Carbon Tetrachloride	124	ug/L	20	24.8	62 - 132
Chlorobenzene	109	ug/L	20	21.8	85 - 117
Chlorodibromomethane	101	ug/L	20	20.2	77 - 122
Chloroethane	103	ug/L	20	20.5	51 - 142
Chloroform	113	ug/L	20	22.6	78 - 122
Chloromethane	93.2	ug/L	20	18.6	38 - 156
Cyclohexane	112	ug/L	20	22.5	66 - 130
Dibromomethane	108	ug/L	20	21.5	81 - 125

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Dichlorodifluoromethane	90.9	ug/L	20	18.2	17 - 166
Diisopropyl ether	93.7	ug/L	20	18.7	74 - 131
Ethyl tert-butyl ether	85.3	ug/L	20	17.1	75 - 123
Ethylbenzene	121	ug/L	20	24.1	80 - 124
Freon 113	143*	ug/L	20	28.6	50 - 130
Hexachlorobutadiene	146*	ug/L	20	29.1	55 - 128
Isopropylbenzene	107	ug/L	20	21.5	73 - 129
Methyl acetate	101	ug/L	20	20.2	70 - 130
Methyl cyclohexane	139*	ug/L	20	27.8	70 - 130
Methyl t-Butyl Ether	89.7	ug/L	20	17.9	69 - 115
Methylene Chloride	112	ug/L	20	22.4	76 - 121
Naphthalene	62.1	ug/L	20	12.4	56 - 134
Styrene	99	ug/L	20	19.8	79 - 123
Tetrachloroethene	122	ug/L	20	24.4	72 - 124
Toluene	104	ug/L	20	20.8	80 - 125
Total Xylenes	110	ug/L	60	65.7	79 - 125
Trichloroethene	112	ug/L	20	22.5	77 - 124
Trichlorofluoromethane	110	ug/L	20	21.9	38 - 123
Vinyl Acetate	88.1	ug/L	20	17.6	58 - 136
Vinyl Chloride	100	ug/L	20	20.0	27 - 138
cis-1,2-Dichloroethene	116	ug/L	20	23.1	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.3	81 - 121
mp-Xylene	111	ug/L	40	44.5	79 - 125
n-Butylbenzene	107	ug/L	20	21.4	71 - 130
n-Propylbenzene	114	ug/L	20	22.8	74 - 122
o-Chlorotoluene	106	ug/L	20	21.3	78 - 126
o-Xylene	106	ug/L	20	21.2	79 - 124
p-Chlorotoluene	104	ug/L	20	20.7	78 - 125
p-Isopropyltoluene	97.7	ug/L	20	19.5	72 - 123
sec-Butylbenzene	113	ug/L	20	22.5	72 - 127
tert-Amyl methyl ether	83.7	ug/L	20	16.7	75 - 121
tert-Butyl Alcohol	72.4	ug/L	100	72.4	17 - 168
tert-Butylbenzene	102	ug/L	20	20.4	72 - 124
trans-1,2-Dichloroethene	120	ug/L	20	23.9	71 - 122
trans-1,3-Dichloropropene	105	ug/L	20	21.0	78 - 126
1,2-Dichloroethane-d4 (S)	113	%			62 - 133
4-Bromofluorobenzene (S)	125*	%			79 - 114
Dibromofluoromethane (S)	92.9	%			78 - 116
Toluene-d8 (S)	92.8	%			76 - 127

MATRIX SPIKE: 2769376 DUPLICATE: 2769377 ORIGINAL: 2322628001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

1,1,1,2-Tetrachloroethane	0	ug/L	20	23.4193	22.8556	117	114	78 - 121	2.44	16
1,1,1-Trichloroethane	0	ug/L	20	25.3237	24.6582	127	123	66 - 130	2.66	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	18.8544	20.4141	94.3	102	74 - 135	7.94	16
1,1,2-Trichloroethane	0	ug/L	20	22.3303	22.1962	112	111	82 - 126	.6	15
1,1-Dichloroethane	0	ug/L	20	23.8504	23.1228	119	116	78 - 124	3.1	15
1,1-Dichloroethene	0	ug/L	20	25.7611	25.2133	129*	126	63 - 128	2.15	21
1,2,3-Trichlorobenzene	0	ug/L	20	11.1724	15.2646	55.9*	76.3	61 - 126	31	36
1,2,3-Trichloropropane	0	ug/L	20	18.6515	19.9406	93.3	99.7	75 - 132	6.68	19
1,2,4-Trichlorobenzene	0	ug/L	20	16.5694	19.8438	82.8	99.2	67 - 123	18	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.7829	21.3509	98.9	107	76 - 125	7.62	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	17.7856	18.4816	88.9	92.4	59 - 133	3.84	26
1,2-Dibromoethane	0	ug/L	20	22.3329	22.3713	112	112	80 - 124	.17	19
1,2-Dichlorobenzene	0	ug/L	20	22.6274	23.7021	113	119*	82 - 118	4.64	15
1,2-Dichloroethane	0	ug/L	20	22.4484	22.0244	112	110	70 - 133	1.91	19
1,2-Dichloroethene, Total	0	ug/L	40	49.2268	47.6442	123	119	78 - 125	3.27	40
1,2-Dichloropropane	0	ug/L	20	23.4706	23.2638	117	116	81 - 127	.89	15
1,3-Dichlorobenzene	0	ug/L	20	22.9984	24.5728	115	123*	81 - 118	6.62	16
1,3-Dichloropropane	0	ug/L	20	22.141	21.9311	111	110	82 - 126	.95	15
1,3-Dichloropropene, Total	0	ug/L	40	40.6414	40.0504	102	100	80 - 123	1.46	16
1,4-Dichlorobenzene	0	ug/L	20	22.5265	23.6767	113	118*	81 - 116	4.98	15
2,2-Dichloropropane	0	ug/L	20	28.044	27.51	140*	138*	64 - 129	1.92	18
2-Butanone	0	ug/L	100	93.7668	95.8614	93.8	95.9	50 - 152	2.21	16
2-Chloroethylvinyl ether	0	ug/L	20	2.71239	3.27082	13.6	16.4	1 - 150	18.7	40
2-Hexanone	0	ug/L	100	80.3619	87.3059	80.4	87.3	65 - 154	8.28	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	86.7342	89.7809	86.7	89.8	71 - 146	3.45	16
Acetone	9.99308	ug/L	100	97.1134	102.425	87.1	92.4	40 - 151	5.32	40
Benzene	0	ug/L	20	23.8862	23.4686	119	117	80 - 124	1.76	26
Bromobenzene	0	ug/L	20	22.5442	22.6806	113	113	81 - 119	.6	17
Bromochloromethane	0	ug/L	20	23.2242	22.6792	116	113	73 - 117	2.37	19
Bromodichloromethane	0	ug/L	20	20.7083	20.0458	104	100	79 - 126	3.25	16
Bromoform	0	ug/L	20	14.907	14.5071	74.5	72.5	70 - 123	2.72	16
Bromomethane	0	ug/L	20	18.1374	17.7862	90.7	88.9	45 - 148	1.96	26
Carbon Disulfide	0	ug/L	20	23.467	21.3623	117	107	57 - 131	9.39	28
Carbon Tetrachloride	0	ug/L	20	25.8688	25.0645	129	125	62 - 132	3.16	17
Chlorobenzene	0	ug/L	20	22.4409	22.0288	112	110	85 - 117	1.85	15
Chlorodibromomethane	0	ug/L	20	18.8262	18.4291	94.1	92.1	77 - 122	2.13	15
Chloroethane	0	ug/L	20	24.8644	24.5002	124	123	51 - 142	1.48	24
Chloroform	0	ug/L	20	23.0792	22.6524	115	113	78 - 122	1.87	16
Chloromethane	0	ug/L	20	21.3301	21.3503	107	107	38 - 156	.09	27
Cyclohexane	0	ug/L	20	23.2735	23.7003	116	119	66 - 130	1.82	20
Dibromomethane	0	ug/L	20	21.725	21.2588	109	106	81 - 125	2.17	16
Dichlorodifluoromethane	0	ug/L	20	20.7662	20.6378	104	103	17 - 166	.62	24
Diisopropyl ether	0	ug/L	20	18.8212	18.9012	94.1	94.5	74 - 131	.42	15
Ethyl tert-butyl ether	0	ug/L	20	16.9993	17.1749	85	85.9	75 - 123	1.03	16
Ethylbenzene	0	ug/L	20	24.9051	24.5282	125*	123	80 - 124	1.52	19
Freon 113	0	ug/L	20	29.5785	28.5977	148*	143*	50 - 130	3.37	26

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Hexachlorobutadiene	0	ug/L	20	29.439	29.2754	147*	146*	55 - 128	.56	35
Isopropylbenzene	0	ug/L	20	20.858	22.0471	104	110	73 - 129	5.54	18
Methyl acetate	0	ug/L	20	15.6923	15.8491	78.5	79.2	70 - 130	.99	18
Methyl cyclohexane	0	ug/L	20	28.1323	29.0403	141*	145*	70 - 130	3.18	18
Methyl t-Butyl Ether	0	ug/L	20	17.1542	17.434	85.8	87.2	69 - 115	1.62	20
Methylene Chloride	0	ug/L	20	22.8747	22.0309	114	110	76 - 121	3.76	17
Naphthalene	0	ug/L	20	9.81933	12.458	49.1*	62.3	56 - 134	23.7	40
Styrene	0	ug/L	20	18.0338	18.2146	90.2	91.1	79 - 123	1	16
Tetrachloroethene	0	ug/L	20	24.4533	24.1303	122	121	72 - 124	1.33	38
Toluene	0	ug/L	20	21.6292	21.1573	108	106	80 - 125	2.21	20
Total Xylenes	0	ug/L	60	65.5152	65.8049	109	110	79 - 125	.44	35
Trichloroethene	0	ug/L	20	24.4501	23.5993	122	118	77 - 124	3.54	18
Trichlorofluoromethane	0	ug/L	20	25.2842	24.864	126*	124*	38 - 123	1.68	23
Vinyl Acetate	0	ug/L	20	13.1078	13.192	65.5	66	58 - 136	.64	17
Vinyl Chloride	0	ug/L	20	23.5496	23.2472	118	116	27 - 138	1.29	40
cis-1,2-Dichloroethene	0	ug/L	20	24.1047	23.4932	121	117	78 - 125	2.57	21
cis-1,3-Dichloropropene	0	ug/L	20	20.181	19.8693	101	99.3	81 - 121	1.56	16
mp-Xylene	0	ug/L	40	45.5331	45.0855	114	113	79 - 125	.99	21
n-Butylbenzene	0	ug/L	20	23.7773	24.8605	119	124	71 - 130	4.45	20
n-Propylbenzene	0	ug/L	20	22.8117	23.9783	114	120	74 - 122	4.99	20
o-Chlorotoluene	0	ug/L	20	19.0529	20.3208	95.3	102	78 - 126	6.44	17
o-Xylene	0	ug/L	20	19.9821	20.7195	99.9	104	79 - 124	3.62	19
p-Chlorotoluene	0	ug/L	20	19.3189	20.4705	96.6	102	78 - 125	5.79	16
p-Isopropyltoluene	0	ug/L	20	19.074	20.8521	95.4	104	72 - 123	8.91	17
sec-Butylbenzene	0	ug/L	20	22.0026	23.9559	110	120	72 - 127	8.5	17
tert-Amyl methyl ether	0	ug/L	20	16.3201	16.885	81.6	84.4	75 - 121	3.4	40
tert-Butyl Alcohol	0	ug/L	100	77.9019	86.8656	77.9	86.9	17 - 168	10.9	40
tert-Butylbenzene	0	ug/L	20	19.6644	22.0358	98.3	110	72 - 124	11.4	17
trans-1,2-Dichloroethene	0	ug/L	20	25.1221	24.151	126*	121	71 - 122	3.94	22
trans-1,3-Dichloropropene	0	ug/L	20	20.4604	20.1811	102	101	78 - 126	1.37	18
1,2-Dichloroethane-d4 (S)	115	%				115	107	62 - 133		
4-Bromofluorobenzene (S)	120	%				120*	123*	79 - 114		
Dibromofluoromethane (S)	94.9	%				94.9	93.9	78 - 116		
Toluene-d8 (S)	93.5	%				93.5	92.4	76 - 127		

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: VOMS/47319 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2322628010, 2322628011

METHOD BLANK: 2770157

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	0.32J	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	106	%	62 - 133
4-Bromofluorobenzene (S)	109	%	79 - 114
Dibromofluoromethane (S)	101	%	78 - 116
Toluene-d8 (S)	103	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

LABORATORY CONTROL SAMPLE: 2770158

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	104	ug/L	20	20.9	78 - 121
1,1,1-Trichloroethane	98.4	ug/L	20	19.7	66 - 130
1,1,2,2-Tetrachloroethane	83.5	ug/L	20	16.7	74 - 135
1,1,2-Trichloroethane	91	ug/L	20	18.2	82 - 126
1,1-Dichloroethane	90.7	ug/L	20	18.1	78 - 124
1,1-Dichloroethene	102	ug/L	20	20.4	63 - 128
1,2,3-Trichlorobenzene	102	ug/L	20	20.3	61 - 126
1,2,3-Trichloropropane	88.4	ug/L	20	17.7	75 - 132
1,2,4-Trichlorobenzene	104	ug/L	20	20.8	67 - 123
1,2,4-Trimethylbenzene	87.7	ug/L	20	17.5	76 - 125
1,2-Dibromo-3-chloropropane	81.7	ug/L	20	16.3	59 - 133
1,2-Dibromoethane	105	ug/L	20	20.9	80 - 124
1,2-Dichlorobenzene	97.9	ug/L	20	19.6	82 - 118
1,2-Dichloroethane	92.2	ug/L	20	18.4	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.5	78 - 125
1,2-Dichloropropane	94.5	ug/L	20	18.9	81 - 127
1,3-Dichlorobenzene	98.3	ug/L	20	19.7	81 - 118
1,3-Dichloropropane	96.6	ug/L	20	19.3	82 - 126
1,3-Dichloropropene, Total	95.6	ug/L	40	38.2	80 - 123
1,4-Dichlorobenzene	91.3	ug/L	20	18.3	81 - 116
2,2-Dichloropropane	90.5	ug/L	20	18.1	64 - 129
2-Butanone	89.2	ug/L	100	89.2	50 - 152
2-Chloroethylvinyl ether	99.5	ug/L	20	19.9	1 - 150
2-Hexanone	103	ug/L	100	103	65 - 154
4-Methyl-2-Pentanone(MIBK)	99.5	ug/L	100	99.5	71 - 146
Acetone	114	ug/L	100	114	40 - 151
Benzene	93.2	ug/L	20	18.6	80 - 124
Bromobenzene	102	ug/L	20	20.4	81 - 119
Bromochloromethane	100	ug/L	20	20.0	73 - 117
Bromodichloromethane	92.1	ug/L	20	18.4	79 - 126
Bromoform	91.9	ug/L	20	18.4	70 - 123
Bromomethane	45.5	ug/L	20	9.1	45 - 148
Carbon Disulfide	114	ug/L	20	22.9	57 - 131
Carbon Tetrachloride	103	ug/L	20	20.6	62 - 132
Chlorobenzene	98.7	ug/L	20	19.7	85 - 117
Chlorodibromomethane	103	ug/L	20	20.6	77 - 122
Chloroethane	71.9	ug/L	20	14.4	51 - 142
Chloroform	98.7	ug/L	20	19.7	78 - 122
Chloromethane	104	ug/L	20	20.8	38 - 156
Cyclohexane	117	ug/L	20	23.5	66 - 130
Dibromomethane	91.5	ug/L	20	18.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Dichlorodifluoromethane	92.8	ug/L	20	18.6	17 - 166
Diisopropyl ether	104	ug/L	20	20.8	74 - 131
Ethyl tert-butyl ether	94.7	ug/L	20	18.9	75 - 123
Ethylbenzene	103	ug/L	20	20.5	80 - 124
Freon 113	128	ug/L	20	25.5	50 - 130
Hexachlorobutadiene	103	ug/L	20	20.6	55 - 128
Isopropylbenzene	83.8	ug/L	20	16.8	73 - 129
Methyl acetate	101	ug/L	20	20.2	70 - 130
Methyl cyclohexane	99.8	ug/L	20	20.0	70 - 130
Methyl t-Butyl Ether	96.1	ug/L	20	19.2	69 - 115
Methylene Chloride	104	ug/L	20	20.7	76 - 121
Naphthalene	84.6	ug/L	20	16.9	56 - 134
Styrene	101	ug/L	20	20.1	79 - 123
Tetrachloroethene	113	ug/L	20	22.5	72 - 124
Toluene	104	ug/L	20	20.8	80 - 125
Total Xylenes	110	ug/L	60	65.9	79 - 125
Trichloroethene	93.1	ug/L	20	18.6	77 - 124
Trichlorofluoromethane	78.6	ug/L	20	15.7	38 - 123
Vinyl Acetate	92.7	ug/L	20	18.5	58 - 136
Vinyl Chloride	84.4	ug/L	20	16.9	27 - 138
cis-1,2-Dichloroethene	98.6	ug/L	20	19.7	78 - 125
cis-1,3-Dichloropropene	94.7	ug/L	20	18.9	81 - 121
mp-Xylene	109	ug/L	40	43.8	79 - 125
n-Butylbenzene	84.6	ug/L	20	16.9	71 - 130
n-Propylbenzene	86.4	ug/L	20	17.3	74 - 122
o-Chlorotoluene	99.4	ug/L	20	19.9	78 - 126
o-Xylene	111	ug/L	20	22.1	79 - 124
p-Chlorotoluene	98	ug/L	20	19.6	78 - 125
p-Isopropyltoluene	96.4	ug/L	20	19.3	72 - 123
sec-Butylbenzene	98	ug/L	20	19.6	72 - 127
tert-Amyl methyl ether	94.4	ug/L	20	18.9	75 - 121
tert-Butyl Alcohol	52.1	ug/L	100	52.1	17 - 168
tert-Butylbenzene	91.4	ug/L	20	18.3	72 - 124
trans-1,2-Dichloroethene	104	ug/L	20	20.7	71 - 122
trans-1,3-Dichloropropene	96.4	ug/L	20	19.3	78 - 126
1,2-Dichloroethane-d4 (S)	105	%			62 - 133
4-Bromofluorobenzene (S)	110	%			79 - 114
Dibromofluoromethane (S)	95.2	%			78 - 116
Toluene-d8 (S)	100	%			76 - 127

MATRIX SPIKE: 2770788 DUPLICATE: 2770789 ORIGINAL: 2323172001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

1,2,4-Trimethylbenzene	0	ug/L	20	18.4964	19.1271	92.5	95.6	76 - 125	3.35	24
Benzene	0	ug/L	20	21.3863	20.5197	107	103	80 - 124	4.14	26
Ethylbenzene	0	ug/L	20	22.0283	21.9067	110	110	80 - 124	.55	19
Isopropylbenzene	0	ug/L	20	18.3439	18.5411	91.7	92.7	73 - 129	1.07	18
Naphthalene	0	ug/L	20	17.3356	18.1158	86.7	90.6	56 - 134	4.4	40
Toluene	0	ug/L	20	22.3415	22.5216	112	113	80 - 125	.8	20
Total Xylenes	0	ug/L	60	70.2052	70.303	117	117	79 - 125	.14	35
n-Butylbenzene	0	ug/L	20	16.5906	18.2808	83	91.4	71 - 130	9.69	20
n-Propylbenzene	0	ug/L	20	18.334	18.8486	91.7	94.2	74 - 122	2.77	20
p-Isopropyltoluene	0	ug/L	20	20.2052	21.217	101	106	72 - 123	4.89	17
sec-Butylbenzene	0	ug/L	20	20.3668	21.6637	102	108	72 - 127	6.17	17
1,2-Dichloroethane-d4 (S)	100	%				100	97.4	62 - 133		
4-Bromofluorobenzene (S)	111	%				111	109	79 - 114		
Dibromofluoromethane (S)	98.3	%				98.3	96	78 - 116		
Toluene-d8 (S)	98.2	%				98.2	99.6	76 - 127		

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QC Batch: VOMS/47326 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2322628004, 2322628005, 2322628006, 2322628007, 2322628008, 2322628009

METHOD BLANK: 2770858

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	2.3J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.6	%	62 - 133
4-Bromofluorobenzene (S)	111	%	79 - 114
Dibromofluoromethane (S)	83.2	%	78 - 116
Toluene-d8 (S)	94.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

LABORATORY CONTROL SAMPLE: 2770859

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	97.5	ug/L	20	19.5	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.8	66 - 130
1,1,2,2-Tetrachloroethane	97.6	ug/L	20	19.5	74 - 135
1,1,2-Trichloroethane	95.7	ug/L	20	19.1	82 - 126
1,1-Dichloroethane	99.3	ug/L	20	19.9	78 - 124
1,1-Dichloroethene	108	ug/L	20	21.6	63 - 128
1,2,3-Trichlorobenzene	89.8	ug/L	20	18.0	61 - 126
1,2,3-Trichloropropane	103	ug/L	20	20.6	75 - 132
1,2,4-Trichlorobenzene	85	ug/L	20	17.0	67 - 123
1,2,4-Trimethylbenzene	92.1	ug/L	20	18.4	76 - 125
1,2-Dibromo-3-chloropropane	81	ug/L	20	16.2	59 - 133
1,2-Dibromoethane	98.4	ug/L	20	19.7	80 - 124
1,2-Dichlorobenzene	95.5	ug/L	20	19.1	82 - 118
1,2-Dichloroethane	93.3	ug/L	20	18.7	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.4	78 - 125
1,2-Dichloropropane	98.2	ug/L	20	19.6	81 - 127
1,3-Dichlorobenzene	94.2	ug/L	20	18.8	81 - 118
1,3-Dichloropropane	98	ug/L	20	19.6	82 - 126
1,3-Dichloropropene, Total	91	ug/L	40	36.4	80 - 123
1,4-Dichlorobenzene	89.9	ug/L	20	18.0	81 - 116
2,2-Dichloropropane	87.1	ug/L	20	17.4	64 - 129
2-Butanone	93.1	ug/L	100	93.1	50 - 152
2-Chloroethylvinyl ether	76.2	ug/L	20	15.2	1 - 150
2-Hexanone	87.8	ug/L	100	87.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	86	ug/L	100	86.0	71 - 146
Acetone	96.1	ug/L	100	96.1	40 - 151
Benzene	99.6	ug/L	20	19.9	80 - 124
Bromobenzene	109	ug/L	20	21.7	81 - 119
Bromochloromethane	94.2	ug/L	20	18.8	73 - 117
Bromodichloromethane	91.5	ug/L	20	18.3	79 - 126
Bromoform	98.7	ug/L	20	19.7	70 - 123
Bromomethane	87.8	ug/L	20	17.6	45 - 148
Carbon Disulfide	94.3	ug/L	20	18.9	57 - 131
Carbon Tetrachloride	100	ug/L	20	20.0	62 - 132
Chlorobenzene	92	ug/L	20	18.4	85 - 117
Chlorodibromomethane	93.1	ug/L	20	18.6	77 - 122
Chloroethane	93.4	ug/L	20	18.7	51 - 142
Chloroform	100	ug/L	20	20.1	78 - 122
Chloromethane	78.9	ug/L	20	15.8	38 - 156
Cyclohexane	108	ug/L	20	21.6	66 - 130
Dibromomethane	90.2	ug/L	20	18.0	81 - 125

QUALITY CONTROL DATA

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Dichlorodifluoromethane	74.4	ug/L	20	14.9	17 - 166
Diisopropyl ether	87.7	ug/L	20	17.5	74 - 131
Ethyl tert-butyl ether	80.8	ug/L	20	16.2	75 - 123
Ethylbenzene	100	ug/L	20	20.0	80 - 124
Freon 113	117	ug/L	20	23.4	50 - 130
Hexachlorobutadiene	102	ug/L	20	20.5	55 - 128
Isopropylbenzene	107	ug/L	20	21.5	73 - 129
Methyl acetate	105	ug/L	20	21.0	70 - 130
Methyl cyclohexane	101	ug/L	20	20.2	70 - 130
Methyl t-Butyl Ether	83.3	ug/L	20	16.7	69 - 115
Methylene Chloride	101	ug/L	20	20.2	76 - 121
Naphthalene	84.5	ug/L	20	16.9	56 - 134
Styrene	97	ug/L	20	19.4	79 - 123
Tetrachloroethene	103	ug/L	20	20.5	72 - 124
Toluene	107	ug/L	20	21.4	80 - 125
Total Xylenes	99.9	ug/L	60	60.0	79 - 125
Trichloroethene	97.4	ug/L	20	19.5	77 - 124
Trichlorofluoromethane	89.6	ug/L	20	17.9	38 - 123
Vinyl Acetate	86.4	ug/L	20	17.3	58 - 136
Vinyl Chloride	80.5	ug/L	20	16.1	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.1	78 - 125
cis-1,3-Dichloropropene	89.5	ug/L	20	17.9	81 - 121
mp-Xylene	107	ug/L	40	42.9	79 - 125
n-Butylbenzene	94.7	ug/L	20	18.9	71 - 130
n-Propylbenzene	99	ug/L	20	19.8	74 - 122
o-Chlorotoluene	90.9	ug/L	20	18.2	78 - 126
o-Xylene	85.5	ug/L	20	17.1	79 - 124
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
p-Isopropyltoluene	85.9	ug/L	20	17.2	72 - 123
sec-Butylbenzene	91.1	ug/L	20	18.2	72 - 127
tert-Amyl methyl ether	79.6	ug/L	20	15.9	75 - 121
tert-Butyl Alcohol	76.8	ug/L	100	76.8	17 - 168
tert-Butylbenzene	96.2	ug/L	20	19.2	72 - 124
trans-1,2-Dichloroethene	101	ug/L	20	20.3	71 - 122
trans-1,3-Dichloropropene	92.5	ug/L	20	18.5	78 - 126
1,2-Dichloroethane-d4 (S)	88.8	%			62 - 133
4-Bromofluorobenzene (S)	121*	%			79 - 114
Dibromofluoromethane (S)	83.9	%			78 - 116
Toluene-d8 (S)	92.5	%			76 - 127

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2322628 ALG001|LMC MRC 06/25/18

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2769176	1	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 139 and the control limits were 70 to 130.				
2769176	2	Lab Control Standard	SW846 8260B	Hexachlorobutadiene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.				
2769176	3	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 143 and the control limits were 50 to 130.				
2769176	4	Lab Control Standard	SW846 8260B	2,2-Dichloropropane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 133 and the control limits were 64 to 129.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2322628 ALG001|LMC MRC 06/25/18

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2322628001	MRC-SW13B	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628002	MRC-SW6B	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628003	MRC-SW13A	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628004	MRC-SW8A	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628005	MRC-SW8B	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628006	MRC-SW7B	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628007	MRC-SW9B	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628008	MRC-SW7A	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628009	MRC-SW9A	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628010	MRC-SW6A	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628011	MRC-SW13BDUP	SW846 3510C	EXTR/52730	8270 SIM	SVMS/30919
2322628001	MRC-SW13B			SW846 8260B	VOMS/47303
2322628002	MRC-SW6B			SW846 8260B	VOMS/47303
2322628003	MRC-SW13A			SW846 8260B	VOMS/47303
2322628012	TB-062518			SW846 8260B	VOMS/47303
2322628010	MRC-SW6A			SW846 8260B	VOMS/47319
2322628011	MRC-SW13BDUP			SW846 8260B	VOMS/47319
2322628004	MRC-SW8A			SW846 8260B	VOMS/47326
2322628005	MRC-SW8B			SW846 8260B	VOMS/47326
2322628006	MRC-SW7B			SW846 8260B	VOMS/47326
2322628007	MRC-SW9B			SW846 8260B	VOMS/47326
2322628008	MRC-SW7A			SW846 8260B	VOMS/47326
2322628009	MRC-SW9A			SW846 8260B	VOMS/47326

ALS Environmental

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F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2

Courier:

Tracking #:

2322628

Co. Name: AECOM

Contact (Report to): Ravi Damera Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

						***Container Type	G	AG									
						***Container Size	40mL	1L									
						*** Preservative	HCl	—									
						ANALYSES/METHOD REQUESTED											
							VOCs (8260C)	1,4-Dioxane (8270D SIM)									
Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Enter Number of Containers Per Analysis											
1 MRC-SW13B	SW= Surface H2O,	6-25-18	1335	G	SW	6	6										
2	extra V for ms/msd																
3 MRC-SW6B		6-25-18	1235	G	SW	2	2										
4 MRC-SW13A		6-25-18	1325	G	SW	2	2										
5 MRC-SW8A		6-25-18	1250	G	SW	2	2										
6 MRC-SW8B		6-25-18	1305	G	SW	2	2										
7 MRC-SW7B		6-25-18	1135	G	SW	2	2										
8 MRC-SW9B		6-25-18	1205	G	SW	2	2										

(completed by Sample Receiving)
Performed by: [signature]
Cooler Temp: 2°C
Therm. ID: 402
No. of Coolers:
Notes:

Circle appropriate Y or N.	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?
1	Y	Y	Y	Y
2	Y	Y	Y	Y
3	Y	Y	Y	Y
4	Y	Y	Y	Y
5	Y	Y	Y	Y
6	Y	Y	Y	Y
7	Y	Y	Y	Y
8	Y	Y	Y	Y

Circle appropriate Y or N.	Custody seals Present?	(If present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
1	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y
3	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	Y
5	Y	Y	Y	Y	Y
6	Y	Y	Y	Y	Y
7	Y	Y	Y	Y	Y
8	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Victoria Kirkpatrick

Project Comments: Also email holly.brown@aecom.com & naum.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AECOM	6-25-18	1650	2 [signature] AV	6/25	1650
3 [signature]	6/25	1725	4 [signature]	6/25	1730
5 [signature]	6/25	2240	6 [signature] ALS	6/25/18	2240
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

SDWA Forms? yes / yes / yes / yes

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ] Other

EDDs Required? [X] If yes, format type: EQuIS & CSV

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 6oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 2

Courier:

Tracking #:

2628 COC#

Co. Name: AECOM

Contact (Report to): Ravi Damera Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): PO# 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? [ ] -Y No.:

***Container Type																	
***Container Size																	
*** Preservative																	

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOCs (8260C)	14-Dioxane (8270D SIM)								
1	MRC-SW7A		6-25-18	1120	G	SW	2	2								
2	MRC-SW9A		6-25-18	1150	G	SW	2	2								
3	MRC-SW6A		6-25-18	1220	G	SW	2	2								
4	MRC-SW13B Dup	field duplicate	6-25-18	1340	G	SW	2	2								
5	TB-062518		~~6-25-18~~ NA	NA	G	SW	2									
6																
7																
8																

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: [signature]

Cooler Temp: 2°C

Therm. ID: 402

No. of Coolers:

Notes:

	Sample Description/Location	Custody seals Present?	(If present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
1	MRC-SW7A	Y	N	Y	N	Y
2	MRC-SW9A	Y	N	Y	N	Y
3	MRC-SW6A	Y	N	Y	N	Y
4	MRC-SW13B Dup	Y	N	Y	N	Y
5	TB-062518	Y	N	Y	N	Y
6						
7						
8						

Correct containers? Y N

Correct sample volume? Y N

Correct preservation? Y N

Headspace/Volatiles? Y N

Circle appropriate Y or N.

SAMPLED BY (Please Print): Victoria Kirkpatrick

Project Comments: Also email holly.brown@aecom.com & naoum.tavantzis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] AECOM	6-25-18	1650	2	[signature]	6/25	1650
3	[signature] ALS	6/25	1750	4	[signature]	6/28	1900
5	[signature]	6/28	2240	6	[signature] ALS	6/25/18	2240
7				8			
9				10			

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] Other

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQuIS & CSV Other

Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 19, 2018

Mr. Naoum Tavantzis
AECOM
7 St.Paul Street
16th Floor
Baltimore, MD 21202

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2323127**
Purchase Order:	**95840ACM**	Workorder ID:	**ALG002|LMC MRC**

Dear Mr. Tavantzis:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, June 26, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Holly Brown , Mr. Ravi Damera , Ms. Victoria Kirkpatrick

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2323127001	MRC-SW16A	Water	6/25/2018 14:30	6/26/2018 21:30	Ms. Victoria
2323127002	MRC-SW15A	Water	6/25/2018 14:45	6/26/2018 21:30	Ms. Victoria
2323127003	MRC-SW5A2	Water	6/25/2018 15:00	6/26/2018 21:30	Ms. Victoria
2323127004	MRC-SW5A1	Water	6/25/2018 15:05	6/26/2018 21:30	Ms. Victoria
2323127005	MRC-SW5B	Water	6/25/2018 15:15	6/26/2018 21:30	Ms. Victoria
2323127006	MRC-SW2A	Water	6/25/2018 15:30	6/26/2018 21:30	Ms. Victoria
2323127007	MRC-SW1A	Water	6/25/2018 15:45	6/26/2018 21:30	Ms. Victoria
2323127008	TB-0626-18	Water	6/26/2018 21:30	6/26/2018 21:30	Ms. Victoria
2323127009	MRC-MW11A	Water	6/25/2018 14:00	6/26/2018 21:30	Ms. Victoria
2323127010	MRC-MW16A	Water	6/25/2018 15:30	6/26/2018 21:30	Ms. Victoria
2323127011	MRC-MW16A-DUP	Water	6/25/2018 15:50	6/26/2018 21:30	Ms. Victoria
2323127012	MRC-MW17A	Water	6/26/2018 10:40	6/26/2018 21:30	Ms. Victoria
2323127013	MRC-MW17A DUP	Water	6/26/2018 10:45	6/26/2018 21:30	Ms. Victoria
2323127014	EW-2	Water	6/26/2018 11:05	6/26/2018 21:30	Ms. Victoria
2323127015	EW-1	Water	6/26/2018 13:20	6/26/2018 21:30	Ms. Victoria

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2323127 ALG002|LMC MRC

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2323127 ALG002|LMC MRC

Workorder Comments

Please see attached subcontracting from ALS Rochester. VNB 7/19/18

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127001** Date Collected: 6/25/2018 14:30 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 16:55	TMP	C
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 16:55	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 16:55	TMP	C
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 16:55	TMP	C
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 16:55	TMP	C
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 16:55	TMP	C
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 16:55	TMP	C
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 16:55	TMP	C
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichloroethene, Total	0.51J	J,1	ug/L	2.0	0.45	SW846 8260B		7/6/18 16:55	TMP	C
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 16:55	TMP	C
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 16:55	TMP	C
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 16:55	TMP	C
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 16:55	TMP	C
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 16:55	TMP	C
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 16:55	TMP	C
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 16:55	TMP	C
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 16:55	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 16:55	TMP	C
Acetone	17.8		ug/L	10.0	3.1	SW846 8260B		7/6/18 16:55	TMP	C
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 16:55	TMP	C
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 16:55	TMP	C
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 16:55	TMP	C
Bromomethane	0.45J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 16:55	TMP	C
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 16:55	TMP	C
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 16:55	TMP	C
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 16:55	TMP	C

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127001** Date Collected: 6/25/2018 14:30 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 16:55	TMP	C
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 16:55	TMP	C
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 16:55	TMP	C
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 16:55	TMP	C
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 16:55	TMP	C
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 16:55	TMP	C
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 16:55	TMP	C
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 16:55	TMP	C
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 16:55	TMP	C
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 16:55	TMP	C
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 16:55	TMP	C
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 16:55	TMP	C
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 16:55	TMP	C
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 16:55	TMP	C
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 16:55	TMP	C
Trichloroethene	2.5		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 16:55	TMP	C
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 16:55	TMP	C
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 16:55	TMP	C
cis-1,2-Dichloroethene	0.51J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 16:55	TMP	C
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 16:55	TMP	C
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 16:55	TMP	C
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 16:55	TMP	C
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 16:55	TMP	C
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 16:55	TMP	C
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 16:55	TMP	C
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 16:55	TMP	C
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 16:55	TMP	C

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127001** Date Collected: 6/25/2018 14:30 Matrix: Water

Sample ID: **MRC-SW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 16:55	TMP	C
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 16:55	TMP	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.5		%	62 - 133		SW846 8260B			7/6/18 16:55	TMP	C
4-Bromofluorobenzene (S)	86.2		%	79 - 114		SW846 8260B			7/6/18 16:55	TMP	C
Dibromofluoromethane (S)	89.9		%	78 - 116		SW846 8260B			7/6/18 16:55	TMP	C
Toluene-d8 (S)	82		%	76 - 127		SW846 8260B			7/6/18 16:55	TMP	C
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:27	CGS	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127002** Date Collected: 6/25/2018 14:45 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:17	TMP	C
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:17	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:17	TMP	C
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:17	TMP	C
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:17	TMP	C
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:17	TMP	C
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:17	TMP	C
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:17	TMP	C
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichloroethene, Total	0.46J	J,1	ug/L	2.0	0.45	SW846 8260B		7/6/18 17:17	TMP	C
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:17	TMP	C
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:17	TMP	C
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:17	TMP	C
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:17	TMP	C
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:17	TMP	C
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:17	TMP	C
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 17:17	TMP	C
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:17	TMP	C
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:17	TMP	C
Acetone	14.6		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:17	TMP	C
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:17	TMP	C
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:17	TMP	C
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:17	TMP	C
Bromomethane	0.47J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 17:17	TMP	C
Carbon Disulfide	0.26J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:17	TMP	C
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:17	TMP	C
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:17	TMP	C

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127002** Date Collected: 6/25/2018 14:45 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 17:17	TMP	C
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 17:17	TMP	C
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:17	TMP	C
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:17	TMP	C
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:17	TMP	C
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:17	TMP	C
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 17:17	TMP	C
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:17	TMP	C
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:17	TMP	C
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:17	TMP	C
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 17:17	TMP	C
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:17	TMP	C
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:17	TMP	C
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:17	TMP	C
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:17	TMP	C
Trichloroethene	2.3		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:17	TMP	C
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:17	TMP	C
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:17	TMP	C
cis-1,2-Dichloroethene	0.46J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:17	TMP	C
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:17	TMP	C
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:17	TMP	C
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:17	TMP	C
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:17	TMP	C
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:17	TMP	C
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 17:17	TMP	C
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 17:17	TMP	C
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 17:17	TMP	C

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127002** Date Collected: 6/25/2018 14:45 Matrix: Water

Sample ID: **MRC-SW15A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 17:17	TMP	C
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:17	TMP	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.7		%	62 - 133		SW846 8260B			7/6/18 17:17	TMP	C
4-Bromofluorobenzene (S)	89.2		%	79 - 114		SW846 8260B			7/6/18 17:17	TMP	C
Dibromofluoromethane (S)	92.3		%	78 - 116		SW846 8260B			7/6/18 17:17	TMP	C
Toluene-d8 (S)	83.2		%	76 - 127		SW846 8260B			7/6/18 17:17	TMP	C
SEMIVOLATILE SIM											
1,4-Dioxane	ND		ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:53	CGS	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127003** Date Collected: 6/25/2018 15:00 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:28	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:28	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:28	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:28	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:28	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:28	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:28	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:28	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:28	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:28	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:28	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:28	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:28	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:28	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:28	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:28	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:28	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:28	TMP	A
Acetone	14.1		ug/L	10.0	3.1	SW846 8260B		7/6/18 19:28	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:28	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:28	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:28	TMP	A
Bromomethane	0.45J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 19:28	TMP	A
Carbon Disulfide	0.28J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 19:28	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:28	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:28	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127003** Date Collected: 6/25/2018 15:00 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:28	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:28	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:28	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:28	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:28	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:28	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:28	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:28	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:28	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:28	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:28	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:28	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:28	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:28	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:28	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:28	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:28	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:28	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:28	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:28	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:28	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:28	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:28	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:28	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:28	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:28	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:28	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127003** Date Collected: 6/25/2018 15:00 Matrix: Water

Sample ID: **MRC-SW5A2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:28	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:28	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	79.9		%	62 - 133		SW846 8260B			7/6/18 19:28	TMP	A
4-Bromofluorobenzene (S)	88.6		%	79 - 114		SW846 8260B			7/6/18 19:28	TMP	A
Dibromofluoromethane (S)	89.6		%	78 - 116		SW846 8260B			7/6/18 19:28	TMP	A
Toluene-d8 (S)	80.5		%	76 - 127		SW846 8260B			7/6/18 19:28	TMP	A

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127004** Date Collected: 6/25/2018 15:05 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:50	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:50	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:50	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:50	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:50	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:50	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:50	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:50	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:50	TMP	A
Acetone	10.8		ug/L	10.0	3.1	SW846 8260B		7/6/18 19:50	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:50	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:50	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:50	TMP	A
Bromomethane	0.47J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 19:50	TMP	A
Carbon Disulfide	0.58J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 19:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127004** Date Collected: 6/25/2018 15:05 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:50	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:50	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:50	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:50	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:50	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:50	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:50	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:50	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:50	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:50	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 19:50	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:50	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:50	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:50	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:50	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:50	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:50	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:50	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:50	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:50	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:50	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:50	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:50	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:50	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:50	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127004** Date Collected: 6/25/2018 15:05 Matrix: Water

Sample ID: **MRC-SW5A1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:50	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.1		%	62 - 133		SW846 8260B			7/6/18 19:50	TMP	A
4-Bromofluorobenzene (S)	92.4		%	79 - 114		SW846 8260B			7/6/18 19:50	TMP	A
Dibromofluoromethane (S)	91.9		%	78 - 116		SW846 8260B			7/6/18 19:50	TMP	A
Toluene-d8 (S)	84.5		%	76 - 127		SW846 8260B			7/6/18 19:50	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127005** Date Collected: 6/25/2018 15:15 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 20:39	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 20:39	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 20:39	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 20:39	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 20:39	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 20:39	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 20:39	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 20:39	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 20:39	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 20:39	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 20:39	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 20:39	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 20:39	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 20:39	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 20:39	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 20:39	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 20:39	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 20:39	TMP	A
Acetone	15.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 20:39	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 20:39	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 20:39	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 20:39	TMP	A
Bromomethane	0.45J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 20:39	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 20:39	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 20:39	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 20:39	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127005** Date Collected: 6/25/2018 15:15 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 20:39	TMP	A
Chloromethane	0.35J	J	ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 20:39	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 20:39	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 20:39	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 20:39	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 20:39	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 20:39	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 20:39	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 20:39	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 20:39	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 20:39	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 20:39	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 20:39	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 20:39	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 20:39	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 20:39	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 20:39	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 20:39	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 20:39	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 20:39	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 20:39	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 20:39	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 20:39	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 20:39	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 20:39	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 20:39	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 20:39	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127005** Date Collected: 6/25/2018 15:15 Matrix: Water

Sample ID: **MRC-SW5B** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 20:39	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 20:39	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84.2		%	62 - 133		SW846 8260B			7/6/18 20:39	TMP	A
4-Bromofluorobenzene (S)	93.2		%	79 - 114		SW846 8260B			7/6/18 20:39	TMP	A
Dibromofluoromethane (S)	94.8		%	78 - 116		SW846 8260B			7/6/18 20:39	TMP	A
Toluene-d8 (S)	84.8		%	76 - 127		SW846 8260B			7/6/18 20:39	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127006** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:01	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:01	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:01	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:01	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:01	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:01	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:01	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:01	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 21:01	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:01	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:01	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:01	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:01	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:01	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
2-Butanone	1.9J	J	ug/L	10.0	1.8	SW846 8260B		7/6/18 21:01	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:01	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:01	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:01	TMP	A
Acetone	21.5		ug/L	10.0	3.1	SW846 8260B		7/6/18 21:01	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:01	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:01	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:01	TMP	A
Bromomethane	0.66J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:01	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:01	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:01	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:01	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127006** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 21:01	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:01	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:01	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:01	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:01	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:01	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:01	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:01	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:01	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:01	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:01	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:01	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:01	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:01	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:01	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:01	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:01	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:01	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:01	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:01	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:01	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:01	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:01	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:01	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:01	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:01	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:01	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127006** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-SW2A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 21:01	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:01	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.7		%	62 - 133		SW846 8260B			7/6/18 21:01	TMP	A
4-Bromofluorobenzene (S)	91.4		%	79 - 114		SW846 8260B			7/6/18 21:01	TMP	A
Dibromofluoromethane (S)	90		%	78 - 116		SW846 8260B			7/6/18 21:01	TMP	A
Toluene-d8 (S)	81.4		%	76 - 127		SW846 8260B			7/6/18 21:01	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.021J	J	ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 13:20	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127007** Date Collected: 6/25/2018 15:45 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:22	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:22	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:22	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:22	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:22	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:22	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:22	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:22	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 21:22	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:22	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:22	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:22	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:22	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:22	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 21:22	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:22	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:22	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:22	TMP	A
Acetone	11.4		ug/L	10.0	3.1	SW846 8260B		7/6/18 21:22	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:22	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:22	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:22	TMP	A
Bromomethane	0.49J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:22	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:22	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:22	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:22	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127007** Date Collected: 6/25/2018 15:45 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 21:22	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:22	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:22	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:22	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:22	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:22	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:22	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:22	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:22	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:22	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:22	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:22	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:22	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:22	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:22	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:22	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:22	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:22	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:22	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:22	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:22	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:22	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:22	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:22	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:22	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:22	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:22	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127007** Date Collected: 6/25/2018 15:45 Matrix: Water

Sample ID: **MRC-SW1A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 21:22	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:22	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.8		%	62 - 133		SW846 8260B			7/6/18 21:22	TMP	A
4-Bromofluorobenzene (S)	91.7		%	79 - 114		SW846 8260B			7/6/18 21:22	TMP	A
Dibromofluoromethane (S)	90.5		%	78 - 116		SW846 8260B			7/6/18 21:22	TMP	A
Toluene-d8 (S)	83.2		%	76 - 127		SW846 8260B			7/6/18 21:22	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.027J	J	ug/L	0.095	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:07	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127008** Date Collected: 6/26/2018 21:30 Matrix: Water

Sample ID: **TB-0626-18** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:07	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:07	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:07	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:07	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:07	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 19:07	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:07	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 19:07	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/6/18 19:07	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:07	TMP	A
1,3-Dichlorobenzene	0.37J	J	ug/L	1.0	0.25	SW846 8260B		7/6/18 19:07	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:07	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 19:07	TMP	A
1,4-Dichlorobenzene	0.45J	J	ug/L	1.0	0.27	SW846 8260B		7/6/18 19:07	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 19:07	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 19:07	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 19:07	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 19:07	TMP	A
Acetone	8.5J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 19:07	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:07	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 19:07	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 19:07	TMP	A
Bromomethane	0.54J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 19:07	TMP	A
Carbon Disulfide	0.58J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 19:07	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
Chlorobenzene	0.24J	J	ug/L	1.0	0.19	SW846 8260B		7/6/18 19:07	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:07	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127008** Date Collected: 6/26/2018 21:30 Matrix: Water

Sample ID: **TB-0626-18** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 19:07	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 19:07	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 19:07	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 19:07	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 19:07	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:07	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 19:07	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 19:07	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:07	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 19:07	TMP	A
Naphthalene	0.66J	J	ug/L	2.0	0.34	SW846 8260B		7/6/18 19:07	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:07	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 19:07	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 19:07	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 19:07	TMP	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 19:07	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 19:07	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 19:07	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 19:07	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 19:07	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 19:07	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 19:07	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 19:07	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 19:07	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 19:07	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 19:07	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 19:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127008** Date Collected: 6/26/2018 21:30 Matrix: Water

Sample ID: **TB-0626-18** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 19:07	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 19:07	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	80.5		%	62 - 133		SW846 8260B			7/6/18 19:07	TMP	A
4-Bromofluorobenzene (S)	91.3		%	79 - 114		SW846 8260B			7/6/18 19:07	TMP	A
Dibromofluoromethane (S)	87.9		%	78 - 116		SW846 8260B			7/6/18 19:07	TMP	A
Toluene-d8 (S)	82.2		%	76 - 127		SW846 8260B			7/6/18 19:07	TMP	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127009** Date Collected: 6/25/2018 14:00 Matrix: Water

Sample ID: **MRC-MW11A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:44	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:44	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:44	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
1,1-Dichloroethane	2.8		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:44	TMP	A
1,1-Dichloroethene	10.4	2	ug/L	1.0	0.29	SW846 8260B		7/6/18 21:44	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:44	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:44	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:44	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichloroethene, Total	2.7	1	ug/L	2.0	0.45	SW846 8260B		7/6/18 21:44	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:44	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:44	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:44	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:44	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:44	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 21:44	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:44	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:44	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:44	TMP	A
Acetone	11.3		ug/L	10.0	3.1	SW846 8260B		7/6/18 21:44	TMP	A
Benzene	0.25J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 21:44	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:44	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:44	TMP	A
Bromomethane	0.50J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:44	TMP	A
Carbon Disulfide	0.24J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 21:44	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:44	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:44	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127009** Date Collected: 6/25/2018 14:00 Matrix: Water

Sample ID: **MRC-MW11A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Chloroform	1.4		ug/L	1.0	0.21	SW846 8260B		7/6/18 21:44	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:44	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:44	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:44	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:44	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:44	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:44	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:44	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:44	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:44	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:44	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:44	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:44	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:44	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:44	TMP	A
Trichloroethene	1.7		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:44	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:44	TMP	A
Vinyl Chloride	1.1		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:44	TMP	A
cis-1,2-Dichloroethene	2.7		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:44	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:44	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:44	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:44	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:44	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:44	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:44	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:44	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:44	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127009** Date Collected: 6/25/2018 14:00 Matrix: Water

Sample ID: **MRC-MW11A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 21:44	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:44	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	85.3		%	62 - 133		SW846 8260B			7/6/18 21:44	TMP	A
4-Bromofluorobenzene (S)	90.4		%	79 - 114		SW846 8260B			7/6/18 21:44	TMP	A
Dibromofluoromethane (S)	93.8		%	78 - 116		SW846 8260B			7/6/18 21:44	TMP	A
Toluene-d8 (S)	83.5		%	76 - 127		SW846 8260B			7/6/18 21:44	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	2.0		ug/L	0.098	0.019	8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 12:01	CGS	C
METALS											
Antimony, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Arsenic, Total	0.0071		mg/L	0.0033	0.0011	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Beryllium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Cadmium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Chromium, Total	0.0011J	J	mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Cobalt, Total	0.028		mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Copper, Total	0.0022J	J	mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Lead, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Mercury, Total	ND		mg/L	0.00050	0.00017	SW846 7470A	6/29/18 09:55	AXC	6/29/18 14:35	AXC	E
Nickel, Total	0.0039J	J	mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Selenium, Total	ND		mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Silver, Total	ND		mg/L	0.0022	0.00074	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Thallium, Total	ND		mg/L	0.0011	0.00037	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1
Zinc, Total	0.011		mg/L	0.0056	0.0019	SW846 6020A	6/29/18 19:20	AHI	7/6/18 10:56	MO	E1

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127010** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-MW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 17:39	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:39	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:39	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
1,1-Dichloroethane	28.2	12,13	ug/L	1.0	0.28	SW846 8260B		7/6/18 17:39	TMP	A
1,1-Dichloroethene	72.7	1,2,3	ug/L	1.0	0.29	SW846 8260B		7/6/18 17:39	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 17:39	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:39	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 17:39	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichloroethane	0.33J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichloroethene, Total	12.3	33,34,35	ug/L	2.0	0.45	SW846 8260B		7/6/18 17:39	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:39	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:39	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:39	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 17:39	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:39	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 17:39	TMP	A
2-Chloroethylvinyl ether	ND	25	ug/L	2.0	0.38	SW846 8260B		7/6/18 17:39	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 17:39	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 17:39	TMP	A
Acetone	17.6		ug/L	10.0	3.1	SW846 8260B		7/6/18 17:39	TMP	A
Benzene	0.70J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:39	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
Bromochloromethane	ND	16,17	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 17:39	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 17:39	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 17:39	TMP	A
Carbon Disulfide	ND	8,9	ug/L	1.0	0.23	SW846 8260B		7/6/18 17:39	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127010** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-MW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Carbon Tetrachloride	ND	22	ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 17:39	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 17:39	TMP	A
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Chloroform	ND	18	ug/L	1.0	0.21	SW846 8260B		7/6/18 17:39	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
Cyclohexane	0.35J	J,19 ,20, 21	ug/L	1.0	0.29	SW846 8260B		7/6/18 17:39	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 17:39	TMP	A
Ethyl tert-butyl ether	ND	29,3 0	ug/L	1.0	0.19	SW846 8260B		7/6/18 17:39	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 17:39	TMP	A
Freon 113	ND	6,7	ug/L	1.0	0.26	SW846 8260B		7/6/18 17:39	TMP	A
Hexachlorobutadiene	ND	27,2 8	ug/L	5.0	1.0	SW846 8260B		7/6/18 17:39	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 17:39	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
Methyl cyclohexane	ND	31,3 2	ug/L	1.0	0.30	SW846 8260B		7/6/18 17:39	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Methylene Chloride	ND	4,5	ug/L	1.0	0.45	SW846 8260B		7/6/18 17:39	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 17:39	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:39	TMP	A
Tetrachloroethene	6.1	26	ug/L	1.0	0.35	SW846 8260B		7/6/18 17:39	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 17:39	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 17:39	TMP	A
Trichloroethene	20.4	23,2 4	ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 17:39	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 17:39	TMP	A
Vinyl Chloride	8.1		ug/L	1.0	0.30	SW846 8260B		7/6/18 17:39	TMP	A
cis-1,2-Dichloroethene	12.3	14,1 5	ug/L	1.0	0.32	SW846 8260B		7/6/18 17:39	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 17:39	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 17:39	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 17:39	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 17:39	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 17:39	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127010** Date Collected: 6/25/2018 15:30 Matrix: Water

Sample ID: **MRC-MW16A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B			7/6/18 17:39	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B			7/6/18 17:39	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B			7/6/18 17:39	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B			7/6/18 17:39	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B			7/6/18 17:39	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B			7/6/18 17:39	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B			7/6/18 17:39	TMP	A
trans-1,2-Dichloroethene	ND	10,11	ug/L	1.0	0.26	SW846 8260B			7/6/18 17:39	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 17:39	TMP	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.6		%	62 - 133	SW846 8260B			7/6/18 17:39	TMP	A
4-Bromofluorobenzene (S)	90.2		%	79 - 114	SW846 8260B			7/6/18 17:39	TMP	A
Dibromofluoromethane (S)	87.4		%	78 - 116	SW846 8260B			7/6/18 17:39	TMP	A
Toluene-d8 (S)	81.1		%	76 - 127	SW846 8260B			7/6/18 17:39	TMP	A

SEMIVOLATILE SIM

1,4-Dioxane	42.6		ug/L	2.0	0.38	8270 SIM	6/28/18 18:00	DXL	7/2/18 20:40	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 14:40	CGS	G

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	60.8		%	29 - 112	8270 SIM	6/28/18 18:00	DXL	7/2/18 20:40	CGS	G
Fluoranthene-d10 (S)	96.1		%	45 - 130	8270 SIM	6/28/18 18:00	DXL	7/2/18 20:40	CGS	G

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127011** Date Collected: 6/25/2018 15:50 Matrix: Water

Sample ID: **MRC-MW16A-DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 22:06	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 22:06	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 22:06	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
1,1-Dichloroethane	30.6		ug/L	1.0	0.28	SW846 8260B		7/6/18 22:06	TMP	A
1,1-Dichloroethene	79.0	1	ug/L	1.0	0.29	SW846 8260B		7/6/18 22:06	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 22:06	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 22:06	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 22:06	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichloroethane	0.34J	J	ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichloroethene, Total	13.7	4	ug/L	2.0	0.45	SW846 8260B		7/6/18 22:06	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 22:06	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 22:06	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 22:06	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 22:06	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 22:06	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 22:06	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 22:06	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 22:06	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 22:06	TMP	A
Acetone	8.8J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 22:06	TMP	A
Benzene	0.80J	J	ug/L	1.0	0.23	SW846 8260B		7/6/18 22:06	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 22:06	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 22:06	TMP	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/6/18 22:06	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 22:06	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 22:06	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 22:06	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127011** Date Collected: 6/25/2018 15:50 Matrix: Water

Sample ID: **MRC-MW16A-DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Chloroform	ND		ug/L	1.0	0.21	SW846 8260B		7/6/18 22:06	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
Cyclohexane	0.37J	J,2	ug/L	1.0	0.29	SW846 8260B		7/6/18 22:06	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 22:06	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 22:06	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 22:06	TMP	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 22:06	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 22:06	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 22:06	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 22:06	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 22:06	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 22:06	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 22:06	TMP	A
Tetrachloroethene	6.3	3	ug/L	1.0	0.35	SW846 8260B		7/6/18 22:06	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 22:06	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 22:06	TMP	A
Trichloroethene	20.7		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 22:06	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 22:06	TMP	A
Vinyl Chloride	10.9		ug/L	1.0	0.30	SW846 8260B		7/6/18 22:06	TMP	A
cis-1,2-Dichloroethene	13.7		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 22:06	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 22:06	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 22:06	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 22:06	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 22:06	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 22:06	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 22:06	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 22:06	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 22:06	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127011** Date Collected: 6/25/2018 15:50 Matrix: Water

Sample ID: **MRC-MW16A-DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/6/18 22:06	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 22:06	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	83.6		%	62 - 133		SW846 8260B			7/6/18 22:06	TMP	A
4-Bromofluorobenzene (S)	90.2		%	79 - 114		SW846 8260B			7/6/18 22:06	TMP	A
Dibromofluoromethane (S)	92		%	78 - 116		SW846 8260B			7/6/18 22:06	TMP	A
Toluene-d8 (S)	82.6		%	76 - 127		SW846 8260B			7/6/18 22:06	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	38.1		ug/L	1.9	0.36	8270 SIM	6/28/18 18:00	DXL	6/30/18 06:30	DHF	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 15:34	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Methylnapthalene-d10 (S)	55.1		%	29 - 112		8270 SIM	6/28/18 18:00	DXL	6/30/18 06:30	DHF	C
Fluoranthene-d10 (S)	72.2		%	45 - 130		8270 SIM	6/28/18 18:00	DXL	6/30/18 06:30	DHF	C

Vanessa N. Badman

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127012** Date Collected: 6/26/2018 10:40 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 02:48	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 02:48	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 02:48	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
1,1-Dichloroethane	ND	4	ug/L	1.0	0.28	SW846 8260B		7/7/18 02:48	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 02:48	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/7/18 02:48	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 02:48	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/7/18 02:48	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/7/18 02:48	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 02:48	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 02:48	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 02:48	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/7/18 02:48	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 02:48	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/7/18 02:48	PDK	A
2-Chloroethylvinyl ether	ND	5,6	ug/L	2.0	0.38	SW846 8260B		7/7/18 02:48	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/7/18 02:48	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/7/18 02:48	PDK	A
Acetone	7.4J	J	ug/L	10.0	3.1	SW846 8260B		7/7/18 02:48	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 02:48	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
Bromodichloromethane	0.31J	J	ug/L	1.0	0.27	SW846 8260B		7/7/18 02:48	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/7/18 02:48	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/7/18 02:48	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 02:48	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 02:48	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 02:48	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127012** Date Collected: 6/26/2018 10:40 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Chloroform	1.1		ug/L	1.0	0.21	SW846 8260B		7/7/18 02:48	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 02:48	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Diisopropyl ether	ND	1	ug/L	1.0	0.25	SW846 8260B		7/7/18 02:48	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 02:48	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 02:48	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 02:48	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/7/18 02:48	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 02:48	PDK	A
Methyl acetate	ND	2	ug/L	2.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 02:48	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Methylene Chloride	ND	3	ug/L	1.0	0.45	SW846 8260B		7/7/18 02:48	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/7/18 02:48	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 02:48	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 02:48	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 02:48	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/7/18 02:48	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 02:48	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/7/18 02:48	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 02:48	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/7/18 02:48	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 02:48	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 02:48	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 02:48	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 02:48	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 02:48	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/7/18 02:48	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/7/18 02:48	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/7/18 02:48	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127012** Date Collected: 6/26/2018 10:40 Matrix: Water

Sample ID: **MRC-MW17A** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/7/18 02:48	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/7/18 02:48	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	62 - 133		SW846 8260B			7/7/18 02:48	PDK	A
4-Bromofluorobenzene (S)	93.3		%	79 - 114		SW846 8260B			7/7/18 02:48	PDK	A
Dibromofluoromethane (S)	87.1		%	78 - 116		SW846 8260B			7/7/18 02:48	PDK	A
Toluene-d8 (S)	89.3		%	76 - 127		SW846 8260B			7/7/18 02:48	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.042J	J	ug/L	0.097	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 16:01	CGS	G

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127013** Date Collected: 6/26/2018 10:45 Matrix: Water

Sample ID: **MRC-MW17A DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:10	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:10	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:10	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:10	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:10	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/7/18 03:10	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:10	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/7/18 03:10	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichloroethene, Total	ND		ug/L	2.0	0.45	SW846 8260B		7/7/18 03:10	PDK	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:10	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:10	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:10	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/7/18 03:10	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:10	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/7/18 03:10	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/7/18 03:10	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/7/18 03:10	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/7/18 03:10	PDK	A
Acetone	9.8J	J	ug/L	10.0	3.1	SW846 8260B		7/7/18 03:10	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:10	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
Bromodichloromethane	0.30J	J	ug/L	1.0	0.27	SW846 8260B		7/7/18 03:10	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/7/18 03:10	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/7/18 03:10	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:10	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:10	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:10	PDK	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127013** Date Collected: 6/26/2018 10:45 Matrix: Water

Sample ID: **MRC-MW17A DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Chloroform	1.1		ug/L	1.0	0.21	SW846 8260B		7/7/18 03:10	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:10	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:10	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:10	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:10	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:10	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/7/18 03:10	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:10	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 03:10	PDK	A
Methyl t-Butyl Ether	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:10	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/7/18 03:10	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:10	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:10	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:10	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/7/18 03:10	PDK	A
Trichloroethene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:10	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/7/18 03:10	PDK	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 03:10	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/7/18 03:10	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:10	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:10	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:10	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:10	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:10	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/7/18 03:10	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/7/18 03:10	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/7/18 03:10	PDK	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127013** Date Collected: 6/26/2018 10:45 Matrix: Water

Sample ID: **MRC-MW17A DUP** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	ND		ug/L	1.0	0.26	SW846 8260B			7/7/18 03:10	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/7/18 03:10	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100		%	62 - 133		SW846 8260B			7/7/18 03:10	PDK	A
4-Bromofluorobenzene (S)	91.5		%	79 - 114		SW846 8260B			7/7/18 03:10	PDK	A
Dibromofluoromethane (S)	88.3		%	78 - 116		SW846 8260B			7/7/18 03:10	PDK	A
Toluene-d8 (S)	90.1		%	76 - 127		SW846 8260B			7/7/18 03:10	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.037J	J	ug/L	0.096	0.018	8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:20	CGS	C

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127014** Date Collected: 6/26/2018 11:05 Matrix: Water

Sample ID: **EW-2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:07	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:07	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:07	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:07	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:07	TMP	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/6/18 21:07	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:07	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/6/18 21:07	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichloroethene, Total	23.0		ug/L	2.0	0.45	SW846 8260B		7/6/18 21:07	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:07	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:07	TMP	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:07	TMP	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/6/18 21:07	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:07	TMP	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/6/18 21:07	TMP	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/6/18 21:07	TMP	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/6/18 21:07	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/6/18 21:07	TMP	A
Acetone	6.7J	J	ug/L	10.0	3.1	SW846 8260B		7/6/18 21:07	TMP	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:07	TMP	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/6/18 21:07	TMP	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/6/18 21:07	TMP	A
Bromomethane	0.44J	J	ug/L	1.0	0.39	SW846 8260B		7/6/18 21:07	TMP	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:07	TMP	A
Carbon Tetrachloride	1.8		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
Chlorobenzene	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:07	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127014** Date Collected: 6/26/2018 11:05 Matrix: Water

Sample ID: **EW-2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
Chloroform	0.91J	J	ug/L	1.0	0.21	SW846 8260B		7/6/18 21:07	TMP	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/6/18 21:07	TMP	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/6/18 21:07	TMP	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/6/18 21:07	TMP	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/6/18 21:07	TMP	A
Freon 113	7.1		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:07	TMP	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/6/18 21:07	TMP	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/6/18 21:07	TMP	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:07	TMP	A
Methyl t-Butyl Ether	5.4		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/6/18 21:07	TMP	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/6/18 21:07	TMP	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:07	TMP	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/6/18 21:07	TMP	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/6/18 21:07	TMP	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/6/18 21:07	TMP	A
Trichloroethene	2420		ug/L	50.0	16.5	SW846 8260B		7/9/18 14:58	DD	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/6/18 21:07	TMP	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/6/18 21:07	TMP	A
Vinyl Chloride	ND		ug/L	1.0	0.30	SW846 8260B		7/6/18 21:07	TMP	A
cis-1,2-Dichloroethene	22.5		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/6/18 21:07	TMP	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/6/18 21:07	TMP	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/6/18 21:07	TMP	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/6/18 21:07	TMP	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/6/18 21:07	TMP	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/6/18 21:07	TMP	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/6/18 21:07	TMP	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/6/18 21:07	TMP	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/6/18 21:07	TMP	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127014** Date Collected: 6/26/2018 11:05 Matrix: Water

Sample ID: **EW-2** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	0.48J	J	ug/L	1.0	0.26	SW846 8260B			7/6/18 21:07	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/6/18 21:07	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99.5		%	62 - 133		SW846 8260B			7/9/18 14:58	DD	B
1,2-Dichloroethane-d4 (S)	97.8		%	62 - 133		SW846 8260B			7/6/18 21:07	TMP	A
4-Bromofluorobenzene (S)	88.2		%	79 - 114		SW846 8260B			7/6/18 21:07	TMP	A
4-Bromofluorobenzene (S)	86.2		%	79 - 114		SW846 8260B			7/9/18 14:58	DD	B
Dibromofluoromethane (S)	84.4		%	78 - 116		SW846 8260B			7/6/18 21:07	TMP	A
Dibromofluoromethane (S)	85.5		%	78 - 116		SW846 8260B			7/9/18 14:58	DD	B
Toluene-d8 (S)	92.1		%	76 - 127		SW846 8260B			7/9/18 14:58	DD	B
Toluene-d8 (S)	95.9		%	76 - 127		SW846 8260B			7/6/18 21:07	TMP	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.13		ug/L	0.099	0.019	8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 17:47	CGS	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			6/26/18 11:05	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127015** Date Collected: 6/26/2018 13:20 Matrix: Water

Sample ID: **EW-1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:32	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:32	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:32	PDK	A
1,1,2-Trichloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:32	PDK	A
1,1-Dichloroethene	12.1		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:32	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	2.0	0.93	SW846 8260B		7/7/18 03:32	PDK	A
1,2,3-Trichloropropane	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:32	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	0.82	SW846 8260B		7/7/18 03:32	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	1.5	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	0.28	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dichlorobenzene	ND		ug/L	1.0	0.38	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
1,2-Dichloroethene, Total	5320		ug/L	200	45.0	SW846 8260B		7/10/18 03:22	PDK	B
1,2-Dichloropropane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:32	PDK	A
1,3-Dichlorobenzene	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:32	PDK	A
1,3-Dichloropropane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:32	PDK	A
1,3-Dichloropropene, Total	ND		ug/L	2.0	0.47	SW846 8260B		7/7/18 03:32	PDK	A
1,4-Dichlorobenzene	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:32	PDK	A
2,2-Dichloropropane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
2-Butanone	ND		ug/L	10.0	1.8	SW846 8260B		7/7/18 03:32	PDK	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	0.38	SW846 8260B		7/7/18 03:32	PDK	A
2-Hexanone	ND		ug/L	5.0	1.3	SW846 8260B		7/7/18 03:32	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	1.5	SW846 8260B		7/7/18 03:32	PDK	A
Acetone	7.3J	J	ug/L	10.0	3.1	SW846 8260B		7/7/18 03:32	PDK	A
Benzene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:32	PDK	A
Bromobenzene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
Bromochloromethane	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
Bromodichloromethane	ND		ug/L	1.0	0.27	SW846 8260B		7/7/18 03:32	PDK	A
Bromoform	ND		ug/L	1.0	0.40	SW846 8260B		7/7/18 03:32	PDK	A
Bromomethane	ND		ug/L	1.0	0.39	SW846 8260B		7/7/18 03:32	PDK	A
Carbon Disulfide	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:32	PDK	A
Carbon Tetrachloride	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
Chlorobenzene	1.2		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:32	PDK	A
Chlorodibromomethane	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:32	PDK	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127015** Date Collected: 6/26/2018 13:20 Matrix: Water

Sample ID: **EW-1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chloroethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
Chloroform	1.7		ug/L	1.0	0.21	SW846 8260B		7/7/18 03:32	PDK	A
Chloromethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
Cyclohexane	ND		ug/L	1.0	0.29	SW846 8260B		7/7/18 03:32	PDK	A
Dibromomethane	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
Dichlorodifluoromethane	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
Diisopropyl ether	ND		ug/L	1.0	0.25	SW846 8260B		7/7/18 03:32	PDK	A
Ethyl tert-butyl ether	ND		ug/L	1.0	0.19	SW846 8260B		7/7/18 03:32	PDK	A
Ethylbenzene	ND		ug/L	1.0	0.34	SW846 8260B		7/7/18 03:32	PDK	A
Freon 113	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:32	PDK	A
Hexachlorobutadiene	ND		ug/L	5.0	1.0	SW846 8260B		7/7/18 03:32	PDK	A
Isopropylbenzene	ND		ug/L	1.0	0.22	SW846 8260B		7/7/18 03:32	PDK	A
Methyl acetate	ND		ug/L	2.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
Methyl cyclohexane	ND		ug/L	1.0	0.30	SW846 8260B		7/7/18 03:32	PDK	A
Methyl t-Butyl Ether	0.65J	J	ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
Methylene Chloride	ND		ug/L	1.0	0.45	SW846 8260B		7/7/18 03:32	PDK	A
Naphthalene	ND		ug/L	2.0	0.34	SW846 8260B		7/7/18 03:32	PDK	A
Styrene	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:32	PDK	A
Tetrachloroethene	ND		ug/L	1.0	0.35	SW846 8260B		7/7/18 03:32	PDK	A
Toluene	ND		ug/L	1.0	0.23	SW846 8260B		7/7/18 03:32	PDK	A
Total Xylenes	ND		ug/L	3.0	0.66	SW846 8260B		7/7/18 03:32	PDK	A
Trichloroethene	794		ug/L	100	33.0	SW846 8260B		7/10/18 03:22	PDK	B
Trichlorofluoromethane	ND		ug/L	1.0	0.24	SW846 8260B		7/7/18 03:32	PDK	A
Vinyl Acetate	ND		ug/L	5.0	1.6	SW846 8260B		7/7/18 03:32	PDK	A
Vinyl Chloride	0.54J	J	ug/L	1.0	0.30	SW846 8260B		7/7/18 03:32	PDK	A
cis-1,2-Dichloroethene	5320		ug/L	100	32.0	SW846 8260B		7/10/18 03:22	PDK	B
cis-1,3-Dichloropropene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
mp-Xylene	ND		ug/L	2.0	0.52	SW846 8260B		7/7/18 03:32	PDK	A
n-Butylbenzene	ND		ug/L	2.0	0.60	SW846 8260B		7/7/18 03:32	PDK	A
n-Propylbenzene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
o-Chlorotoluene	ND		ug/L	1.0	0.26	SW846 8260B		7/7/18 03:32	PDK	A
o-Xylene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
p-Chlorotoluene	ND		ug/L	1.0	0.33	SW846 8260B		7/7/18 03:32	PDK	A
p-Isopropyltoluene	ND		ug/L	1.0	0.32	SW846 8260B		7/7/18 03:32	PDK	A
sec-Butylbenzene	ND		ug/L	1.0	0.31	SW846 8260B		7/7/18 03:32	PDK	A
tert-Amyl methyl ether	ND		ug/L	1.0	0.20	SW846 8260B		7/7/18 03:32	PDK	A
tert-Butyl Alcohol	ND		ug/L	10.0	2.2	SW846 8260B		7/7/18 03:32	PDK	A
tert-Butylbenzene	ND		ug/L	2.0	0.44	SW846 8260B		7/7/18 03:32	PDK	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

Lab ID: **2323127015** Date Collected: 6/26/2018 13:20 Matrix: Water

Sample ID: **EW-1** Date Received: 6/26/2018 21:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
trans-1,2-Dichloroethene	8.9		ug/L	1.0	0.26	SW846 8260B			7/7/18 03:32	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	0.29	SW846 8260B			7/7/18 03:32	PDK	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	95		%	62 - 133		SW846 8260B			7/7/18 03:32	PDK	A
1,2-Dichloroethane-d4 (S)	89.7		%	62 - 133		SW846 8260B			7/10/18 03:22	PDK	B
4-Bromofluorobenzene (S)	91.8		%	79 - 114		SW846 8260B			7/10/18 03:22	PDK	B
4-Bromofluorobenzene (S)	88.1		%	79 - 114		SW846 8260B			7/7/18 03:32	PDK	A
Dibromofluoromethane (S)	78.1		%	78 - 116		SW846 8260B			7/10/18 03:22	PDK	B
Dibromofluoromethane (S)	86.6		%	78 - 116		SW846 8260B			7/7/18 03:32	PDK	A
Toluene-d8 (S)	90.7		%	76 - 127		SW846 8260B			7/10/18 03:22	PDK	B
Toluene-d8 (S)	89.1		%	76 - 127		SW846 8260B			7/7/18 03:32	PDK	A
SEMIVOLATILE SIM											
1,4-Dioxane	0.075J	J	ug/L	0.099	0.019	8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
IS_Naphthalene-d8	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
IS_Perylene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
Acenaphthene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
Phenanthrene-d10	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
Chrysene-d12	0.0		ug/L			8270 SIM	6/28/18 18:00	DXL	6/29/18 18:14	CGS	C
SUBCONTRACTED ANALYSIS											
Subcontracted Analysis	See attached.					Subcontract			6/26/18 13:20	SUB	E

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2323127001	1	MRC-SW16A	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2323127002	1	MRC-SW15A	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2323127009	1	MRC-MW11A	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2323127009	2	MRC-MW11A	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.				
2323127010	1	MRC-MW16A	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.				
2323127010	2	MRC-MW16A	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 170 and the control limits were 63 to 128.				
2323127010	3	MRC-MW16A	SW846 8260B	1,1-Dichloroethene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 163 and the control limits were 63 to 128.				
2323127010	4	MRC-MW16A	SW846 8260B	Methylene Chloride
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 133 and the control limits were 76 to 121.				
2323127010	5	MRC-MW16A	SW846 8260B	Methylene Chloride
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 128 and the control limits were 76 to 121.				
2323127010	6	MRC-MW16A	SW846 8260B	Freon 113
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 163 and the control limits were 50 to 130.				
2323127010	7	MRC-MW16A	SW846 8260B	Freon 113
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 171 and the control limits were 50 to 130.				
2323127010	8	MRC-MW16A	SW846 8260B	Carbon Disulfide
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 144 and the control limits were 57 to 131.				
2323127010	9	MRC-MW16A	SW846 8260B	Carbon Disulfide
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 143 and the control limits were 57 to 131.				
2323127010	10	MRC-MW16A	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 140 and the control limits were 71 to 122.				

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

2323127010	11	MRC-MW16A	SW846 8260B	trans-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 141 and the control limits were 71 to 122.

2323127010	12	MRC-MW16A	SW846 8260B	1,1-Dichloroethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 141 and the control limits were 78 to 124.

2323127010	13	MRC-MW16A	SW846 8260B	1,1-Dichloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The % Recovery was reported as 139 and the control limits were 78 to 124.

2323127010	14	MRC-MW16A	SW846 8260B	cis-1,2-Dichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 136 and the control limits were 78 to 125.

2323127010	15	MRC-MW16A	SW846 8260B	cis-1,2-Dichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte cis-1,2-Dichloroethene. The % Recovery was reported as 132 and the control limits were 78 to 125.

2323127010	16	MRC-MW16A	SW846 8260B	Bromochloromethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 126 and the control limits were 73 to 117.

2323127010	17	MRC-MW16A	SW846 8260B	Bromochloromethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 126 and the control limits were 73 to 117.

2323127010	18	MRC-MW16A	SW846 8260B	Chloroform

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Chloroform. The % Recovery was reported as 125 and the control limits were 78 to 122.

2323127010	19	MRC-MW16A	SW846 8260B	Cyclohexane

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 132 and the control limits were 66 to 130.

2323127010	20	MRC-MW16A	SW846 8260B	Cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 136 and the control limits were 66 to 130.

2323127010	21	MRC-MW16A	SW846 8260B	Cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 140 and the control limits were 66 to 130.

2323127010	22	MRC-MW16A	SW846 8260B	Carbon Tetrachloride

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Carbon Tetrachloride. The % Recovery was reported as 135 and the control limits were 62 to 132.

2323127010	23	MRC-MW16A	SW846 8260B	Trichloroethene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 129 and the control limits were 77 to 124.

2323127010	24	MRC-MW16A	SW846 8260B	Trichloroethene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 128 and the control limits were 77 to 124.

2323127010	25	MRC-MW16A	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 163 and the control limits were 1 to 150.

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

2323127010	26	MRC-MW16A	SW846 8260B	Tetrachloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 127 and the control limits were 72 to 124.

2323127010	27	MRC-MW16A	SW846 8260B	Hexachlorobutadiene

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 135 and the control limits were 55 to 128.

2323127010	28	MRC-MW16A	SW846 8260B	Hexachlorobutadiene

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Hexachlorobutadiene. The % Recovery was reported as 146 and the control limits were 55 to 128.

2323127010	29	MRC-MW16A	SW846 8260B	Ethyl tert-butyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Ethyl tert-butyl ether. The % Recovery was reported as 125 and the control limits were 75 to 123.

2323127010	30	MRC-MW16A	SW846 8260B	Ethyl tert-butyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Ethyl tert-butyl ether. The % Recovery was reported as 125 and the control limits were 75 to 123.

2323127010	31	MRC-MW16A	SW846 8260B	Methyl cyclohexane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 141 and the control limits were 70 to 130.

2323127010	32	MRC-MW16A	SW846 8260B	Methyl cyclohexane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 150 and the control limits were 70 to 130.

2323127010	33	MRC-MW16A	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.

2323127010	34	MRC-MW16A	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 138 and the control limits were 78 to 125.

2323127010	35	MRC-MW16A	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 136 and the control limits were 78 to 125.

2323127011	1	MRC-MW16A-DUP	SW846 8260B	1,1-Dichloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.

2323127011	2	MRC-MW16A-DUP	SW846 8260B	Cyclohexane

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 132 and the control limits were 66 to 130.

2323127011	3	MRC-MW16A-DUP	SW846 8260B	Tetrachloroethene

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 127 and the control limits were 72 to 124.

2323127011	4	MRC-MW16A-DUP	SW846 8260B	1,2-Dichloroethene, Total

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.

2323127012	1	MRC-MW17A	SW846 8260B	Diisopropyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Diisopropyl ether. The RPD was reported as 18.2 and the upper control limit is 15.

ANALYTICAL RESULTS

Workorder: 2323127 ALG002|LMC MRC

2323127012	2	MRC-MW17A	SW846 8260B	Methyl acetate

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl acetate. The RPD was reported as 22 and the upper control limit is 18.

2323127012	3	MRC-MW17A	SW846 8260B	Methylene Chloride

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The RPD was reported as 18.5 and the upper control limit is 17.

2323127012	4	MRC-MW17A	SW846 8260B	1,1-Dichloroethane

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethane. The RPD was reported as 16.4 and the upper control limit is 15.

2323127012	5	MRC-MW17A	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .5 and the control limits were 1 to 150.

2323127012	6	MRC-MW17A	SW846 8260B	2-Chloroethylvinyl ether

The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as .5 and the control limits were 1 to 150.

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Analysis Method	Prep Method
2323127001	MRC-SW16A	8270 SIM	SW846 3510C
2323127001	MRC-SW16A	SW846 8260B	
2323127002	MRC-SW15A	8270 SIM	SW846 3510C
2323127002	MRC-SW15A	SW846 8260B	
2323127003	MRC-SW5A2	SW846 8260B	
2323127004	MRC-SW5A1	SW846 8260B	
2323127005	MRC-SW5B	SW846 8260B	
2323127006	MRC-SW2A	8270 SIM	SW846 3510C
2323127006	MRC-SW2A	SW846 8260B	
2323127007	MRC-SW1A	8270 SIM	SW846 3510C
2323127007	MRC-SW1A	SW846 8260B	
2323127008	TB-0626-18	SW846 8260B	
2323127009	MRC-MW11A	8270 SIM	SW846 3510C
2323127009	MRC-MW11A	SW846 6020A	SW846 3015
2323127009	MRC-MW11A	SW846 7470A	SW846 7470A
2323127009	MRC-MW11A	SW846 8260B	
2323127010	MRC-MW16A	8270 SIM	SW846 3510C
2323127010	MRC-MW16A	SW846 8260B	
2323127011	MRC-MW16A-DUP	8270 SIM	SW846 3510C
2323127011	MRC-MW16A-DUP	SW846 8260B	
2323127012	MRC-MW17A	8270 SIM	SW846 3510C
2323127012	MRC-MW17A	SW846 8260B	
2323127013	MRC-MW17A DUP	8270 SIM	SW846 3510C
2323127013	MRC-MW17A DUP	SW846 8260B	
2323127014	EW-2	8270 SIM	SW846 3510C
2323127014	EW-2	SW846 8260B	
2323127014	EW-2	Subcontract	
2323127015	EW-1	8270 SIM	SW846 3510C
2323127015	EW-1	SW846 8260B	
2323127015	EW-1	Subcontract	

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: EXTR/52759 **Analysis Method:** 8270 SIM

QC Batch Method: SW846 3510C

Associated Lab Samples: 2323127001, 2323127002, 2323127006, 2323127007, 2323127009, 2323127010, 2323127011, 2323127012, 2323127013, 2323127014, 2323127015

METHOD BLANK: 2766541

Parameter	Blank Result	Units	Reporting Limit
1,4-Dioxane	0.029J	ug/L	0.10
2-Methylnapthalene-d10 (S)			
Fluoranthene-d10 (S)			

LABORATORY CONTROL SAMPLE: 2766542

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,4-Dioxane	29.8	ug/L	1	0.30	22 - 75
2-Methylnapthalene-d10 (S)					
Fluoranthene-d10 (S)					

MATRIX SPIKE: 2766543 DUPLICATE: 2766544 ORIGINAL: 2323127010

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	42.6286	ug/L	.98	24.3529	28.1237	NC	NC	22 - 75	14.4	

MATRIX SPIKE: 2766545 DUPLICATE: 2766546 ORIGINAL: 2323127012

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
1,4-Dioxane	.04152	ug/L	.96	.29137	.32321	26.1	29.4	22 - 75	10.4	

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: MDIG/72452 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2323127009

METHOD BLANK: 2767054

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

LABORATORY CONTROL SAMPLE: 2767055

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	108	mg/L	.002	0.0022	85 - 115

MATRIX SPIKE: 2767058 DUPLICATE: 2767059 ORIGINAL: 2322792002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00514	.00503	103	101	70 - 130	2.16	20

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QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: MDIG/72465 **Analysis Method:** SW846 6020A

QC Batch Method: SW846 3015

Associated Lab Samples: 2323127009

METHOD BLANK: 2767319

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.0022
Arsenic, Total	ND	mg/L	0.0033
Beryllium, Total	ND	mg/L	0.0011
Cadmium, Total	ND	mg/L	0.0011
Chromium, Total	ND	mg/L	0.0022
Cobalt, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0022
Nickel, Total	ND	mg/L	0.0056
Selenium, Total	ND	mg/L	0.0056
Silver, Total	ND	mg/L	0.0022
Thallium, Total	ND	mg/L	0.0011
Zinc, Total	0.0022J	mg/L	0.0056

LABORATORY CONTROL SAMPLE: 2767320

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	94.1	mg/L	.22	0.21	80 - 120
Arsenic, Total	83.3	mg/L	.22	0.19	80 - 120
Beryllium, Total	96.1	mg/L	.22	0.21	80 - 120
Cadmium, Total	90.9	mg/L	.22	0.20	80 - 120
Chromium, Total	92.9	mg/L	.22	0.21	80 - 120
Cobalt, Total	95.3	mg/L	.22	0.21	80 - 120
Copper, Total	93.4	mg/L	.22	0.21	80 - 120
Lead, Total	98.6	mg/L	.22	0.22	80 - 120
Nickel, Total	94.4	mg/L	.22	0.21	80 - 120
Selenium, Total	88	mg/L	.22	0.20	80 - 120
Silver, Total	91.1	mg/L	.11	0.10	80 - 120
Thallium, Total	96.4	mg/L	.22	0.21	80 - 120
Zinc, Total	95.2	mg/L	.22	0.21	80 - 120

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QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

MATRIX SPIKE: 2767321 DUPLICATE: 2767322 ORIGINAL: 2323443003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Arsenic, Total	.00213	mg/L	.22	.21269	.21224	94.8	94.5	75 - 125	.21	20
Cadmium, Total	.00003	mg/L	.22	.2162	.21327	97.3	96	75 - 125	1.37	20
Chromium, Total	.00373	mg/L	.22	.21906	.21397	96.9	94.6	75 - 125	2.35	20
Copper, Total	.00377	mg/L	.22	.21454	.21208	94.8	93.7	75 - 125	1.16	20
Lead, Total	.00058	mg/L	.22	.23019	.22593	103	101	75 - 125	1.87	20
Nickel, Total	.00272	mg/L	.22	.21384	.21028	95	93.4	75 - 125	1.68	20
Selenium, Total	.00021	mg/L	.22	.18984	.18929	85.3	85.1	75 - 125	.29	20
Silver, Total	.00013	mg/L	.11	.10194	.10094	91.6	90.7	75 - 125	.99	20
Zinc, Total	.00812	mg/L	.22	.20829	.20521	90.1	88.7	75 - 125	1.49	20

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47322 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127001, 2323127002, 2323127003, 2323127004, 2323127005, 2323127006, 2323127007, 2323127008, 2323127009, 2323127010, 2323127011

METHOD BLANK: 2770696

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	0.46J	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	82.2	%	62 - 133
4-Bromofluorobenzene (S)	85.5	%	79 - 114
Dibromofluoromethane (S)	89.3	%	78 - 116
Toluene-d8 (S)	83.5	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2770697

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	98.9	ug/L	20	19.8	78 - 121
1,1,1-Trichloroethane	124	ug/L	20	24.9	66 - 130
1,1,2,2-Tetrachloroethane	84.5	ug/L	20	16.9	74 - 135
1,1,2-Trichloroethane	105	ug/L	20	21.0	82 - 126
1,1-Dichloroethane	124	ug/L	20	24.9	78 - 124
1,1-Dichloroethene	147*	ug/L	20	29.5	63 - 128
1,2,3-Trichlorobenzene	89.6	ug/L	20	17.9	61 - 126
1,2,3-Trichloropropane	86.8	ug/L	20	17.4	75 - 132
1,2,4-Trichlorobenzene	94.3	ug/L	20	18.9	67 - 123
1,2,4-Trimethylbenzene	90.3	ug/L	20	18.1	76 - 125
1,2-Dibromo-3-chloropropane	76.4	ug/L	20	15.3	59 - 133
1,2-Dibromoethane	101	ug/L	20	20.3	80 - 124
1,2-Dichlorobenzene	87.1	ug/L	20	17.4	82 - 118
1,2-Dichloroethane	112	ug/L	20	22.4	70 - 133
1,2-Dichloroethene, Total	126*	ug/L	40	50.2	78 - 125
1,2-Dichloropropane	119	ug/L	20	23.8	81 - 127
1,3-Dichlorobenzene	87.5	ug/L	20	17.5	81 - 118
1,3-Dichloropropane	98.2	ug/L	20	19.6	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.2	80 - 123
1,4-Dichlorobenzene	85.1	ug/L	20	17.0	81 - 116
2,2-Dichloropropane	119	ug/L	20	23.7	64 - 129
2-Butanone	127	ug/L	100	127	50 - 152
2-Chloroethylvinyl ether	78.2	ug/L	20	15.6	1 - 150
2-Hexanone	106	ug/L	100	106	65 - 154
4-Methyl-2-Pentanone(MIBK)	107	ug/L	100	107	71 - 146
Acetone	124	ug/L	100	124	40 - 151
Benzene	111	ug/L	20	22.3	80 - 124
Bromobenzene	88.6	ug/L	20	17.7	81 - 119
Bromochloromethane	121*	ug/L	20	24.2	73 - 117
Bromodichloromethane	111	ug/L	20	22.2	79 - 126
Bromoform	83.7	ug/L	20	16.7	70 - 123
Bromomethane	136	ug/L	20	27.2	45 - 148
Carbon Disulfide	131	ug/L	20	26.1	57 - 131
Carbon Tetrachloride	129	ug/L	20	25.7	62 - 132
Chlorobenzene	99	ug/L	20	19.8	85 - 117
Chlorodibromomethane	99	ug/L	20	19.8	77 - 122
Chloroethane	170*	ug/L	20	34.0	51 - 142
Chloroform	122	ug/L	20	24.3	78 - 122
Chloromethane	127	ug/L	20	25.4	38 - 156
Cyclohexane	132*	ug/L	20	26.3	66 - 130
Dibromomethane	111	ug/L	20	22.1	81 - 125

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dichlorodifluoromethane	118	ug/L	20	23.6	17 - 166
Diisopropyl ether	121	ug/L	20	24.2	74 - 131
Ethyl tert-butyl ether	126*	ug/L	20	25.3	75 - 123
Ethylbenzene	104	ug/L	20	20.8	80 - 124
Freon 113	160*	ug/L	20	31.9	50 - 130
Hexachlorobutadiene	126	ug/L	20	25.1	55 - 128
Isopropylbenzene	96.6	ug/L	20	19.3	73 - 129
Methyl acetate	124	ug/L	20	24.8	70 - 130
Methyl cyclohexane	139*	ug/L	20	27.8	70 - 130
Methyl t-Butyl Ether	113	ug/L	20	22.5	69 - 115
Methylene Chloride	122*	ug/L	20	24.4	76 - 121
Naphthalene	75.4	ug/L	20	15.1	56 - 134
Styrene	86.7	ug/L	20	17.3	79 - 123
Tetrachloroethene	127*	ug/L	20	25.4	72 - 124
Toluene	107	ug/L	20	21.5	80 - 125
Total Xylenes	103	ug/L	60	61.8	79 - 125
Trichloroethene	121	ug/L	20	24.3	77 - 124
Trichlorofluoromethane	120	ug/L	20	23.9	38 - 123
Vinyl Acetate	143*	ug/L	20	28.6	58 - 136
Vinyl Chloride	121	ug/L	20	24.3	27 - 138
cis-1,2-Dichloroethene	122	ug/L	20	24.5	78 - 125
cis-1,3-Dichloropropene	101	ug/L	20	20.1	81 - 121
mp-Xylene	104	ug/L	40	41.8	79 - 125
n-Butylbenzene	100	ug/L	20	20.1	71 - 130
n-Propylbenzene	99.7	ug/L	20	19.9	74 - 122
o-Chlorotoluene	86.9	ug/L	20	17.4	78 - 126
o-Xylene	100	ug/L	20	20.0	79 - 124
p-Chlorotoluene	88.4	ug/L	20	17.7	78 - 125
p-Isopropyltoluene	97.4	ug/L	20	19.5	72 - 123
sec-Butylbenzene	103	ug/L	20	20.5	72 - 127
tert-Amyl methyl ether	121	ug/L	20	24.3	75 - 121
tert-Butyl Alcohol	121	ug/L	100	121	17 - 168
tert-Butylbenzene	91	ug/L	20	18.2	72 - 124
trans-1,2-Dichloroethene	129*	ug/L	20	25.8	71 - 122
trans-1,3-Dichloropropene	100	ug/L	20	20.1	78 - 126
1,2-Dichloroethane-d4 (S)	82.3	%			62 - 133
4-Bromofluorobenzene (S)	84.3	%			79 - 114
Dibromofluoromethane (S)	92.9	%			78 - 116
Toluene-d8 (S)	83.3	%			76 - 127

MATRIX SPIKE: 2770856 DUPLICATE: 2770857 ORIGINAL: 2323127010

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

1,1,1,2-Tetrachloroethane	0	ug/L	20	19.9584	20.6685	99.8	103	78 - 121	3.5	16
1,1,1-Trichloroethane	0	ug/L	20	25.846	25.8952	129	129	66 - 130	.19	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	18.0663	19.029	90.3	95.1	74 - 135	5.19	16
1,1,2-Trichloroethane	0	ug/L	20	20.9663	21.0446	105	105	82 - 126	.37	15
1,1-Dichloroethane	28.2149	ug/L	20	56.374	55.9288	141*	139*	78 - 124	.79	15
1,1-Dichloroethene	72.7311	ug/L	20	106.811	105.375	170*	163*	63 - 128	1.35	21
1,2,3-Trichlorobenzene	0	ug/L	20	19.4944	21.2125	97.5	106	61 - 126	8.44	36
1,2,3-Trichloropropane	0	ug/L	20	17.815	18.7921	89.1	94	75 - 132	5.34	19
1,2,4-Trichlorobenzene	0	ug/L	20	19.5208	22.4454	97.6	112	67 - 123	13.9	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.1693	20.8096	95.8	104	76 - 125	8.21	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.7497	17.3143	78.7	86.6	59 - 133	9.46	26
1,2-Dibromoethane	0	ug/L	20	20.0154	20.3222	100	102	80 - 124	1.52	19
1,2-Dichlorobenzene	0	ug/L	20	18.1217	20.5017	90.6	103	82 - 118	12.3	15
1,2-Dichloroethane	.32812	ug/L	20	23.6424	23.2039	117	114	70 - 133	1.87	19
1,2-Dichloroethene, Total	12.2977	ug/L	40	67.5353	66.7628	138*	136*	78 - 125	1.15	40
1,2-Dichloropropane	0	ug/L	20	25.2202	24.8674	126	124	81 - 127	1.41	15
1,3-Dichlorobenzene	0	ug/L	20	18.2605	20.3198	91.3	102	81 - 118	10.7	16
1,3-Dichloropropane	0	ug/L	20	20.2817	20.7636	101	104	82 - 126	2.35	15
1,3-Dichloropropene, Total	0	ug/L	40	40.096	41.151	100	103	80 - 123	2.6	16
1,4-Dichlorobenzene	0	ug/L	20	18.2382	20.5968	91.2	103	81 - 116	12.1	15
2,2-Dichloropropane	0	ug/L	20	24.4301	24.4225	122	122	64 - 129	.03	18
2-Butanone	0	ug/L	100	123.878	129.232	124	129	50 - 152	4.23	16
2-Chloroethylvinyl ether	0	ug/L	20	32.5809	29.4865	163*	147	1 - 150	9.97	40
2-Hexanone	0	ug/L	100	107.789	110.746	108	111	65 - 154	2.71	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	108.161	114.238	108	114	71 - 146	5.46	16
Acetone	17.6365	ug/L	100	132.991	135.587	115	118	40 - 151	1.93	40
Benzene	.70297	ug/L	20	24.6771	25.5232	120	124	80 - 124	3.37	26
Bromobenzene	0	ug/L	20	17.8513	20.4352	89.3	102	81 - 119	13.5	17
Bromochloromethane	0	ug/L	20	25.1824	25.1119	126*	126*	73 - 117	.28	19
Bromodichloromethane	0	ug/L	20	22.7302	22.5222	114	113	79 - 126	.92	16
Bromoform	0	ug/L	20	17.7807	18.9275	88.9	94.6	70 - 123	6.25	16
Bromomethane	0	ug/L	20	23.8214	21.6116	119	108	45 - 148	9.73	26
Carbon Disulfide	0	ug/L	20	28.8058	28.6976	144*	143*	57 - 131	.38	28
Carbon Tetrachloride	0	ug/L	20	26.0844	27.0487	130	135*	62 - 132	3.63	17
Chlorobenzene	0	ug/L	20	20.5732	22.0309	103	110	85 - 117	6.84	15
Chlorodibromomethane	0	ug/L	20	20.058	20.2608	100	101	77 - 122	1.01	15
Chloroethane	0	ug/L	20	25.834	22.0269	129	110	51 - 142	15.9	24
Chloroform	0	ug/L	20	24.4946	24.9986	122	125*	78 - 122	2.04	16
Chloromethane	0	ug/L	20	18.0325	15.9246	90.2	79.6	38 - 156	12.4	27
Cyclohexane	.34839	ug/L	20	27.6146	28.3849	136*	140*	66 - 130	2.75	20
Dibromomethane	0	ug/L	20	22.4521	22.946	112	115	81 - 125	2.18	16
Dichlorodifluoromethane	0	ug/L	20	12.4657	10.4682	62.3	52.3	17 - 166	17.4	24
Diisopropyl ether	0	ug/L	20	24.4711	24.4964	122	122	74 - 131	.1	15
Ethyl tert-butyl ether	0	ug/L	20	25.0497	25.0539	125*	125*	75 - 123	.02	16
Ethylbenzene	0	ug/L	20	21.2304	22.1028	106	111	80 - 124	4.03	19
Freon 113	0	ug/L	20	32.6221	34.1136	163*	171*	50 - 130	4.47	26

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Hexachlorobutadiene	0	ug/L	20	26.998	29.2372	135*	146*	55 - 128	7.96	35
Isopropylbenzene	0	ug/L	20	20.6264	22.1605	103	111	73 - 129	7.17	18
Methyl acetate	0	ug/L	20	20.8711	21.3463	104	107	70 - 130	2.25	18
Methyl cyclohexane	0	ug/L	20	28.1414	29.975	141*	150*	70 - 130	6.31	18
Methyl t-Butyl Ether	0	ug/L	20	22.7276	23.0638	114	115	69 - 115	1.47	20
Methylene Chloride	0	ug/L	20	26.5502	25.6731	133*	128*	76 - 121	3.36	17
Naphthalene	0	ug/L	20	16.4071	18.9551	82	94.8	56 - 134	14.4	40
Styrene	0	ug/L	20	18.2358	20.0982	91.2	100	79 - 123	9.72	16
Tetrachloroethene	6.06213	ug/L	20	29.2104	30.7372	116	123	72 - 124	5.09	38
Toluene	0	ug/L	20	21.8671	23.0205	109	115	80 - 125	5.14	20
Total Xylenes	0	ug/L	60	64.5839	66.1405	108	110	79 - 125	2.38	35
Trichloroethene	20.4031	ug/L	20	46.2419	46.0496	129*	128*	77 - 124	.42	18
Trichlorofluoromethane	0	ug/L	20	18.8742	16.1797	94.4	80.9	38 - 123	15.4	23
Vinyl Acetate	0	ug/L	20	21.2945	22.0412	106	110	58 - 136	3.45	17
Vinyl Chloride	8.11519	ug/L	20	25.8793	23.347	88.8	76.2	27 - 138	10.3	40
cis-1,2-Dichloroethene	12.2977	ug/L	20	39.5857	38.6434	136*	132*	78 - 125	2.41	21
cis-1,3-Dichloropropene	0	ug/L	20	19.709	20.6157	98.5	103	81 - 121	4.5	16
mp-Xylene	0	ug/L	40	44.1692	44.8714	110	112	79 - 125	1.58	21
n-Butylbenzene	0	ug/L	20	20.8592	23.1003	104	116	71 - 130	10.2	20
n-Propylbenzene	0	ug/L	20	20.1825	22.38	101	112	74 - 122	10.3	20
o-Chlorotoluene	0	ug/L	20	18.4165	19.9241	92.1	99.6	78 - 126	7.86	17
o-Xylene	0	ug/L	20	20.4146	21.2691	102	106	79 - 124	4.1	19
p-Chlorotoluene	0	ug/L	20	18.5394	19.9434	92.7	99.7	78 - 125	7.3	16
p-Isopropyltoluene	0	ug/L	20	21.0755	22.3216	105	112	72 - 123	5.74	17
sec-Butylbenzene	0	ug/L	20	21.4037	23.5219	107	118	72 - 127	9.43	17
tert-Amyl methyl ether	0	ug/L	20	23.4915	24.1187	117	121	75 - 121	2.63	40
tert-Butyl Alcohol	0	ug/L	100	122.533	123.667	123	124	17 - 168	.92	40
tert-Butylbenzene	0	ug/L	20	19.7524	21.0403	98.8	105	72 - 124	6.31	17
trans-1,2-Dichloroethene	0	ug/L	20	27.9495	28.1194	140*	141*	71 - 122	.61	22
trans-1,3-Dichloropropene	0	ug/L	20	20.387	20.5353	102	103	78 - 126	.72	18
1,2-Dichloroethane-d4 (S)	82.5	%				82.5	80.3	62 - 133		
4-Bromofluorobenzene (S)	86.7	%				86.7	92.6	79 - 114		
Dibromofluoromethane (S)	92.5	%				92.5	92.2	78 - 116		
Toluene-d8 (S)	80.8	%				80.8	83	76 - 127		

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47323 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127012, 2323127013, 2323127015

METHOD BLANK: 2770709

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	ND	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	96.4	%	62 - 133
4-Bromofluorobenzene (S)	93.3	%	79 - 114
Dibromofluoromethane (S)	82.7	%	78 - 116
Toluene-d8 (S)	97.2	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2770710

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	99.9	ug/L	20	20.0	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.9	66 - 130
1,1,2,2-Tetrachloroethane	91.6	ug/L	20	18.3	74 - 135
1,1,2-Trichloroethane	102	ug/L	20	20.4	82 - 126
1,1-Dichloroethane	98.3	ug/L	20	19.7	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.8	63 - 128
1,2,3-Trichlorobenzene	83.5	ug/L	20	16.7	61 - 126
1,2,3-Trichloropropane	95.3	ug/L	20	19.1	75 - 132
1,2,4-Trichlorobenzene	84.2	ug/L	20	16.8	67 - 123
1,2,4-Trimethylbenzene	91.4	ug/L	20	18.3	76 - 125
1,2-Dibromo-3-chloropropane	72.5	ug/L	20	14.5	59 - 133
1,2-Dibromoethane	105	ug/L	20	21.1	80 - 124
1,2-Dichlorobenzene	97.2	ug/L	20	19.4	82 - 118
1,2-Dichloroethane	94	ug/L	20	18.8	70 - 133
1,2-Dichloroethene, Total	102	ug/L	40	40.6	78 - 125
1,2-Dichloropropane	96.2	ug/L	20	19.2	81 - 127
1,3-Dichlorobenzene	97	ug/L	20	19.4	81 - 118
1,3-Dichloropropane	104	ug/L	20	20.8	82 - 126
1,3-Dichloropropene, Total	100	ug/L	40	40.2	80 - 123
1,4-Dichlorobenzene	92	ug/L	20	18.4	81 - 116
2,2-Dichloropropane	110	ug/L	20	22.0	64 - 129
2-Butanone	106	ug/L	100	106	50 - 152
2-Chloroethylvinyl ether	68.3	ug/L	20	13.7	1 - 150
2-Hexanone	105	ug/L	100	105	65 - 154
4-Methyl-2-Pentanone(MIBK)	91.9	ug/L	100	91.9	71 - 146
Acetone	145	ug/L	100	145	40 - 151
Benzene	100	ug/L	20	20.1	80 - 124
Bromobenzene	101	ug/L	20	20.2	81 - 119
Bromochloromethane	97.2	ug/L	20	19.4	73 - 117
Bromodichloromethane	91.3	ug/L	20	18.3	79 - 126
Bromoform	80.1	ug/L	20	16.0	70 - 123
Bromomethane	85.1	ug/L	20	17.0	45 - 148
Carbon Disulfide	95.4	ug/L	20	19.1	57 - 131
Carbon Tetrachloride	102	ug/L	20	20.3	62 - 132
Chlorobenzene	94.4	ug/L	20	18.9	85 - 117
Chlorodibromomethane	97	ug/L	20	19.4	77 - 122
Chloroethane	90	ug/L	20	18.0	51 - 142
Chloroform	99.8	ug/L	20	20.0	78 - 122
Chloromethane	72.2	ug/L	20	14.4	38 - 156
Cyclohexane	110	ug/L	20	22.0	66 - 130
Dibromomethane	91.7	ug/L	20	18.3	81 - 125

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dichlorodifluoromethane	74.2	ug/L	20	14.8	17 - 166
Diisopropyl ether	89.8	ug/L	20	18.0	74 - 131
Ethyl tert-butyl ether	81.9	ug/L	20	16.4	75 - 123
Ethylbenzene	104	ug/L	20	20.7	80 - 124
Freon 113	123	ug/L	20	24.6	50 - 130
Hexachlorobutadiene	101	ug/L	20	20.2	55 - 128
Isopropylbenzene	94.4	ug/L	20	18.9	73 - 129
Methyl acetate	105	ug/L	20	21.0	70 - 130
Methyl cyclohexane	118	ug/L	20	23.6	70 - 130
Methyl t-Butyl Ether	85.7	ug/L	20	17.1	69 - 115
Methylene Chloride	102	ug/L	20	20.5	76 - 121
Naphthalene	75	ug/L	20	15.0	56 - 134
Styrene	88.8	ug/L	20	17.8	79 - 123
Tetrachloroethene	110	ug/L	20	22.0	72 - 124
Toluene	112	ug/L	20	22.4	80 - 125
Total Xylenes	104	ug/L	60	62.5	79 - 125
Trichloroethene	102	ug/L	20	20.5	77 - 124
Trichlorofluoromethane	91.8	ug/L	20	18.4	38 - 123
Vinyl Acetate	87.7	ug/L	20	17.5	58 - 136
Vinyl Chloride	77.9	ug/L	20	15.6	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.2	78 - 125
cis-1,3-Dichloropropene	98.7	ug/L	20	19.7	81 - 121
mp-Xylene	110	ug/L	40	44.1	79 - 125
n-Butylbenzene	106	ug/L	20	21.3	71 - 130
n-Propylbenzene	94.1	ug/L	20	18.8	74 - 122
o-Chlorotoluene	92.7	ug/L	20	18.5	78 - 126
o-Xylene	92.1	ug/L	20	18.4	79 - 124
p-Chlorotoluene	108	ug/L	20	21.7	78 - 125
p-Isopropyltoluene	92	ug/L	20	18.4	72 - 123
sec-Butylbenzene	100	ug/L	20	20.1	72 - 127
tert-Amyl methyl ether	80.7	ug/L	20	16.1	75 - 121
tert-Butyl Alcohol	75.9	ug/L	100	75.9	17 - 168
tert-Butylbenzene	93	ug/L	20	18.6	72 - 124
trans-1,2-Dichloroethene	102	ug/L	20	20.4	71 - 122
trans-1,3-Dichloropropene	102	ug/L	20	20.4	78 - 126
1,2-Dichloroethane-d4 (S)	91.1	%			62 - 133
4-Bromofluorobenzene (S)	95.1	%			79 - 114
Dibromofluoromethane (S)	82.6	%			78 - 116
Toluene-d8 (S)	93.7	%			76 - 127

MATRIX SPIKE: 2770997 DUPLICATE: 2770998 ORIGINAL: 2323127012

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

1,1,1,2-Tetrachloroethane	0	ug/L	20	20.8418	20.8845	104	104	78 - 121	.2	16
1,1,1-Trichloroethane	0	ug/L	20	22.8276	22.4735	114	112	66 - 130	1.56	20
1,1,2,2-Tetrachloroethane	0	ug/L	20	19.9315	19.2472	99.7	96.2	74 - 135	3.49	16
1,1,2-Trichloroethane	0	ug/L	20	19.737	19.883	98.7	99.4	82 - 126	.74	15
1,1-Dichloroethane	0	ug/L	20	21.2818	18.0568	106	90.3	78 - 124	16.4	15
1,1-Dichloroethene	0	ug/L	20	19.7482	19.5254	98.7	97.6	63 - 128	1.13	21
1,2,3-Trichlorobenzene	0	ug/L	20	15.4012	16.1312	77	80.7	61 - 126	4.63	36
1,2,3-Trichloropropane	0	ug/L	20	21.4373	20.2309	107	101	75 - 132	5.79	19
1,2,4-Trichlorobenzene	0	ug/L	20	14.9184	16.1817	74.6	80.9	67 - 123	8.12	22
1,2,4-Trimethylbenzene	0	ug/L	20	19.6579	19.3731	98.3	96.9	76 - 125	1.46	24
1,2-Dibromo-3-chloropropane	0	ug/L	20	15.3816	15.158	76.9	75.8	59 - 133	1.46	26
1,2-Dibromoethane	0	ug/L	20	20.5193	20.687	103	103	80 - 124	.81	19
1,2-Dichlorobenzene	0	ug/L	20	20.7676	20.6231	104	103	82 - 118	.7	15
1,2-Dichloroethane	0	ug/L	20	19.8775	19.7374	99.4	98.7	70 - 133	.71	19
1,2-Dichloroethene, Total	0	ug/L	40	43.9949	38.2037	110	95.5	78 - 125	14.1	40
1,2-Dichloropropane	0	ug/L	20	21.5206	21.4358	108	107	81 - 127	.39	15
1,3-Dichlorobenzene	0	ug/L	20	20.528	20.317	103	102	81 - 118	1.03	16
1,3-Dichloropropane	0	ug/L	20	20.935	20.9534	105	105	82 - 126	.09	15
1,3-Dichloropropene, Total	0	ug/L	40	38.8426	39.4529	97.1	98.6	80 - 123	1.56	16
1,4-Dichlorobenzene	0	ug/L	20	19.3225	19.1346	96.6	95.7	81 - 116	.98	15
2,2-Dichloropropane	0	ug/L	20	21.6988	21.1789	108	106	64 - 129	2.43	18
2-Butanone	0	ug/L	100	88.3399	93.5535	88.3	93.6	50 - 152	5.73	16
2-Chloroethylvinyl ether	0	ug/L	20	.10071	.09949	.5*	.5*	1 - 150	1.22	40
2-Hexanone	0	ug/L	100	90.2221	94.0332	90.2	94	65 - 154	4.14	17
4-Methyl-2-Pentanone(MIBK)	0	ug/L	100	89.8488	91.2903	89.8	91.3	71 - 146	1.59	16
Acetone	7.38144	ug/L	100	103.533	81.0743	96.2	73.7	40 - 151	24.3	40
Benzene	0	ug/L	20	21.5268	21.3386	108	107	80 - 124	.88	26
Bromobenzene	0	ug/L	20	22.2293	21.9965	111	110	81 - 119	1.05	17
Bromochloromethane	0	ug/L	20	20.3892	19.6793	102	98.4	73 - 117	3.54	19
Bromodichloromethane	.30647	ug/L	20	20.0637	20.2014	98.8	99.5	79 - 126	.68	16
Bromoform	0	ug/L	20	18.2698	17.6786	91.3	88.4	70 - 123	3.29	16
Bromomethane	0	ug/L	20	17.1183	16.5727	85.6	82.9	45 - 148	3.24	26
Carbon Disulfide	0	ug/L	20	16.0126	15.8113	80.1	79.1	57 - 131	1.27	28
Carbon Tetrachloride	0	ug/L	20	22.0504	22.0412	110	110	62 - 132	.04	17
Chlorobenzene	0	ug/L	20	19.8349	19.8694	99.2	99.3	85 - 117	.17	15
Chlorodibromomethane	0	ug/L	20	19.1737	19.2447	95.9	96.2	77 - 122	.37	15
Chloroethane	0	ug/L	20	20.0961	20.4742	100	102	51 - 142	1.86	24
Chloroform	1.08031	ug/L	20	22.5588	22.3365	107	106	78 - 122	.99	16
Chloromethane	0	ug/L	20	16.5696	16.4586	82.8	82.3	38 - 156	.67	27
Cyclohexane	0	ug/L	20	23.6553	23.515	118	118	66 - 130	.59	20
Dibromomethane	0	ug/L	20	19.187	18.7726	95.9	93.9	81 - 125	2.18	16
Dichlorodifluoromethane	0	ug/L	20	16.6515	16.3327	83.3	81.7	17 - 166	1.93	24
Diisopropyl ether	0	ug/L	20	19.176	15.9838	95.9	79.9	74 - 131	18.2	15
Ethyl tert-butyl ether	0	ug/L	20	17.7629	15.4881	88.8	77.4	75 - 123	13.7	16
Ethylbenzene	0	ug/L	20	21.5675	22.0161	108	110	80 - 124	2.06	19
Freon 113	0	ug/L	20	22.5339	22.0683	113	110	50 - 130	2.09	26

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Hexachlorobutadiene	0	ug/L	20	15.6584	17.5789	78.3	87.9	55 - 128	11.6	35
Isopropylbenzene	0	ug/L	20	22.3085	21.7921	112	109	73 - 129	2.34	18
Methyl acetate	0	ug/L	20	18.3728	14.7341	91.9	73.7	70 - 130	22	18
Methyl cyclohexane	0	ug/L	20	20.8832	21.2523	104	106	70 - 130	1.75	18
Methyl t-Butyl Ether	0	ug/L	20	17.8143	15.6105	89.1	78.1	69 - 115	13.2	20
Methylene Chloride	0	ug/L	20	21.8097	18.1096	109	90.5	76 - 121	18.5	17
Naphthalene	0	ug/L	20	17.2224	16.9307	86.1	84.7	56 - 134	1.71	40
Styrene	0	ug/L	20	20.3364	19.7473	102	98.7	79 - 123	2.94	16
Tetrachloroethene	0	ug/L	20	21.16	21.485	106	107	72 - 124	1.52	38
Toluene	0	ug/L	20	23.3281	23.4276	117	117	80 - 125	.43	20
Total Xylenes	0	ug/L	60	65.1681	65.6729	109	109	79 - 125	.77	35
Trichloroethene	0	ug/L	20	21.7743	21.6363	109	108	77 - 124	.64	18
Trichlorofluoromethane	0	ug/L	20	19.5405	19.6371	97.7	98.2	38 - 123	.49	23
Vinyl Acetate	0	ug/L	20	15.938	14.1043	79.7	70.5	58 - 136	12.2	17
Vinyl Chloride	0	ug/L	20	16.6973	16.7392	83.5	83.7	27 - 138	.25	40
cis-1,2-Dichloroethene	0	ug/L	20	22.0335	19.7956	110	99	78 - 125	10.7	21
cis-1,3-Dichloropropene	0	ug/L	20	18.9325	19.371	94.7	96.9	81 - 121	2.29	16
mp-Xylene	0	ug/L	40	46.5044	46.6958	116	117	79 - 125	.41	21
n-Butylbenzene	0	ug/L	20	19.6511	20.2038	98.3	101	71 - 130	2.77	20
n-Propylbenzene	0	ug/L	20	20.3901	20.2271	102	101	74 - 122	.8	20
o-Chlorotoluene	0	ug/L	20	20.6564	20.2955	103	101	78 - 126	1.76	17
o-Xylene	0	ug/L	20	18.6637	18.9771	93.3	94.9	79 - 124	1.67	19
p-Chlorotoluene	0	ug/L	20	23.8203	23.2737	119	116	78 - 125	2.32	16
p-Isopropyltoluene	0	ug/L	20	18.2693	18.4403	91.3	92.2	72 - 123	.93	17
sec-Butylbenzene	0	ug/L	20	19.7748	20.0728	98.9	100	72 - 127	1.5	17
tert-Amyl methyl ether	0	ug/L	20	17.2867	17.5835	86.4	87.9	75 - 121	1.7	40
tert-Butyl Alcohol	0	ug/L	100	77.9516	73.223	78	73.2	17 - 168	6.26	40
tert-Butylbenzene	0	ug/L	20	19.7183	19.8008	98.6	99	72 - 124	.42	17
trans-1,2-Dichloroethene	0	ug/L	20	21.9614	18.4081	110	92	71 - 122	17.6	22
trans-1,3-Dichloropropene	0	ug/L	20	19.91	20.082	99.6	100	78 - 126	.86	18
1,2-Dichloroethane-d4 (S)	91.5	%				91.5	91.4	62 - 133		
4-Bromofluorobenzene (S)	97.7	%				97.7	97.9	79 - 114		
Dibromofluoromethane (S)	82.4	%				82.4	82.2	78 - 116		
Toluene-d8 (S)	87.4	%				87.4	89.3	76 - 127		

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47326 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127014

METHOD BLANK: 2770858

Parameter	Blank Result	Units	Reporting Limit
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	2.3J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.6	%	62 - 133
4-Bromofluorobenzene (S)	111	%	79 - 114
Dibromofluoromethane (S)	83.2	%	78 - 116
Toluene-d8 (S)	94.3	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2770859

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,1,1,2-Tetrachloroethane	97.5	ug/L	20	19.5	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.8	66 - 130
1,1,2,2-Tetrachloroethane	97.6	ug/L	20	19.5	74 - 135
1,1,2-Trichloroethane	95.7	ug/L	20	19.1	82 - 126
1,1-Dichloroethane	99.3	ug/L	20	19.9	78 - 124
1,1-Dichloroethene	108	ug/L	20	21.6	63 - 128
1,2,3-Trichlorobenzene	89.8	ug/L	20	18.0	61 - 126
1,2,3-Trichloropropane	103	ug/L	20	20.6	75 - 132
1,2,4-Trichlorobenzene	85	ug/L	20	17.0	67 - 123
1,2,4-Trimethylbenzene	92.1	ug/L	20	18.4	76 - 125
1,2-Dibromo-3-chloropropane	81	ug/L	20	16.2	59 - 133
1,2-Dibromoethane	98.4	ug/L	20	19.7	80 - 124
1,2-Dichlorobenzene	95.5	ug/L	20	19.1	82 - 118
1,2-Dichloroethane	93.3	ug/L	20	18.7	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.4	78 - 125
1,2-Dichloropropane	98.2	ug/L	20	19.6	81 - 127
1,3-Dichlorobenzene	94.2	ug/L	20	18.8	81 - 118
1,3-Dichloropropane	98	ug/L	20	19.6	82 - 126
1,3-Dichloropropene, Total	91	ug/L	40	36.4	80 - 123
1,4-Dichlorobenzene	89.9	ug/L	20	18.0	81 - 116
2,2-Dichloropropane	87.1	ug/L	20	17.4	64 - 129
2-Butanone	93.1	ug/L	100	93.1	50 - 152
2-Chloroethylvinyl ether	76.2	ug/L	20	15.2	1 - 150
2-Hexanone	87.8	ug/L	100	87.8	65 - 154
4-Methyl-2-Pentanone(MIBK)	86	ug/L	100	86.0	71 - 146
Acetone	96.1	ug/L	100	96.1	40 - 151
Benzene	99.6	ug/L	20	19.9	80 - 124
Bromobenzene	109	ug/L	20	21.7	81 - 119
Bromochloromethane	94.2	ug/L	20	18.8	73 - 117
Bromodichloromethane	91.5	ug/L	20	18.3	79 - 126
Bromoform	98.7	ug/L	20	19.7	70 - 123
Bromomethane	87.8	ug/L	20	17.6	45 - 148
Carbon Disulfide	94.3	ug/L	20	18.9	57 - 131
Carbon Tetrachloride	100	ug/L	20	20.0	62 - 132
Chlorobenzene	92	ug/L	20	18.4	85 - 117
Chlorodibromomethane	93.1	ug/L	20	18.6	77 - 122
Chloroethane	93.4	ug/L	20	18.7	51 - 142
Chloroform	100	ug/L	20	20.1	78 - 122
Chloromethane	78.9	ug/L	20	15.8	38 - 156
Cyclohexane	108	ug/L	20	21.6	66 - 130
Dibromomethane	90.2	ug/L	20	18.0	81 - 125

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dichlorodifluoromethane	74.4	ug/L	20	14.9	17 - 166
Diisopropyl ether	87.7	ug/L	20	17.5	74 - 131
Ethyl tert-butyl ether	80.8	ug/L	20	16.2	75 - 123
Ethylbenzene	100	ug/L	20	20.0	80 - 124
Freon 113	117	ug/L	20	23.4	50 - 130
Hexachlorobutadiene	102	ug/L	20	20.5	55 - 128
Isopropylbenzene	107	ug/L	20	21.5	73 - 129
Methyl acetate	105	ug/L	20	21.0	70 - 130
Methyl cyclohexane	101	ug/L	20	20.2	70 - 130
Methyl t-Butyl Ether	83.3	ug/L	20	16.7	69 - 115
Methylene Chloride	101	ug/L	20	20.2	76 - 121
Naphthalene	84.5	ug/L	20	16.9	56 - 134
Styrene	97	ug/L	20	19.4	79 - 123
Tetrachloroethene	103	ug/L	20	20.5	72 - 124
Toluene	107	ug/L	20	21.4	80 - 125
Total Xylenes	99.9	ug/L	60	60.0	79 - 125
Trichlorofluoromethane	89.6	ug/L	20	17.9	38 - 123
Vinyl Acetate	86.4	ug/L	20	17.3	58 - 136
Vinyl Chloride	80.5	ug/L	20	16.1	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.1	78 - 125
cis-1,3-Dichloropropene	89.5	ug/L	20	17.9	81 - 121
mp-Xylene	107	ug/L	40	42.9	79 - 125
n-Butylbenzene	94.7	ug/L	20	18.9	71 - 130
n-Propylbenzene	99	ug/L	20	19.8	74 - 122
o-Chlorotoluene	90.9	ug/L	20	18.2	78 - 126
o-Xylene	85.5	ug/L	20	17.1	79 - 124
p-Chlorotoluene	113	ug/L	20	22.6	78 - 125
p-Isopropyltoluene	85.9	ug/L	20	17.2	72 - 123
sec-Butylbenzene	91.1	ug/L	20	18.2	72 - 127
tert-Amyl methyl ether	79.6	ug/L	20	15.9	75 - 121
tert-Butyl Alcohol	76.8	ug/L	100	76.8	17 - 168
tert-Butylbenzene	96.2	ug/L	20	19.2	72 - 124
trans-1,2-Dichloroethene	101	ug/L	20	20.3	71 - 122
trans-1,3-Dichloropropene	92.5	ug/L	20	18.5	78 - 126
1,2-Dichloroethane-d4 (S)	88.8	%			62 - 133
4-Bromofluorobenzene (S)	121*	%			79 - 114
Dibromofluoromethane (S)	83.9	%			78 - 116
Toluene-d8 (S)	92.5	%			76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47336 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127014

METHOD BLANK: 2771294

Parameter	Blank Result	Units	Reporting Limit
Trichloroethene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethene, Total	ND	ug/L	2.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	1.3J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	94.3	%	62 - 133
4-Bromofluorobenzene (S)	86.8	%	79 - 114
Dibromofluoromethane (S)	82.4	%	78 - 116
Toluene-d8 (S)	84	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2771295

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Trichloroethene	99.2	ug/L	20	19.8	77 - 124
1,1,1,2-Tetrachloroethane	102	ug/L	20	20.4	78 - 121
1,1,1-Trichloroethane	104	ug/L	20	20.7	66 - 130
1,1,2,2-Tetrachloroethane	86.1	ug/L	20	17.2	74 - 135
1,1,2-Trichloroethane	104	ug/L	20	20.8	82 - 126
1,1-Dichloroethane	100	ug/L	20	20.1	78 - 124
1,1-Dichloroethene	105	ug/L	20	21.1	63 - 128
1,2,3-Trichlorobenzene	78.8	ug/L	20	15.8	61 - 126
1,2,3-Trichloropropane	97.5	ug/L	20	19.5	75 - 132
1,2,4-Trichlorobenzene	80.9	ug/L	20	16.2	67 - 123
1,2,4-Trimethylbenzene	87	ug/L	20	17.4	76 - 125
1,2-Dibromo-3-chloropropane	67.6	ug/L	20	13.5	59 - 133
1,2-Dibromoethane	106	ug/L	20	21.1	80 - 124
1,2-Dichlorobenzene	96.7	ug/L	20	19.3	82 - 118
1,2-Dichloroethane	94.2	ug/L	20	18.8	70 - 133
1,2-Dichloroethene, Total	101	ug/L	40	40.4	78 - 125
1,2-Dichloropropane	100	ug/L	20	20.0	81 - 127
1,3-Dichlorobenzene	95.5	ug/L	20	19.1	81 - 118
1,3-Dichloropropane	103	ug/L	20	20.6	82 - 126
1,3-Dichloropropene, Total	102	ug/L	40	40.8	80 - 123
1,4-Dichlorobenzene	90.8	ug/L	20	18.2	81 - 116
2,2-Dichloropropane	106	ug/L	20	21.1	64 - 129
2-Butanone	91.9	ug/L	100	91.9	50 - 152
2-Chloroethylvinyl ether	64.2	ug/L	20	12.8	1 - 150
2-Hexanone	89.9	ug/L	100	89.9	65 - 154
4-Methyl-2-Pentanone(MIBK)	90.5	ug/L	100	90.5	71 - 146
Acetone	95.9	ug/L	100	95.9	40 - 151
Benzene	100	ug/L	20	20.0	80 - 124
Bromobenzene	102	ug/L	20	20.3	81 - 119
Bromochloromethane	96.6	ug/L	20	19.3	73 - 117
Bromodichloromethane	92.9	ug/L	20	18.6	79 - 126
Bromoform	79.3	ug/L	20	15.9	70 - 123
Bromomethane	73.7	ug/L	20	14.7	45 - 148
Carbon Disulfide	97.3	ug/L	20	19.5	57 - 131
Carbon Tetrachloride	102	ug/L	20	20.5	62 - 132
Chlorobenzene	94.5	ug/L	20	18.9	85 - 117
Chlorodibromomethane	94.6	ug/L	20	18.9	77 - 122
Chloroethane	83.7	ug/L	20	16.7	51 - 142
Chloroform	98	ug/L	20	19.6	78 - 122
Chloromethane	66.1	ug/L	20	13.2	38 - 156
Cyclohexane	107	ug/L	20	21.4	66 - 130

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Dibromomethane	91.3	ug/L	20	18.3	81 - 125
Dichlorodifluoromethane	58.7	ug/L	20	11.7	17 - 166
Diisopropyl ether	90.4	ug/L	20	18.1	74 - 131
Ethyl tert-butyl ether	85.1	ug/L	20	17.0	75 - 123
Ethylbenzene	102	ug/L	20	20.5	80 - 124
Freon 113	116	ug/L	20	23.1	50 - 130
Hexachlorobutadiene	104	ug/L	20	20.8	55 - 128
Isopropylbenzene	95	ug/L	20	19.0	73 - 129
Methyl acetate	101	ug/L	20	20.2	70 - 130
Methyl cyclohexane	108	ug/L	20	21.7	70 - 130
Methyl t-Butyl Ether	87.7	ug/L	20	17.5	69 - 115
Methylene Chloride	103	ug/L	20	20.6	76 - 121
Naphthalene	67.5	ug/L	20	13.5	56 - 134
Styrene	84.7	ug/L	20	16.9	79 - 123
Tetrachloroethene	111	ug/L	20	22.1	72 - 124
Toluene	116	ug/L	20	23.2	80 - 125
Total Xylenes	101	ug/L	60	60.9	79 - 125
Trichlorofluoromethane	83.5	ug/L	20	16.7	38 - 123
Vinyl Acetate	91.5	ug/L	20	18.3	58 - 136
Vinyl Chloride	71	ug/L	20	14.2	27 - 138
cis-1,2-Dichloroethene	101	ug/L	20	20.2	78 - 125
cis-1,3-Dichloropropene	99.3	ug/L	20	19.9	81 - 121
mp-Xylene	109	ug/L	40	43.7	79 - 125
n-Butylbenzene	104	ug/L	20	20.8	71 - 130
n-Propylbenzene	92	ug/L	20	18.4	74 - 122
o-Chlorotoluene	88.6	ug/L	20	17.7	78 - 126
o-Xylene	85.9	ug/L	20	17.2	79 - 124
p-Chlorotoluene	102	ug/L	20	20.4	78 - 125
p-Isopropyltoluene	90.9	ug/L	20	18.2	72 - 123
sec-Butylbenzene	97.1	ug/L	20	19.4	72 - 127
tert-Amyl methyl ether	84.5	ug/L	20	16.9	75 - 121
tert-Butyl Alcohol	81.4	ug/L	100	81.4	17 - 168
tert-Butylbenzene	92.3	ug/L	20	18.5	72 - 124
trans-1,2-Dichloroethene	101	ug/L	20	20.2	71 - 122
trans-1,3-Dichloropropene	105	ug/L	20	20.9	78 - 126
1,2-Dichloroethane-d4 (S)	84.8	%			62 - 133
4-Bromofluorobenzene (S)	94.8	%			79 - 114
Dibromofluoromethane (S)	83	%			78 - 116
Toluene-d8 (S)	97.1	%			76 - 127

MATRIX SPIKE: 2771691 DUPLICATE: 2771692 ORIGINAL: 2323597001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

1,2,4-Trimethylbenzene	0	ug/L	20	19.2979	19.2682	96.5	96.3	76 - 125	.15	24
Benzene	0	ug/L	20	21.7085	21.755	109	109	80 - 124	.21	26
Ethylbenzene	0	ug/L	20	21.341	21.4698	107	107	80 - 124	.6	19
Isopropylbenzene	0	ug/L	20	21.7094	22.4	109	112	73 - 129	3.13	18
Methyl t-Butyl Ether	0	ug/L	20	17.5283	17.7216	87.6	88.6	69 - 115	1.1	20
Naphthalene	0	ug/L	20	14.1073	13.8638	70.5	69.3	56 - 134	1.74	40
Toluene	0	ug/L	20	22.9594	22.5143	115	113	80 - 125	1.96	20
1,2-Dichloroethane-d4 (S)	87.1	%				87.1	93.6	62 - 133		
4-Bromofluorobenzene (S)	96.9	%				96.9	96.7	79 - 114		
Dibromofluoromethane (S)	83.7	%				83.7	84.8	78 - 116		
Toluene-d8 (S)	86.3	%				86.3	87	76 - 127		

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

QC Batch: VOMS/47346 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2323127015

METHOD BLANK: 2771849

Parameter	Blank Result	Units	Reporting Limit
1,2-Dichloroethene, Total	ND	ug/L	2.0
Trichloroethene	ND	ug/L	1.0
cis-1,2-Dichloroethene	ND	ug/L	1.0
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
1,2,3-Trichlorobenzene	ND	ug/L	2.0
1,2,3-Trichloropropane	ND	ug/L	2.0
1,2,4-Trichlorobenzene	ND	ug/L	2.0
1,2,4-Trimethylbenzene	ND	ug/L	1.0
1,2-Dibromo-3-chloropropane	ND	ug/L	7.0
1,2-Dibromoethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichloropropane	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	2.0
1,4-Dichlorobenzene	ND	ug/L	1.0
2,2-Dichloropropane	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
2-Hexanone	ND	ug/L	5.0
4-Methyl-2-Pentanone(MIBK)	ND	ug/L	5.0
Acetone	ND	ug/L	10.0
Benzene	ND	ug/L	1.0
Bromobenzene	ND	ug/L	1.0
Bromochloromethane	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	1.0
Bromomethane	ND	ug/L	1.0
Carbon Disulfide	ND	ug/L	1.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
Cyclohexane	ND	ug/L	1.0
Dibromomethane	ND	ug/L	1.0
Dichlorodifluoromethane	ND	ug/L	1.0
Diisopropyl ether	ND	ug/L	1.0
Ethyl tert-butyl ether	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Freon 113	ND	ug/L	1.0
Hexachlorobutadiene	1.1J	ug/L	5.0
Isopropylbenzene	ND	ug/L	1.0
Methyl acetate	ND	ug/L	2.0
Methyl cyclohexane	ND	ug/L	1.0
Methyl t-Butyl Ether	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Naphthalene	ND	ug/L	2.0
Styrene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
Total Xylenes	ND	ug/L	3.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Acetate	ND	ug/L	5.0
Vinyl Chloride	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
mp-Xylene	ND	ug/L	2.0
n-Butylbenzene	ND	ug/L	2.0
n-Propylbenzene	ND	ug/L	1.0
o-Chlorotoluene	ND	ug/L	1.0
o-Xylene	ND	ug/L	1.0
p-Chlorotoluene	ND	ug/L	1.0
p-Isopropyltoluene	ND	ug/L	1.0
sec-Butylbenzene	ND	ug/L	1.0
tert-Amyl methyl ether	ND	ug/L	1.0
tert-Butyl Alcohol	ND	ug/L	10.0
tert-Butylbenzene	ND	ug/L	2.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	90.2	%	62 - 133
4-Bromofluorobenzene (S)	93.5	%	79 - 114
Dibromofluoromethane (S)	81.8	%	78 - 116
Toluene-d8 (S)	87.7	%	76 - 127

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

LABORATORY CONTROL SAMPLE: 2771850

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2-Dichloroethene, Total	103	ug/L	40	41.2	78 - 125
Trichloroethene	107	ug/L	20	21.3	77 - 124
cis-1,2-Dichloroethene	103	ug/L	20	20.5	78 - 125
1,1,1,2-Tetrachloroethane	102	ug/L	20	20.4	78 - 121
1,1,1-Trichloroethane	113	ug/L	20	22.7	66 - 130
1,1,2,2-Tetrachloroethane	91.8	ug/L	20	18.4	74 - 135
1,1,2-Trichloroethane	91.1	ug/L	20	18.2	82 - 126
1,1-Dichloroethane	98.1	ug/L	20	19.6	78 - 124
1,1-Dichloroethene	109	ug/L	20	21.9	63 - 128
1,2,3-Trichlorobenzene	66.2	ug/L	20	13.2	61 - 126
1,2,3-Trichloropropane	98.3	ug/L	20	19.7	75 - 132
1,2,4-Trichlorobenzene	79.3	ug/L	20	15.9	67 - 123
1,2,4-Trimethylbenzene	94.6	ug/L	20	18.9	76 - 125
1,2-Dibromo-3-chloropropane	70.2	ug/L	20	14.0	59 - 133
1,2-Dibromoethane	97.9	ug/L	20	19.6	80 - 124
1,2-Dichlorobenzene	99.8	ug/L	20	20.0	82 - 118
1,2-Dichloroethane	103	ug/L	20	20.6	70 - 133
1,2-Dichloropropane	99.1	ug/L	20	19.8	81 - 127
1,3-Dichlorobenzene	101	ug/L	20	20.1	81 - 118
1,3-Dichloropropane	94.2	ug/L	20	18.8	82 - 126
1,3-Dichloropropene, Total	94.1	ug/L	40	37.6	80 - 123
1,4-Dichlorobenzene	95.2	ug/L	20	19.0	81 - 116
2,2-Dichloropropane	124	ug/L	20	24.8	64 - 129
2-Butanone	104	ug/L	100	104	50 - 152
2-Chloroethylvinyl ether	70.7	ug/L	20	14.1	1 - 150
2-Hexanone	101	ug/L	100	101	65 - 154
4-Methyl-2-Pentanone(MIBK)	82.5	ug/L	100	82.5	71 - 146
Acetone	139	ug/L	100	139	40 - 151
Benzene	100	ug/L	20	20.1	80 - 124
Bromobenzene	106	ug/L	20	21.2	81 - 119
Bromochloromethane	102	ug/L	20	20.4	73 - 117
Bromodichloromethane	97.5	ug/L	20	19.5	79 - 126
Bromoform	80.3	ug/L	20	16.1	70 - 123
Bromomethane	83.9	ug/L	20	16.8	45 - 148
Carbon Disulfide	99.1	ug/L	20	19.8	57 - 131
Carbon Tetrachloride	110	ug/L	20	22.0	62 - 132
Chlorobenzene	95.2	ug/L	20	19.0	85 - 117
Chlorodibromomethane	88.7	ug/L	20	17.7	77 - 122
Chloroethane	93	ug/L	20	18.6	51 - 142
Chloroform	105	ug/L	20	21.0	78 - 122
Chloromethane	68.8	ug/L	20	13.8	38 - 156

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

Cyclohexane	110	ug/L	20	22.1	66 - 130
Dibromomethane	97.1	ug/L	20	19.4	81 - 125
Dichlorodifluoromethane	64.5	ug/L	20	12.9	17 - 166
Diisopropyl ether	88.7	ug/L	20	17.7	74 - 131
Ethyl tert-butyl ether	87.3	ug/L	20	17.5	75 - 123
Ethylbenzene	105	ug/L	20	21.0	80 - 124
Freon 113	125	ug/L	20	25.0	50 - 130
Hexachlorobutadiene	106	ug/L	20	21.2	55 - 128
Isopropylbenzene	105	ug/L	20	21.0	73 - 129
Methyl acetate	95.7	ug/L	20	19.1	70 - 130
Methyl cyclohexane	94.9	ug/L	20	19.0	70 - 130
Methyl t-Butyl Ether	91.5	ug/L	20	18.3	69 - 115
Methylene Chloride	101	ug/L	20	20.3	76 - 121
Naphthalene	63.9	ug/L	20	12.8	56 - 134
Styrene	94.5	ug/L	20	18.9	79 - 123
Tetrachloroethene	103	ug/L	20	20.6	72 - 124
Toluene	105	ug/L	20	21.1	80 - 125
Total Xylenes	105	ug/L	60	63.1	79 - 125
Trichlorofluoromethane	92.7	ug/L	20	18.5	38 - 123
Vinyl Acetate	91	ug/L	20	18.2	58 - 136
Vinyl Chloride	77	ug/L	20	15.4	27 - 138
cis-1,3-Dichloropropene	92.2	ug/L	20	18.4	81 - 121
mp-Xylene	112	ug/L	40	44.8	79 - 125
n-Butylbenzene	111	ug/L	20	22.2	71 - 130
n-Propylbenzene	97.6	ug/L	20	19.5	74 - 122
o-Chlorotoluene	96.9	ug/L	20	19.4	78 - 126
o-Xylene	91.7	ug/L	20	18.3	79 - 124
p-Chlorotoluene	113	ug/L	20	22.5	78 - 125
p-Isopropyltoluene	98.5	ug/L	20	19.7	72 - 123
sec-Butylbenzene	105	ug/L	20	21.0	72 - 127
tert-Amyl methyl ether	87.7	ug/L	20	17.5	75 - 121
tert-Butyl Alcohol	84.4	ug/L	100	84.4	17 - 168
tert-Butylbenzene	98.9	ug/L	20	19.8	72 - 124
trans-1,2-Dichloroethene	103	ug/L	20	20.6	71 - 122
trans-1,3-Dichloropropene	96	ug/L	20	19.2	78 - 126
1,2-Dichloroethane-d4 (S)	90.7	%			62 - 133
4-Bromofluorobenzene (S)	97.8	%			79 - 114
Dibromofluoromethane (S)	85.7	%			78 - 116
Toluene-d8 (S)	84.9	%			76 - 127

MATRIX SPIKE: 2772130 DUPLICATE: 2772131 ORIGINAL: 2323941002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD

QUALITY CONTROL DATA

Workorder: 2323127 ALG002|LMC MRC

1,2,4-Trimethylbenzene	0	ug/L	20	17.7285	18.3424	88.6	91.7	76 - 125	3.4	24
Benzene	0	ug/L	20	21.7427	21.2188	109	106	80 - 124	2.44	26
Ethylbenzene	0	ug/L	20	21.014	20.5509	105	103	80 - 124	2.23	19
Isopropylbenzene	0	ug/L	20	20.1222	20.4566	101	102	73 - 129	1.65	18
Methyl t-Butyl Ether	0	ug/L	20	17.9906	16.3447	90	81.7	69 - 115	9.59	20
Naphthalene	0	ug/L	20	9.46996	11.5804	47.3*	57.9	56 - 134	20.1	40
Toluene	0	ug/L	20	23.7725	22.1399	119	111	80 - 125	7.11	20
1,2-Dichloroethane-d4 (S)	90.6	%				90.6	90.6	62 - 133		
4-Bromofluorobenzene (S)	93.8	%				93.8	93.7	79 - 114		
Dibromofluoromethane (S)	83.1	%				83.1	83.4	78 - 116		
Toluene-d8 (S)	91	%				91	87	76 - 127		

QUALITY CONTROL DATA QUALIFIERS

Workorder: 2323127 ALG002|LMC MRC

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2770697	1	Lab Control Standard	SW846 8260B	Vinyl Acetate
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 143 and the control limits were 58 to 136.				
2770697	2	Lab Control Standard	SW846 8260B	Cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Cyclohexane. The % Recovery was reported as 132 and the control limits were 66 to 130.				
2770697	3	Lab Control Standard	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 122 and the control limits were 76 to 121.				
2770697	4	Lab Control Standard	SW846 8260B	Ethyl tert-butyl ether
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Ethyl tert-butyl ether. The % Recovery was reported as 126 and the control limits were 75 to 123.				
2770697	5	Lab Control Standard	SW846 8260B	Bromochloromethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Bromochloromethane. The % Recovery was reported as 121 and the control limits were 73 to 117.				
2770697	6	Lab Control Standard	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 129 and the control limits were 71 to 122.				
2770697	7	Lab Control Standard	SW846 8260B	Tetrachloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Tetrachloroethene. The % Recovery was reported as 127 and the control limits were 72 to 124.				
2770697	8	Lab Control Standard	SW846 8260B	Methyl cyclohexane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl cyclohexane. The % Recovery was reported as 139 and the control limits were 70 to 130.				
2770697	9	Lab Control Standard	SW846 8260B	1,2-Dichloroethene, Total
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,2-Dichloroethene, Total. The % Recovery was reported as 126 and the control limits were 78 to 125.				
2770697	10	Lab Control Standard	SW846 8260B	Chloroethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Chloroethane. The % Recovery was reported as 170 and the control limits were 51 to 142.				
2770697	11	Lab Control Standard	SW846 8260B	Freon 113
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Freon 113. The % Recovery was reported as 160 and the control limits were 50 to 130.				
2770697	12	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 147 and the control limits were 63 to 128.				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2323127001	MRC-SW16A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127002	MRC-SW15A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127006	MRC-SW2A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127007	MRC-SW1A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127009	MRC-MW11A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127010	MRC-MW16A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127011	MRC-MW16A-DUP	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127012	MRC-MW17A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127013	MRC-MW17A DUP	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127014	EW-2	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127015	EW-1	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30943
2323127011	MRC-MW16A-DUP	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30949
2323127010	MRC-MW16A	SW846 3510C	EXTR/52759	8270 SIM	SVMS/30953
2323127009	MRC-MW11A	SW846 7470A	MDIG/72452	SW846 7470A	META/62650
2323127009	MRC-MW11A	SW846 3015	MDIG/72465	SW846 6020A	META/62728
2323127001	MRC-SW16A			SW846 8260B	VOMS/47322
2323127002	MRC-SW15A			SW846 8260B	VOMS/47322
2323127003	MRC-SW5A2			SW846 8260B	VOMS/47322
2323127004	MRC-SW5A1			SW846 8260B	VOMS/47322
2323127005	MRC-SW5B			SW846 8260B	VOMS/47322
2323127006	MRC-SW2A			SW846 8260B	VOMS/47322
2323127007	MRC-SW1A			SW846 8260B	VOMS/47322
2323127008	TB-0626-18			SW846 8260B	VOMS/47322
2323127009	MRC-MW11A			SW846 8260B	VOMS/47322
2323127010	MRC-MW16A			SW846 8260B	VOMS/47322
2323127011	MRC-MW16A-DUP			SW846 8260B	VOMS/47322
2323127012	MRC-MW17A			SW846 8260B	VOMS/47323
2323127013	MRC-MW17A DUP			SW846 8260B	VOMS/47323

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2323127 ALG002|LMC MRC

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2323127015	EW-1			SW846 8260B	VOMS/47323
2323127014	EW-2			SW846 8260B	VOMS/47326
2323127014	EW-2			SW846 8260B	VOMS/47336
2323127015	EW-1			SW846 8260B	VOMS/47346

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2

Courier:

Tracking #:

* 2 3 2 3 1 2 7 *

Co. Name: AECOM

Contact (Report to): Ravi Damera Phone: 301-674-3199

Address: 12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Bill to (if different than Report to): PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y ravi.damera@aecom.com
Fax? [ ] -Y No.:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOC (8260C)	1,4-Dioxane (8270 SIM)								
1	MRC-SW16A	SW=Surface H_2O	6/25/18	1430	G	SW	~~2~~	2	→	rec'd		HCl VIALS +				
2	MRC-SW15A		6/25/18	1445	G	SW	2	2							AIL	6/26/18
3	MRC-SW5A2		6/25/18	1500	G	SW	2									
4	MRC-SW5A1		6/25/18	1505	G	SW	2									
5	MRC-SW5B		6/25/18	1515	G	SW	2									
6	MRC-SW2A		6/25/18	1530	G	SW	2	2								
7	MRC-SW1A		6/25/18	1545	G	SW	2	2								
8	TB-062518		6/25/18	—	G	W	2									

Enter Number of Containers Per Analysis

ANALYSES/METHOD REQUESTED

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	X	Y	
2	Y	Y	X	Y	
3	Y	Y	Y	Y	
4	Y	Y	Y	Y	
5	Y	Y	Y	Y	
6	Y	Y	Y	Y	
7	Y	Y	Y	Y	
8	Y	Y	Y	Y	

Custody seals Present? (if present) Seals intact? Received on ice? COC/Label's complete/accurate? Container in good condition?

(completed by Sample Receiving)
Performed by: [illegible]
Cooler Temp: 3.2
Therm. ID: 402
No. of Coolers:
Notes:

SAMPLED BY (Please Print): Victoria Kirkpatrick

Project Comments: Also email holly.brown@aecom.com and naoum.tavantzis@aecom.com

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] AECOM	6-26-18	1600	2	[signature] ALS	6/26	1600
3	[signature] ALS	6/26	1735	4	[signature]	6/26	1830
5	[signature]	6/26	2130	6	M Koufan	6/26/18	2130
7				8			
9				10			

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ____ now

SOWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: FQUIS+.CSV Other

Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 01-2013

gd1 set up 2-01

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 2

Courier:

Tracking #:

COC# 3127

Co. Name: AECOM

Contact (Report to): Ravi Damera

Phone: 301-674-3199

Address: 12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Bill to (if different than Report to):

PO#: 95840ACM

Project Name/#: LMC MRC

ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] -Y ravi.damera@aecom.com

Fax? [ ] -Y No.:

***Container Type	CG	AG	P													
***Container Size	40ml	1L	250ml													
*** Preservative	HCl	—	HNO3													

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	VOC (8260C)	1,4-Dioxane (8270 SIM)	Metals	PCBs						
1 MRC-MW11A	GW = groundwater	6/25/18	1400	G	GW	2	2	1							
2 MRC-MW16A	+ extra volume for MS/MSD	6/25/18	1530	G	GW	6	6		(broken bottle)						
3 MRC-MW16A-DUP		6/25/18	1550	G	GW	2	2								
4 MRC-SW17A	+ extra volume for MS/MSD	6/26/18	1040	G	SW	6	6								
5 MRC-SW17A-DUP		6/26/18	1045	G	SW	2	2								
6 EW-2		6/26/18	1105	G	GW	2	2		2						
7 EW-1		6/26/18	1320	G	GW	2	2		2						
8															

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 3.0

Therm. ID: 402

No. of Coolers:

Notes:

Sample Description/Location	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1 MRC-MW11A	Y	Y	Y	Y	
2 MRC-MW16A	Y	Y	Y	Y	
3 MRC-MW16A-DUP	Y	Y	Y	Y	
4 MRC-SW17A	Y	Y	Y	Y	
5 MRC-SW17A-DUP	Y	Y	Y	Y	
6 EW-2	Y	Y	Y	Y	
7 EW-1	Y	Y	Y	Y	
8					

Sample Description/Location	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 MRC-MW11A	Y	Y	Y	Y	Y
2 MRC-MW16A	Y	Y	Y	Y	Y
3 MRC-MW16A-DUP	Y	Y	Y	Y	Y
4 MRC-SW17A	Y	Y	Y	Y	Y
5 MRC-SW17A-DUP	Y	Y	Y	Y	Y
6 EW-2	Y	Y	Y	Y	Y
7 EW-1	Y	Y	Y	Y	Y
8					

SAMPLED BY (Please Print): Antonio Zarelli

Project Comments: Please also email holly.brown@aecom.com and naoum.tavantzis@aecom.com

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AECOM	6-26-18	1600	2 [signature]	6/26	1600
3 [signature]	6/26	1235	4 [signature]	6/26	1830
5 [signature]	6/26	2130	6 M. Kouyaw	6/26/18	2130
7			8		
9			10		

Data Deliverables: [ ] Standard [X] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] new

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

EDDs Required? [X] If yes, format type: EQUIS + CSV Other

Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

July 18, 2018

Service Request No:R1806157

Vanessa Badman
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

Laboratory Results for: UR115: 2323127

Dear Vanessa,

Enclosed are the results of the sample(s) submitted to our laboratory June 29, 2018
For your reference, these analyses have been assigned our service request number **R1806157.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp
dba ALS Environmental

Narrative Documents

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Environmental

Client: ALS Environmental - US
Project: UR115:2323127
Sample Matrix: Water

Service Request: R1806157
Date Received: 06/29/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Two water samples were received for analysis at ALS Environmental on 06/29/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Semivolatiles by GC/MS:

Method 680, 07/13/2018: The control limit was exceeded for one or more surrogates in the Continuing Calibration Verification (CCV). The surrogates were within acceptance limits for the associated field samples. The data quality was not significantly affected and no further corrective action was taken.
Method 680, 07/09/2018: The lower control limit for the spike recovery of the Laboratory Control Sample (LCS) was exceeded for one or more analyte. There were no detections of the analyte(s) in the associated field samples. The discrepancy associated with reduced recovery equates to a potential low bias. Additional analysis of R1806157-001 could not be performed because insufficient sample remained for testing. Sample R1806157-002 was re-extracted out of holding time. The spikes for the re-extracted sample also failed recoveries low. The analytes affected are flagged in the LCS Summary.

Approved by _____ Date 07/13/2018

SAMPLE DETECTION SUMMARY

CLIENT ID: 2323127-015			Lab ID: R1806157-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Dichlorobiphenyls, Total	0.0035	J	0.0016	0.0051	ug/L	680
Trichlorobiphenyls, Total	0.0056		0.0022	0.0051	ug/L	680

Sample Receipt Information

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: ALS Environmental - US
Project: UR115: 2323127

Service Request: R1806157

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1806157-001	2323127-014	6/26/2018	1105
R1806157-002	2323127-015	6/26/2018	1320

ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

** ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 2
ALS Quote #:	

Client Name: ALS Environmental

Address: 34 Dogwood Lane
Middletown, PA 17057

Contact: Vanessa Badman

Phone#: (717) 944-5541

Project Name/#: UR115: 2323127

Bill To: ALS Environmental

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 7/10/2018 Approved By:

Email? [ ] Y

Fax? [ ] Y No.:

Container Type: AN
Container Size: 1 L
Preservative: None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	680 (PCB Homologs)	*Report to the MDL, QC lab report needed, EQUIS EDD.	Sample/COC Comments
1 2323127 014	6/26/18	1105	G	WT	2	*	
2 2323127 015	6/26/18	1320	G	WT	2	*	Sub to ALS Rochester
3							
4							
5							
6							
7							
8							
9							
10							

Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ALS Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other:

Project Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/26/18	1445	2	6/28/18	1235
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] MD

Reportable to PADEP? Yes [ ] PWSID #

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type:

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; W

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

R1806157 5
ALS Environmental
UR115: 2323127

Cooler Receipt and Preservation Check Form

R1806157 5
ALS Environmental
UR116: 2323127

Project/Client ALS-MOT Folder Number R1806157

Cooler received on 6/29/18 by: @ COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	Y (N) *	6	Where did the bottles originate? ALS/ROC (CLIENT)	
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set (NA)	

8. Temperature Readings Date: 6/29/18 Time: 1245 ID: (IR#7) IR#9 From: Temp Blank (Sample Bottle)

Observed Temp (°C)	2.9						
Correction Factor (°C)	–						
Corrected Temp (°C)	2.9						
Temp from:Type of bottle	–						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ (Ice melted) Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by e on 6/29/18 at 1250
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 7-2-18 Time: 13:30 by: RE

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: Client bottles
Explain all Discrepancies/ Other Comments:

* Samples packed in cooler w/o bubble wrap
014 – 1 ember broke

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

Labels secondary reviewed by: RE
PC Secondary Review: [signature] 7/5/18 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Miscellaneous Forms

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

\# Spike was diluted out

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL

Client: ALS Environmental - US
Project: UR115: 2323127

Service Request: R1806157

Sample Name: 2323127 014
Lab Code: R1806157-001
Sample Matrix: Water

Date Collected: 06/26/18
Date Received: 06/29/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

Sample Name: 2323127 015
Lab Code: R1806157-002
Sample Matrix: Water

Date Collected: 06/26/18
Date Received: 06/29/18

Analysis Method	Extracted/Digested By	Analyzed By
680	MPEDRO	JMISIUREWICZ

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-C
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

Sample Results

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Semivolatile Organic Compounds by GC/MS

ALS Environmental Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	06/26/18 11:05
Sample Matrix:	Water	**Date Received:**	06/29/18 12:35
Sample Name:	2323127 014	**Units:**	ug/L
Lab Code:	R1806157-001	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.024 U	0.024	0.012	1	07/09/18 13:17	7/3/18	
Dichlorobiphenyls, Total	0.0047 U	0.0047	0.0016	1	07/09/18 13:17	7/3/18	
Heptachlorobiphenyls, Total	0.014 U	0.014	0.0090	1	07/09/18 13:17	7/3/18	
Hexachlorobiphenyls, Total	0.0094 U	0.0094	0.0047	1	07/09/18 13:17	7/3/18	
Monochlorobiphenyls, Total	0.0047 U	0.0047	0.00059	1	07/09/18 13:17	7/3/18	
Nonachlorobiphenyls, Total	0.019 U	0.019	0.0088	1	07/09/18 13:17	7/3/18	
Octachlorobiphenyls, Total	0.014 U	0.014	0.0099	1	07/09/18 13:17	7/3/18	
Pentachlorobiphenyls, Total	0.0094 U	0.0094	0.0043	1	07/09/18 13:17	7/3/18	
Tetrachlorobiphenyls, Total	0.0094 U	0.0094	0.0023	1	07/09/18 13:17	7/3/18	
Trichlorobiphenyls, Total	0.0047 U	0.0047	0.0022	1	07/09/18 13:17	7/3/18	
Total PCBs as Sum of Homologs	0.024 U	0.024	-	1	07/09/18 13:17	7/3/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	39	55 - 133	07/09/18 13:17	
4,4'-DDT	93	57 - 200	07/09/18 13:17	

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	06/26/18 13:20
Sample Matrix:	Water	**Date Received:**	06/29/18 12:35
Sample Name:	2323127 015	**Units:**	ug/L
Lab Code:	R1806157-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.024 U	0.024	0.012	1	07/09/18 13:46	7/3/18	
Dichlorobiphenyls, Total	0.0047 U	0.0047	0.0016	1	07/09/18 13:46	7/3/18	
Heptachlorobiphenyls, Total	0.014 U	0.014	0.0090	1	07/09/18 13:46	7/3/18	
Hexachlorobiphenyls, Total	0.0094 U	0.0094	0.0047	1	07/09/18 13:46	7/3/18	
Monochlorobiphenyls, Total	0.0047 U	0.0047	0.00059	1	07/09/18 13:46	7/3/18	
Nonachlorobiphenyls, Total	0.019 U	0.019	0.0088	1	07/09/18 13:46	7/3/18	
Octachlorobiphenyls, Total	0.014 U	0.014	0.0099	1	07/09/18 13:46	7/3/18	
Pentachlorobiphenyls, Total	0.0094 U	0.0094	0.0043	1	07/09/18 13:46	7/3/18	
Tetrachlorobiphenyls, Total	0.0094 U	0.0094	0.0023	1	07/09/18 13:46	7/3/18	
Trichlorobiphenyls, Total	0.0047 U	0.0047	0.0022	1	07/09/18 13:46	7/3/18	
Total PCBs as Sum of Homologs	0.024 U	0.024	-	1	07/09/18 13:46	7/3/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	50	55 - 133	07/09/18 13:46	
4,4'-DDT	57	57 - 200	07/09/18 13:46	

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	06/26/18 13:20
Sample Matrix:	Water	**Date Received:**	06/29/18 12:35
Sample Name:	2323127 015	**Units:**	ug/L
Lab Code:	R1806157-002	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.025 U	0.025	0.012	1	07/13/18 07:55	7/11/18	*
Dichlorobiphenyls, Total	**0.0035 J**	0.0051	0.0016	1	07/13/18 07:55	7/11/18	*
Heptachlorobiphenyls, Total	0.015 U	0.015	0.0090	1	07/13/18 07:55	7/11/18	*
Hexachlorobiphenyls, Total	0.010 U	0.010	0.0047	1	07/13/18 07:55	7/11/18	*
Monochlorobiphenyls, Total	0.0051 U	0.0051	0.00060	1	07/13/18 07:55	7/11/18	*
Nonachlorobiphenyls, Total	0.020 U	0.020	0.0089	1	07/13/18 07:55	7/11/18	*
Octachlorobiphenyls, Total	0.015 U	0.015	0.010	1	07/13/18 07:55	7/11/18	*
Pentachlorobiphenyls, Total	0.010 U	0.010	0.0043	1	07/13/18 07:55	7/11/18	*
Tetrachlorobiphenyls, Total	0.010 U	0.010	0.0024	1	07/13/18 07:55	7/11/18	*
Trichlorobiphenyls, Total	**0.0056**	0.0051	0.0022	1	07/13/18 07:55	7/11/18	*
Total PCBs as Sum of Homologs	0.025 U	0.025	-	1	07/13/18 07:55	7/11/18	*

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	105	55 - 133	07/13/18 07:55	
4,4'-DDT	99	57 - 200	07/13/18 07:55	

QC Summary Forms

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Semivolatile Organic Compounds by GC/MS

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www.alsglobal.com

Client: ALS Environmental - US **Service Request:** R1806157
Project: UR115: 2323127
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Extraction Method: EPA 3510C

Sample Name	Lab Code	gamma-BHC (Lindane) 55-133	4,4'-DDT 57-200
2323127 014	R1806157-001	89	93
2323127 015	R1806157-002	60	57
2323127 015 RE	R1806157-002	105	99
Method Blank	RQ1806671-01	92	108
Method Blank	RQ1806951-01	75	92
Lab Control Sample	RQ1806671-02	76	90
Duplicate Lab Control Sample	RQ1806671-03	83	97
Lab Control Sample	RQ1806951-02	68	91
Duplicate Lab Control Sample	RQ1806951-03	77	99

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1806671-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.025 U	0.025	0.012	1	07/09/18 12:20	7/3/18	
Dichlorobiphenyls, Total	0.0050 U	0.0050	0.0016	1	07/09/18 12:20	7/3/18	
Heptachlorobiphenyls, Total	0.015 U	0.015	0.0090	1	07/09/18 12:20	7/3/18	
Hexachlorobiphenyls, Total	0.010 U	0.010	0.0047	1	07/09/18 12:20	7/3/18	
Monochlorobiphenyls, Total	0.0050 U	0.0050	0.00059	1	07/09/18 12:20	7/3/18	
Nonachlorobiphenyls, Total	0.020 U	0.020	0.0088	1	07/09/18 12:20	7/3/18	
Octachlorobiphenyls, Total	0.015 U	0.015	0.0099	1	07/09/18 12:20	7/3/18	
Pentachlorobiphenyls, Total	0.010 U	0.010	0.0043	1	07/09/18 12:20	7/3/18	
Tetrachlorobiphenyls, Total	0.010 U	0.010	0.0023	1	07/09/18 12:20	7/3/18	
Trichlorobiphenyls, Total	0.0050 U	0.0050	0.0022	1	07/09/18 12:20	7/3/18	
Total PCBs as Sum of Homologs	0.025 U	0.025	-	1	07/09/18 12:20	7/3/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	92	55 - 133	07/09/18 12:20	
4,4'-DDT	108	57 - 200	07/09/18 12:20	

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	R1806157
Project:	UR115: 2323127	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1806951-01	**Basis:**	NA

PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Analysis Method: 680
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Decachlorobiphenyl	0.025 U	0.025	0.012	1	07/13/18 07:27	7/11/18	
Dichlorobiphenyls, Total	0.0050 U	0.0050	0.0016	1	07/13/18 07:27	7/11/18	
Heptachlorobiphenyls, Total	0.015 U	0.015	0.0090	1	07/13/18 07:27	7/11/18	
Hexachlorobiphenyls, Total	0.010 U	0.010	0.0047	1	07/13/18 07:27	7/11/18	
Monochlorobiphenyls, Total	0.0050 U	0.0050	0.00059	1	07/13/18 07:27	7/11/18	
Nonachlorobiphenyls, Total	0.020 U	0.020	0.0088	1	07/13/18 07:27	7/11/18	
Octachlorobiphenyls, Total	0.015 U	0.015	0.0099	1	07/13/18 07:27	7/11/18	
Pentachlorobiphenyls, Total	0.010 U	0.010	0.0043	1	07/13/18 07:27	7/11/18	
Tetrachlorobiphenyls, Total	0.010 U	0.010	0.0023	1	07/13/18 07:27	7/11/18	
Trichlorobiphenyls, Total	0.0050 U	0.0050	0.0022	1	07/13/18 07:27	7/11/18	
Total PCBs as Sum of Homologs	0.025 U	0.025	-	1	07/13/18 07:27	7/11/18	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
gamma-BHC (Lindane)	75	55 - 133	07/13/18 07:27	
4,4'-DDT	92	57 - 200	07/13/18 07:27	

Client: ALS Environmental - US
Project: UR115: 2323127
Sample Matrix: Water

Service Request: R1806157
Date Analyzed: 07/09/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1806671-02			Duplicate Lab Control Sample RQ1806671-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.342	1.25	27 *	0.414	1.25	33	29-162	19	30
Dichlorobiphenyls, Total	680	0.174	0.250	69	0.184	0.250	73	37-139	6	30
Heptachlorobiphenyls, Total	680	0.362	0.750	48 *	0.413	0.750	55	53-120	13	30
Hexachlorobiphenyls, Total	680	0.287	0.500	57	0.329	0.500	66	11-160	14	30
Monochlorobiphenyls, Total	680	0.151	0.250	60	0.155	0.250	62	34-137	3	30
Octachlorobiphenyls, Total	680	0.311	0.750	41 *	0.368	0.750	49 *	57-125	17	30
Pentachlorobiphenyls, Total	680	0.350	0.500	70	0.385	0.500	77	10-180	10	30
Tetrachlorobiphenyls, Total	680	0.326	0.500	65	0.355	0.500	71	14-153	9	30
Trichlorobiphenyls, Total	680	0.179	0.250	71	0.190	0.250	76	10-173	6	30

Client: ALS Environmental - US
Project: UR115: 2323127
Sample Matrix: Water

Service Request: R1806157
Date Analyzed: 07/13/18

Duplicate Lab Control Sample Summary
PCB Homologs in Water and Soil/Sediment by Gas Chromatography/Mass Spectrometry

Units: ug/L
Basis: NA

		Lab Control Sample RQ1806951-02			Duplicate Lab Control Sample RQ1806951-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Decachlorobiphenyl	680	0.392	1.25	31	0.401	1.25	32	29-162	2	30
Dichlorobiphenyls, Total	680	0.144	0.250	57	0.167	0.250	67	37-139	15	30
Heptachlorobiphenyls, Total	680	0.369	0.750	49 *	0.385	0.750	51 *	53-120	4	30
Hexachlorobiphenyls, Total	680	0.281	0.500	56	0.305	0.500	61	11-160	8	30
Monochlorobiphenyls, Total	680	0.122	0.250	49	0.144	0.250	58	34-137	17	30
Octachlorobiphenyls, Total	680	0.353	0.750	47 *	0.361	0.750	48 *	57-125	2	30
Pentachlorobiphenyls, Total	680	0.329	0.500	66	0.356	0.500	71	10-180	8	30
Tetrachlorobiphenyls, Total	680	0.269	0.500	54	0.300	0.500	60	14-153	11	30
Trichlorobiphenyls, Total	680	0.146	0.250	58	0.163	0.250	65	10-173	11	30

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 31, 2018

Ms. Holly Brown
AECOM (fka URS) - Germantown MD
12420 Milestone Center Drive
Suite 150
Germantown, MD 20876

Certificate of Analysis

Project Name:	**2018-MIDDLE RIVER COMPLEX**	Workorder:	**2326619**
Purchase Order:	**95840ACM**	Workorder ID:	**ALG004|LMC MRC**

Dear Ms. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, July 13, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Zachary Neigh , Mr. Ravi Damera , Ms. Victoria Kirkpatrick , Mr. Naoum Tavantzis

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2326619 ALG004|LMC MRC

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2326619001	DM-4568-071318	Water	7/13/2018 13:00	7/13/2018 22:40	Collected by Client
2326619002	DM-237-071318	Water	7/13/2018 13:15	7/13/2018 22:40	Collected by Client
2326619003	DM-10111213-071318 CD	Solid	7/13/2018 13:30	7/13/2018 22:40	Collected by Client
2326619004	DM-9-071318 CD	Solid	7/13/2018 13:38	7/13/2018 22:40	Collected by Client

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2326619 ALG004|LMC MRC

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2326619 ALG004|LMC MRC

Sample Comments

Lab ID: 2326619001 **Sample ID:** DM-4568-071318 **Sample Type:** SAMPLE

The percent dry solid per the EPA leaching procedure was less than 0.5%. The sample was filtered to form the leachate.

Lab ID: 2326619002 **Sample ID:** DM-237-071318 **Sample Type:** SAMPLE

The percent dry solid per the EPA leaching procedure was less than 0.5%. The sample was filtered to form the leachate.

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619001** Date Collected: 7/13/2018 13:00 Matrix: Water

Sample ID: **DM-4568-071318** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Polychlorinated Biphenyl	ND		ug/L	11.3	3.0	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
TCLP VOLATILE ORGANICS											
Benzene	ND		ug/L	20.0	8.0	SW846 8260B			7/30/18 15:57	DD	A
2-Butanone	ND		ug/L	200	60.0	SW846 8260B			7/30/18 15:57	DD	A
Carbon Tetrachloride	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 15:57	DD	A
Chlorobenzene	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 15:57	DD	A
Chloroform	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 15:57	DD	A
1,2-Dichloroethane	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 15:57	DD	A
1,1-Dichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 15:57	DD	A
Tetrachloroethene	ND		ug/L	20.0	8.0	SW846 8260B			7/30/18 15:57	DD	A
Trichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 15:57	DD	A
Vinyl Chloride	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 15:57	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	87.1		%	62 - 133		SW846 8260B			7/30/18 15:57	DD	A
4-Bromofluorobenzene (S)	96.3		%	79 - 114		SW846 8260B			7/30/18 15:57	DD	A
Dibromofluoromethane (S)	81.6		%	78 - 116		SW846 8260B			7/30/18 15:57	DD	A
Toluene-d8 (S)	81.9		%	76 - 127		SW846 8260B			7/30/18 15:57	DD	A
PCBs											
Aroclor-1016	ND		ug/L	1.3	0.15	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1221	ND		ug/L	1.3	0.18	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1232	ND		ug/L	1.3	0.48	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1242	ND		ug/L	1.3	0.60	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1248	ND		ug/L	1.3	0.35	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1254	ND		ug/L	1.3	0.25	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1260	ND		ug/L	1.3	0.18	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1262	ND		ug/L	1.3	0.25	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Aroclor-1268	ND		ug/L	1.3	0.43	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	79		%	30 - 140		SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
Tetrachloro-m-xylene (S)	61.8		%	30 - 133		SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:18	EGO	A
WET CHEMISTRY											
Corrosivity as pH	8.44	3	pH_Units			SW846 9040C			7/18/18 18:26	MSA	A
Cyanide, Reactive	ND		ppm	10.0	0.011	SW-846 7.3CN	7/26/18 08:40	VXF	7/26/18 17:06	CTD	A
Flashpoint/Ignitability	See comment	1,2	Deg. F			SW-846 1010A			7/31/18 06:00	SDL	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619001** Date Collected: 7/13/2018 13:00 Matrix: Water

Sample ID: **DM-4568-071318** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfide, Reactive	6.4		ppm	6.3	1.3	SW846 7.3	7/26/18 08:40	VXF	7/26/18 19:45	VXF	A
TCLP METALS											
Arsenic, Total	ND		mg/L	0.14	0.046	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:55	SRT	A2
Barium, Total	ND		mg/L	2.8	0.94	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:55	SRT	A2
Cadmium, Total	0.016		mg/L	0.011	0.0037	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:55	SRT	A2
Chromium, Total	ND		mg/L	0.028	0.010	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:55	SRT	A2
Lead, Total	0.026J	J	mg/L	0.033	0.011	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:55	SRT	A2
Mercury, Total	ND		mg/L	0.0020	0.00066	SW846 7470A	7/30/18 10:20	AXC	7/30/18 13:54	AXC	A1
Selenium, Total	ND		mg/L	0.11	0.037	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:55	SRT	A2
Silver, Total	ND		mg/L	0.022	0.0070	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:55	SRT	A2
TCLP SEMI-VOLATILES											
mp-Cresol	ND		ug/L	60.0	3.2	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
o-Cresol	ND		ug/L	60.0	5.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
1,4-Dichlorobenzene	ND		ug/L	60.0	3.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
2,4-Dinitrotoluene	ND		ug/L	60.0	2.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Hexachlorobenzene	ND		ug/L	60.0	4.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Hexachlorobutadiene	ND		ug/L	60.0	3.8	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Hexachloroethane	ND		ug/L	60.0	6.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Nitrobenzene	ND		ug/L	60.0	5.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Pentachlorophenol	ND		ug/L	120	24.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Pyridine	ND		ug/L	60.0	14.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
2,4,5-Trichlorophenol	ND		ug/L	60.0	11.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
2,4,6-Trichlorophenol	ND		ug/L	60.0	11.4	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	79.2		%	47 - 128	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
2-Fluorobiphenyl (S)	61.2		%	52 - 118	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
2-Fluorophenol (S)	54.6		%	20 - 87	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Nitrobenzene-d5 (S)	78.5		%	27 - 139	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Phenol-d5 (S)	34.3		%	10 - 81	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A
Terphenyl-d14 (S)	86.8		%	46 - 133	SW846 8270D	7/30/18 12:50	VLM	7/30/18 22:59	DHF	A

Vanessa N. Badman

Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619002** Date Collected: 7/13/2018 13:15 Matrix: Water

Sample ID: **DM-237-071318** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Total Polychlorinated Biphenyl	ND		ug/L	11.0	2.9	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
TCLP VOLATILE ORGANICS											
Benzene	ND		ug/L	20.0	8.0	SW846 8260B			7/30/18 16:18	DD	A
2-Butanone	ND		ug/L	200	60.0	SW846 8260B			7/30/18 16:18	DD	A
Carbon Tetrachloride	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 16:18	DD	A
Chlorobenzene	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 16:18	DD	A
Chloroform	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 16:18	DD	A
1,2-Dichloroethane	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 16:18	DD	A
1,1-Dichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 16:18	DD	A
Tetrachloroethene	ND		ug/L	20.0	8.0	SW846 8260B			7/30/18 16:18	DD	A
Trichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 16:18	DD	A
Vinyl Chloride	ND		ug/L	20.0	4.0	SW846 8260B			7/30/18 16:18	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84.9		%	62 - 133		SW846 8260B			7/30/18 16:18	DD	A
4-Bromofluorobenzene (S)	97.4		%	79 - 114		SW846 8260B			7/30/18 16:18	DD	A
Dibromofluoromethane (S)	80.5		%	78 - 116		SW846 8260B			7/30/18 16:18	DD	A
Toluene-d8 (S)	79.9		%	76 - 127		SW846 8260B			7/30/18 16:18	DD	A
PCBs											
Aroclor-1016	ND		ug/L	1.2	0.15	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1221	ND		ug/L	1.2	0.17	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1232	ND		ug/L	1.2	0.46	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1242	ND		ug/L	1.2	0.59	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1248	ND		ug/L	1.2	0.34	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1254	ND		ug/L	1.2	0.24	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1260	ND		ug/L	1.2	0.17	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1262	ND		ug/L	1.2	0.24	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Aroclor-1268	ND		ug/L	1.2	0.41	SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	65.9		%	30 - 140		SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
Tetrachloro-m-xylene (S)	50.2		%	30 - 133		SW846 8082A	7/17/18 14:50	TXC	7/19/18 08:30	EGO	A
WET CHEMISTRY											
Corrosivity as pH	8.92	3	pH_Units			SW846 9040C			7/18/18 18:39	MSA	A
Cyanide, Reactive	ND		ppm	10	0.011	SW-846 7.3CN	7/26/18 08:40	VXF	7/26/18 17:06	CTD	A
Flashpoint/Ignitability	See comment	1,2	Deg. F			SW-846 1010A			7/31/18 06:00	SDL	A

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ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619002** Date Collected: 7/13/2018 13:15 Matrix: Water

Sample ID: **DM-237-071318** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfide, Reactive	8.8		ppm	6.2	1.2	SW846 7.3	7/26/18 08:40	VXF	7/26/18 19:45	VXF	A
TCLP METALS											
Arsenic, Total	ND		mg/L	0.14	0.046	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:59	SRT	A2
Barium, Total	ND		mg/L	2.8	0.94	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:59	SRT	A2
Cadmium, Total	ND		mg/L	0.011	0.0037	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:59	SRT	A2
Chromium, Total	ND		mg/L	0.028	0.010	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:59	SRT	A2
Lead, Total	ND		mg/L	0.033	0.011	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:59	SRT	A2
Mercury, Total	ND		mg/L	0.0020	0.00066	SW846 7470A	7/30/18 10:20	AXC	7/30/18 13:56	AXC	A1
Selenium, Total	ND		mg/L	0.11	0.037	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:59	SRT	A2
Silver, Total	ND		mg/L	0.022	0.0070	SW846 6010C	7/30/18 11:00	DXC	7/30/18 15:59	SRT	A2
TCLP SEMI-VOLATILES											
mp-Cresol	ND		ug/L	60.0	3.2	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
o-Cresol	ND		ug/L	60.0	5.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
1,4-Dichlorobenzene	ND		ug/L	60.0	3.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
2,4-Dinitrotoluene	ND		ug/L	60.0	2.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Hexachlorobenzene	ND		ug/L	60.0	4.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Hexachlorobutadiene	ND		ug/L	60.0	3.8	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Hexachloroethane	ND		ug/L	60.0	6.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Nitrobenzene	ND		ug/L	60.0	5.6	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Pentachlorophenol	ND		ug/L	120	24.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Pyridine	ND		ug/L	60.0	14.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
2,4,5-Trichlorophenol	ND		ug/L	60.0	11.0	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
2,4,6-Trichlorophenol	ND		ug/L	60.0	11.4	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.1		%	47 - 128	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
2-Fluorobiphenyl (S)	59.2		%	52 - 118	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
2-Fluorophenol (S)	56.4		%	20 - 87	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Nitrobenzene-d5 (S)	79.5		%	27 - 139	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Phenol-d5 (S)	36.3		%	10 - 81	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A
Terphenyl-d14 (S)	93.8		%	46 - 133	SW846 8270D	7/30/18 12:50	VLM	7/30/18 23:26	DHF	A

Vanessa N. Badman

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619003** Date Collected: 7/13/2018 13:30 Matrix: Solid

Sample ID: **DM-10111213-071318 CD** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS											
Benzene	ND		ug/L	20.0	8.0	SW846 8260B			7/31/18 12:37	DD	A
2-Butanone	ND		ug/L	200	60.0	SW846 8260B			7/31/18 12:37	DD	A
Carbon Tetrachloride	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 12:37	DD	A
Chlorobenzene	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 12:37	DD	A
Chloroform	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 12:37	DD	A
1,2-Dichloroethane	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 12:37	DD	A
1,1-Dichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 12:37	DD	A
Tetrachloroethene	ND		ug/L	20.0	8.0	SW846 8260B			7/31/18 12:37	DD	A
Trichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 12:37	DD	A
Vinyl Chloride	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 12:37	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93.3		%	62 - 133		SW846 8260B			7/31/18 12:37	DD	A
4-Bromofluorobenzene (S)	100		%	79 - 114		SW846 8260B			7/31/18 12:37	DD	A
Dibromofluoromethane (S)	87.2		%	78 - 116		SW846 8260B			7/31/18 12:37	DD	A
Toluene-d8 (S)	79.9		%	76 - 127		SW846 8260B			7/31/18 12:37	DD	A
PCBs											
Total Polychlorinated Biphenyl	0.076J	J	mg/kg	0.30	0.058	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1016	ND		mg/kg	0.033	0.0059	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1221	ND		mg/kg	0.033	0.0030	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1232	ND		mg/kg	0.033	0.0059	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1242	ND		mg/kg	0.033	0.0089	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1248	ND		mg/kg	0.033	0.0059	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1254	ND		mg/kg	0.033	0.0059	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1260	0.076		mg/kg	0.033	0.0059	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1262	ND		mg/kg	0.033	0.0069	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Aroclor-1268	ND		mg/kg	0.033	0.0089	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	71.1		%	49 - 115		SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
Tetrachloro-m-xylene (S)	84.2		%	27 - 137		SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:00	EGO	A
WET CHEMISTRY											
Moisture	2.4		%	0.1	0.01	S2540G-11			7/17/18 14:58	AXD	
Total Solids	97.6		%	0.1	0.01	S2540G-11			7/17/18 14:58	AXD	
TCLP METALS											
Arsenic, Total	ND		mg/L	0.14	0.046	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:16	SRT	A2

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ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619003** Date Collected: 7/13/2018 13:30 Matrix: Solid

Sample ID: **DM-10111213-071318 CD** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Barium, Total	ND		mg/L	2.8	0.94	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:16	SRT	A2
Cadmium, Total	ND		mg/L	0.011	0.0037	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:16	SRT	A2
Chromium, Total	0.022J	J	mg/L	0.028	0.010	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:16	SRT	A2
Lead, Total	0.42		mg/L	0.033	0.011	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:16	SRT	A2
Mercury, Total	0.00095J	J	mg/L	0.0020	0.00066	SW846 7470A	7/27/18 08:10	AXC	7/27/18 14:10	AXC	A1
Selenium, Total	ND		mg/L	0.11	0.037	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:16	SRT	A2
Silver, Total	ND		mg/L	0.022	0.0070	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:16	SRT	A2
TCLP SEMI-VOLATILES											
mp-Cresol	ND		ug/L	60.0	3.2	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
o-Cresol	ND		ug/L	60.0	5.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	3.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	2.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	4.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	3.8	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Hexachloroethane	ND		ug/L	60.0	6.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Nitrobenzene	ND		ug/L	60.0	5.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Pentachlorophenol	ND	2	ug/L	120	24.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Pyridine	ND		ug/L	60.0	14.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	60.0	11.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
2,4,6-Trichlorophenol	ND	1	ug/L	60.0	11.4	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.4		%	47 - 128	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
2-Fluorobiphenyl (S)	71.5		%	52 - 118	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
2-Fluorophenol (S)	56.6		%	20 - 87	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Nitrobenzene-d5 (S)	83.4		%	27 - 139	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Phenol-d5 (S)	35.2		%	10 - 81	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A
Terphenyl-d14 (S)	90.8		%	46 - 133	SW846 8270D	7/27/18 09:40	MXL	7/28/18 10:49	GEC	A

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ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619004** Date Collected: 7/13/2018 13:38 Matrix: Solid

Sample ID: **DM-9-071318 CD** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS											
Benzene	ND		ug/L	20.0	8.0	SW846 8260B			7/31/18 10:27	DD	A
2-Butanone	ND		ug/L	200	60.0	SW846 8260B			7/31/18 10:27	DD	A
Carbon Tetrachloride	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 10:27	DD	A
Chlorobenzene	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 10:27	DD	A
Chloroform	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 10:27	DD	A
1,2-Dichloroethane	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 10:27	DD	A
1,1-Dichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 10:27	DD	A
Tetrachloroethene	ND		ug/L	20.0	8.0	SW846 8260B			7/31/18 10:27	DD	A
Trichloroethene	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 10:27	DD	A
Vinyl Chloride	ND		ug/L	20.0	4.0	SW846 8260B			7/31/18 10:27	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	90.3		%	62 - 133		SW846 8260B			7/31/18 10:27	DD	A
4-Bromofluorobenzene (S)	103		%	79 - 114		SW846 8260B			7/31/18 10:27	DD	A
Dibromofluoromethane (S)	83.8		%	78 - 116		SW846 8260B			7/31/18 10:27	DD	A
Toluene-d8 (S)	81.2		%	76 - 127		SW846 8260B			7/31/18 10:27	DD	A
PCBs											
Total Polychlorinated Biphenyl	0.077J	J	mg/kg	0.30	0.059	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1016	ND		mg/kg	0.033	0.0061	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1221	ND		mg/kg	0.033	0.0030	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1232	ND		mg/kg	0.033	0.0061	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1242	ND		mg/kg	0.033	0.0091	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1248	ND		mg/kg	0.033	0.0061	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1254	ND		mg/kg	0.033	0.0061	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1260	0.077		mg/kg	0.033	0.0061	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1262	ND		mg/kg	0.033	0.0071	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Aroclor-1268	ND		mg/kg	0.033	0.0091	SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	64.6		%	49 - 115		SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
Tetrachloro-m-xylene (S)	80.7		%	27 - 137		SW846 8082A	7/18/18 13:15	J1H	7/19/18 11:11	EGO	A
WET CHEMISTRY											
Moisture	1.4		%	0.1	0.01	S2540G-11			7/17/18 14:58	AXD	
Total Solids	98.6		%	0.1	0.01	S2540G-11			7/17/18 14:58	AXD	
TCLP METALS											
Arsenic, Total	ND		mg/L	0.14	0.046	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:19	SRT	A2

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ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

Lab ID: **2326619004** Date Collected: 7/13/2018 13:38 Matrix: Solid

Sample ID: **DM-9-071318 CD** Date Received: 7/13/2018 22:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Barium, Total	ND		mg/L	2.8	0.94	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:19	SRT	A2
Cadmium, Total	ND		mg/L	0.011	0.0037	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:19	SRT	A2
Chromium, Total	ND		mg/L	0.028	0.010	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:19	SRT	A2
Lead, Total	ND		mg/L	0.033	0.011	SW846 6010C	7/27/18 14:35	AHI	7/31/18 11:50	SRT	A2
Mercury, Total	ND		mg/L	0.0020	0.00066	SW846 7470A	7/27/18 08:10	AXC	7/27/18 14:11	AXC	A1
Selenium, Total	ND		mg/L	0.11	0.037	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:19	SRT	A2
Silver, Total	ND		mg/L	0.022	0.0070	SW846 6010C	7/27/18 14:35	AHI	7/29/18 14:19	SRT	A2
TCLP SEMI-VOLATILES											
mp-Cresol	ND		ug/L	60.0	3.2	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
o-Cresol	ND		ug/L	60.0	5.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	3.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	2.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	4.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	3.8	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Hexachloroethane	ND		ug/L	60.0	6.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Nitrobenzene	ND		ug/L	60.0	5.6	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Pentachlorophenol	ND		ug/L	120	24.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Pyridine	ND		ug/L	60.0	14.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	60.0	11.0	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	60.0	11.4	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	85.4		%	47 - 128	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
2-Fluorobiphenyl (S)	74		%	52 - 118	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
2-Fluorophenol (S)	61.6		%	20 - 87	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Nitrobenzene-d5 (S)	84.5		%	27 - 139	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Phenol-d5 (S)	41.2		%	10 - 81	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A
Terphenyl-d14 (S)	91.7		%	46 - 133	SW846 8270D	7/27/18 09:40	MXL	7/28/18 12:06	GEC	A

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ANALYTICAL RESULTS

Workorder: 2326619 ALG004|LMC MRC

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2326619001	1	DM-4568-071318	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2326619001	2	DM-4568-071318	SW-846 1010A	Flashpoint/Ignitability
Sample did not flash up to 200 degrees F				
2326619001	3	DM-4568-071318	SW846 9040C	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2326619002	1	DM-237-071318	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2326619002	2	DM-237-071318	SW-846 1010A	Flashpoint/Ignitability
Sample did not flash up to 200 degrees F				
2326619002	3	DM-237-071318	SW846 9040C	Corrosivity as pH
The corrosivity analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2326619003	1	DM-10111213-071318 CD	SW846 8270D	2,4,6-Trichlorophenol
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 2,4,6-Trichlorophenol. The RPD was reported as 27.8 and the upper control limit is 23.				
2326619003	2	DM-10111213-071318 CD	SW846 8270D	Pentachlorophenol
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Pentachlorophenol. The RPD was reported as 34 and the upper control limit is 28.				

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2326619 ALG004|LMC MRC

Lab ID	Sample ID	Analysis Method	Prep Method
2326619001	DM-4568-071318	SW-846 1010A	
2326619001	DM-4568-071318	SW-846 7.3CN	SW-846 7.3CN
2326619001	DM-4568-071318	SW846 6010C	SW846 3015
2326619001	DM-4568-071318	SW846 7.3	SW846 7.3
2326619001	DM-4568-071318	SW846 7470A	SW846 7470A
2326619001	DM-4568-071318	SW846 8082A	SW846 3510C
2326619001	DM-4568-071318	SW846 8260B	
2326619001	DM-4568-071318	SW846 8270D	SW846 3510C
2326619001	DM-4568-071318	SW846 9040C	
2326619002	DM-237-071318	SW-846 1010A	
2326619002	DM-237-071318	SW-846 7.3CN	SW-846 7.3CN
2326619002	DM-237-071318	SW846 6010C	SW846 3015
2326619002	DM-237-071318	SW846 7.3	SW846 7.3
2326619002	DM-237-071318	SW846 7470A	SW846 7470A
2326619002	DM-237-071318	SW846 8082A	SW846 3510C
2326619002	DM-237-071318	SW846 8260B	
2326619002	DM-237-071318	SW846 8270D	SW846 3510C
2326619002	DM-237-071318	SW846 9040C	
2326619003	DM-10111213-071318 CD	S2540G-11	
2326619003	DM-10111213-071318 CD	SW846 6010C	SW846 3015
2326619003	DM-10111213-071318 CD	SW846 7470A	SW846 7470A
2326619003	DM-10111213-071318 CD	SW846 8082A	SW846 3546
2326619003	DM-10111213-071318 CD	SW846 8260B	
2326619003	DM-10111213-071318 CD	SW846 8270D	SW846 3510C
2326619004	DM-9-071318 CD	S2540G-11	
2326619004	DM-9-071318 CD	SW846 6010C	SW846 3015
2326619004	DM-9-071318 CD	SW846 7470A	SW846 7470A
2326619004	DM-9-071318 CD	SW846 8082A	SW846 3546
2326619004	DM-9-071318 CD	SW846 8260B	
2326619004	DM-9-071318 CD	SW846 8270D	SW846 3510C

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QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: EXTR/52981 **Analysis Method:** SW846 8082A

QC Batch Method: SW846 3510C

Associated Lab Samples: 2326619001, 2326619002

METHOD BLANK: 2776515

Parameter	Blank Result	Units	Reporting Limit
Aroclor-1016	ND	ug/L	0.50
Aroclor-1221	ND	ug/L	0.50
Aroclor-1232	ND	ug/L	0.50
Aroclor-1242	ND	ug/L	0.50
Aroclor-1248	ND	ug/L	0.50
Aroclor-1254	ND	ug/L	0.50
Aroclor-1260	ND	ug/L	0.50
Aroclor-1262	ND	ug/L	0.50
Aroclor-1268	ND	ug/L	0.50
Decachlorobiphenyls (S)	94.3	%	30 - 140
Tetrachloro-m-xylene (S)	67.1	%	30 - 133

LABORATORY CONTROL SAMPLE: 2776516

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Aroclor-1016	68.7	ug/L	5	3.4	43 - 132
Aroclor-1260	77.5	ug/L	5	3.9	49 - 130
Decachlorobiphenyls (S)	81.9	%			30 - 140
Tetrachloro-m-xylene (S)	61.6	%			30 - 133

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QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: EXTR/52998 **Analysis Method:** SW846 8082A

QC Batch Method: SW846 3546

Associated Lab Samples: 2326619003, 2326619004

METHOD BLANK: 2777515

Parameter	Blank Result	Units	Reporting Limit
Aroclor-1016	ND	mg/kg	0.033
Aroclor-1221	ND	mg/kg	0.033
Aroclor-1232	ND	mg/kg	0.033
Aroclor-1242	ND	mg/kg	0.033
Aroclor-1248	ND	mg/kg	0.033
Aroclor-1254	ND	mg/kg	0.033
Aroclor-1260	ND	mg/kg	0.033
Aroclor-1262	ND	mg/kg	0.033
Aroclor-1268	ND	mg/kg	0.033
Decachlorobiphenyls (S)	80.7	%	49 - 115
Tetrachloro-m-xylene (S)	95.1	%	27 - 137

LABORATORY CONTROL SAMPLE: 2777516

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Aroclor-1016	89.5	mg/kg	.33	0.30	43 - 132
Aroclor-1221		mg/kg		ND	
Aroclor-1232		mg/kg		ND	
Aroclor-1242		mg/kg		ND	
Aroclor-1248		mg/kg		ND	
Aroclor-1254		mg/kg		ND	
Aroclor-1260	88.7	mg/kg	.33	0.30	53 - 134
Aroclor-1262		mg/kg		ND	
Aroclor-1268		mg/kg		ND	
Decachlorobiphenyls (S)	90.5	%			49 - 115
Tetrachloro-m-xylene (S)	92.1	%			27 - 137

MATRIX SPIKE: 2777530 DUPLICATE: 2777531 ORIGINAL: 2326920001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Aroclor-1016	0	mg/kg	.33	.20419	.20082	62.5	60.2	43 - 132	1.66	40

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

Aroclor-1260	0	mg/kg	.33	.21796	.23191	66.7	69.6	53 - 134	6.2	40
Decachlorobiphenyls (S)	72.9	%				72.9	72.9	49 - 115		
Tetrachloro-m-xylene (S)	65.4	%				65.4	67.9	27 - 137		

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: EXTR/53101 **Analysis Method:** SW846 8270D

QC Batch Method: SW846 3510C

Associated Lab Samples: 2326619003, 2326619004

METHOD BLANK: 2781349

Parameter	Blank Result	Units	Reporting Limit
mp-Cresol	ND	ug/L	3.0
o-Cresol	ND	ug/L	3.0
1,4-Dichlorobenzene	ND	ug/L	3.0
2,4-Dinitrotoluene	ND	ug/L	3.0
Hexachlorobenzene	ND	ug/L	3.0
Hexachlorobutadiene	ND	ug/L	3.0
Hexachloroethane	ND	ug/L	3.0
Nitrobenzene	ND	ug/L	3.0
Pentachlorophenol	ND	ug/L	6.0
Pyridine	ND	ug/L	3.0
2,4,5-Trichlorophenol	ND	ug/L	3.0
2,4,6-Trichlorophenol	ND	ug/L	3.0
2,4,6-Tribromophenol (S)	74.6	%	47 - 128
2-Fluorobiphenyl (S)	64.6	%	52 - 118
2-Fluorophenol (S)	47.8	%	20 - 87
Nitrobenzene-d5 (S)	68.7	%	27 - 139
Phenol-d5 (S)	29.8	%	10 - 81
Terphenyl-d14 (S)	86.3	%	46 - 133

LABORATORY CONTROL SAMPLE: 2781350

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
mp-Cresol	83	ug/L	100	83.0	28 - 128
o-Cresol	98.1	ug/L	100	98.1	34 - 136
1,4-Dichlorobenzene	67.5	ug/L	50	33.7	5 - 116
2,4-Dinitrotoluene	105	ug/L	50	52.4	49 - 138
Hexachlorobenzene	94.3	ug/L	50	47.1	59 - 109
Hexachlorobutadiene	66.5	ug/L	50	33.3	5 - 126
Hexachloroethane	62.7	ug/L	50	31.3	5 - 111
Nitrobenzene	102	ug/L	50	50.8	41 - 128
Pentachlorophenol	92.5	ug/L	100	92.5	41 - 149
Pyridine	64.2	ug/L	50	32.1	5 - 115
2,4,5-Trichlorophenol	101	ug/L	100	101	44 - 148
2,4,6-Trichlorophenol	98.3	ug/L	100	98.3	41 - 148
2,4,6-Tribromophenol (S)	91.4	%			47 - 128

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

2-Fluorobiphenyl (S)	83.8	%	52 - 118
2-Fluorophenol (S)	62.3	%	20 - 87
Nitrobenzene-d5 (S)	89.7	%	27 - 139
Phenol-d5 (S)	40.2	%	10 - 81
Terphenyl-d14 (S)	94.3	%	46 - 133

MATRIX SPIKE: 2781351 DUPLICATE: 2781352 ORIGINAL: 2326619003

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
mp-Cresol	0	ug/L	2000	1636.38	1508.01	81.8	75.4	28 - 128	8.17	20
o-Cresol	0	ug/L	2000	1927.03	1786.15	96.4	89.3	34 - 136	7.59	23
1,4-Dichlorobenzene	0	ug/L	1000	684.524	634.997	68.5	63.5	5 - 116	7.51	30
2,4-Dinitrotoluene	0	ug/L	1000	1044.97	981.425	104	98.1	49 - 138	6.27	22
Hexachlorobenzene	0	ug/L	1000	944.572	892.4	94.5	89.2	59 - 109	5.68	21
Hexachlorobutadiene	0	ug/L	1000	739.186	687.08	73.9	68.7	5 - 126	7.31	30
Hexachloroethane	0	ug/L	1000	682.893	614.16	68.3	61.4	5 - 111	10.6	30
Nitrobenzene	0	ug/L	1000	974.068	921.325	97.4	92.1	41 - 128	5.57	19
Pentachlorophenol	0	ug/L	2000	1738.37	1233.08	86.9	61.7	41 - 149	34	28
Pyridine	0	ug/L	1000	646.991	616.539	64.7	61.7	5 - 115	4.82	30
2,4,5-Trichlorophenol	0	ug/L	2000	1938.02	1633.94	96.9	81.7	44 - 148	17	23
2,4,6-Trichlorophenol	0	ug/L	2000	1945.6	1471.31	97.3	73.6	41 - 148	27.8	23
2,4,6-Tribromophenol (S)	92.5	%				92.5	74.3	47 - 128		
2-Fluorobiphenyl (S)	73.6	%				73.6	70.4	52 - 118		
2-Fluorophenol (S)	64.8	%				64.8	49	20 - 87		
Nitrobenzene-d5 (S)	84.5	%				84.5	80.7	27 - 139		
Phenol-d5 (S)	44.6	%				44.6	38.5	10 - 81		
Terphenyl-d14 (S)	88.5	%				88.5	84.5	46 - 133		

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: EXTR/53134 **Analysis Method:** SW846 8270D

QC Batch Method: SW846 3510C

Associated Lab Samples: 2326619001, 2326619002

METHOD BLANK: 2782735

Parameter	Blank Result	Units	Reporting Limit
mp-Cresol	ND	ug/L	3.0
o-Cresol	ND	ug/L	3.0
1,4-Dichlorobenzene	ND	ug/L	3.0
2,4-Dinitrotoluene	ND	ug/L	3.0
Hexachlorobenzene	ND	ug/L	3.0
Hexachlorobutadiene	ND	ug/L	3.0
Hexachloroethane	ND	ug/L	3.0
Nitrobenzene	ND	ug/L	3.0
Pentachlorophenol	ND	ug/L	6.0
Pyridine	ND	ug/L	3.0
2,4,5-Trichlorophenol	ND	ug/L	3.0
2,4,6-Trichlorophenol	ND	ug/L	3.0
2,4,6-Tribromophenol (S)	77.5	%	47 - 128
2-Fluorobiphenyl (S)	61.2	%	52 - 118
2-Fluorophenol (S)	54.4	%	20 - 87
Nitrobenzene-d5 (S)	76.4	%	27 - 139
Phenol-d5 (S)	34.6	%	10 - 81
Terphenyl-d14 (S)	88.2	%	46 - 133

LABORATORY CONTROL SAMPLE: 2782736

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
mp-Cresol	63	ug/L	100	63.0	28 - 128
o-Cresol	79.4	ug/L	100	79.4	34 - 136
1,4-Dichlorobenzene	65.5	ug/L	50	32.8	5 - 116
2,4-Dinitrotoluene	99.8	ug/L	50	49.9	49 - 138
Hexachlorobenzene	89.2	ug/L	50	44.6	59 - 109
Hexachlorobutadiene	71.9	ug/L	50	36.0	5 - 126
Hexachloroethane	55.7	ug/L	50	27.9	5 - 111
Nitrobenzene	89.2	ug/L	50	44.6	41 - 128
Pentachlorophenol	92.4	ug/L	100	92.4	41 - 149
Pyridine	58.1	ug/L	50	29.0	5 - 115
2,4,5-Trichlorophenol	88.9	ug/L	100	88.9	44 - 148
2,4,6-Trichlorophenol	86.1	ug/L	100	86.1	41 - 148
2,4,6-Tribromophenol (S)	77.7	%			47 - 128

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

2-Fluorobiphenyl (S)	62.2	%	52 - 118
2-Fluorophenol (S)	52.1	%	20 - 87
Nitrobenzene-d5 (S)	78.4	%	27 - 139
Phenol-d5 (S)	34.5	%	10 - 81
Terphenyl-d14 (S)	85.5	%	46 - 133

MATRIX SPIKE: 2782737 DUPLICATE: 2782738 ORIGINAL: 2328380007

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
mp-Cresol	0	ug/L	2000	1361.53	1336.62	68.1	66.8	28 - 128	1.85	20
o-Cresol	0	ug/L	2000	1702.25	1657.67	85.1	82.9	34 - 136	2.65	23
1,4-Dichlorobenzene	0	ug/L	1000	656.696	608.867	65.7	60.9	5 - 116	7.56	30
2,4-Dinitrotoluene	0	ug/L	1000	1073.78	1048.23	107	105	49 - 138	2.41	22
Hexachlorobenzene	0	ug/L	1000	889.222	880.818	88.9	88.1	59 - 109	.95	21
Hexachlorobutadiene	0	ug/L	1000	688.468	627.526	68.8	62.8	5 - 126	9.26	30
Hexachloroethane	0	ug/L	1000	557.022	513.262	55.7	51.3	5 - 111	8.18	30
Nitrobenzene	0	ug/L	1000	946.581	915.33	94.7	91.5	41 - 128	3.36	19
Pentachlorophenol	0	ug/L	2000	2133.81	2106.11	107	105	41 - 149	1.31	28
Pyridine	0	ug/L	1000	641.953	639.964	64.2	64	5 - 115	.31	30
2,4,5-Trichlorophenol	0	ug/L	2000	1951.97	1941.09	97.6	97.1	44 - 148	.56	23
2,4,6-Trichlorophenol	0	ug/L	2000	1932.7	1889.86	96.6	94.5	41 - 148	2.24	23
2,4,6-Tribromophenol (S)	85.2	%				85.2	81.5	47 - 128		
2-Fluorobiphenyl (S)	59.5	%				59.5	55.5	52 - 118		
2-Fluorophenol (S)	59.5	%				59.5	57.8	20 - 87		
Nitrobenzene-d5 (S)	82	%				82	79.6	27 - 139		
Phenol-d5 (S)	37.5	%				37.5	36.3	10 - 81		
Terphenyl-d14 (S)	90	%				90	88.5	46 - 133		

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QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: MDIG/72824 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2326619003, 2326619004

METHOD BLANK: 2780960

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.0020

LABORATORY CONTROL SAMPLE: 2780961

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	105	mg/L	.002	0.0021	85 - 115

MATRIX SPIKE: 2780962 DUPLICATE: 2780963 ORIGINAL: 2326619004

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00476	.00461	95.2	92.2	70 - 130	3.2	20

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: MDIG/72835 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2326619003, 2326619004

METHOD BLANK: 2781515

Parameter	Blank Result	Units	Reporting Limit
Arsenic, Total	ND	mg/L	0.028
Barium, Total	ND	mg/L	0.56
Cadmium, Total	ND	mg/L	0.0022
Chromium, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0067
Selenium, Total	ND	mg/L	0.022
Silver, Total	ND	mg/L	0.0044

LABORATORY CONTROL SAMPLE: 2781516

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Arsenic, Total	102	mg/L	.11	0.11	80 - 120
Barium, Total	103	mg/L	1.1	1.1	80 - 120
Cadmium, Total	98.7	mg/L	.11	0.11	80 - 120
Chromium, Total	101	mg/L	.11	0.11	80 - 120
Lead, Total	103	mg/L	.11	0.11	80 - 120
Selenium, Total	102	mg/L	1.1	1.1	80 - 120
Silver, Total	115	mg/L	.11	0.13	80 - 120

MATRIX SPIKE: 2781517 DUPLICATE: 2781518 ORIGINAL: 2326391001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Arsenic, Total	0	mg/L	5	.12889	.12055	2.58*	2.41*	50 - 150	6.68	20
Barium, Total	56.83277	mg/L	10	57.11054	58.22164	NC	NC	50 - 150	1.93	20
Cadmium, Total	0	mg/L	1	.115	.11722	11.5*	11.7*	50 - 150	1.91	20
Chromium, Total	.00444	mg/L	5	.12111	.12222	2.33*	2.36*	50 - 150	.91	20
Lead, Total	.02389	mg/L	5	.15833	.14944	2.69*	2.51*	50 - 150	5.78	20
Selenium, Total	0	mg/L	1	1.25888	1.26221	126	126	50 - 150	.26	20
Silver, Total	.00167	mg/L	1	.13278	.13055	13.1*	12.9*	50 - 150	1.69	20

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: MDIG/72870 **Analysis Method:** SW846 7470A

QC Batch Method: SW846 7470A

Associated Lab Samples: 2326619001, 2326619002

METHOD BLANK: 2782534

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.0020

LABORATORY CONTROL SAMPLE: 2782535

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	98	mg/L	.002	0.0020J	85 - 115

MATRIX SPIKE: 2782536 DUPLICATE: 2782537 ORIGINAL: 2328122001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Mercury, Total	0	mg/L	.005	.00445	.00515	89	103	70 - 130	14.6	20

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: MDIG/72874 **Analysis Method:** SW846 6010C

QC Batch Method: SW846 3015

Associated Lab Samples: 2326619001, 2326619002

METHOD BLANK: 2782710

Parameter	Blank Result	Units	Reporting Limit
Arsenic, Total	ND	mg/L	0.028
Barium, Total	ND	mg/L	0.56
Cadmium, Total	ND	mg/L	0.0022
Chromium, Total	ND	mg/L	0.0056
Lead, Total	ND	mg/L	0.0067
Selenium, Total	ND	mg/L	0.022
Silver, Total	ND	mg/L	0.0044

LABORATORY CONTROL SAMPLE: 2782711

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Arsenic, Total	101	mg/L	.11	0.11	80 - 120
Barium, Total	102	mg/L	1.1	1.1	80 - 120
Cadmium, Total	97.8	mg/L	.11	0.11	80 - 120
Chromium, Total	98.3	mg/L	.11	0.11	80 - 120
Lead, Total	102	mg/L	.11	0.11	80 - 120
Selenium, Total	99.7	mg/L	1.1	1.1	80 - 120
Silver, Total	95.7	mg/L	.11	0.11	80 - 120

MATRIX SPIKE: 2782712 DUPLICATE: 2782713 ORIGINAL: 2328316001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Arsenic, Total	.01333	mg/L	5	4.76217	4.86217	95	97	50 - 150	2.08	20
Barium, Total	.63055	mg/L	10	10.16657	10.31656	95.4	96.9	50 - 150	1.46	20
Cadmium, Total	.00167	mg/L	1	1.00832	1.01888	101	102	50 - 150	1.04	20
Chromium, Total	0	mg/L	5	4.57051	4.5994	91.4	92	50 - 150	.63	20
Lead, Total	.39277	mg/L	5	5.12662	5.21106	94.7	96.4	50 - 150	1.63	20
Selenium, Total	.00222	mg/L	1	.97166	.98666	96.9	98.4	50 - 150	1.53	20
Silver, Total	.00111	mg/L	1	.86832	.85777	86.7	85.7	50 - 150	1.22	20

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QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: VOMS/47528 **Analysis Method:** SW846 8260B

QC Batch Method: SW846 8260B

Associated Lab Samples: 2326619001, 2326619002

METHOD BLANK: 2782684

Parameter	Blank Result	Units	Reporting Limit
Benzene	ND	ug/L	1.0
2-Butanone	ND	ug/L	10.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chloroform	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
Vinyl Chloride	ND	ug/L	1.0
1,2-Dichloroethane-d4 (S)	84.7	%	62 - 133
4-Bromofluorobenzene (S)	91.4	%	79 - 114
Dibromofluoromethane (S)	81.4	%	78 - 116
Toluene-d8 (S)	80.9	%	76 - 127

LABORATORY CONTROL SAMPLE: 2782685

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Benzene	122	ug/L	20	24.5	80 - 124
2-Butanone	107	ug/L	100	107	50 - 152
Carbon Tetrachloride	114	ug/L	20	22.8	62 - 132
Chlorobenzene	108	ug/L	20	21.7	85 - 117
Chloroform	115	ug/L	20	23.0	78 - 122
1,2-Dichloroethane	105	ug/L	20	21.1	70 - 133
1,1-Dichloroethene	130*	ug/L	20	26.0	63 - 128
Tetrachloroethene	108	ug/L	20	21.6	72 - 124
Trichloroethene	108	ug/L	20	21.7	77 - 124
Vinyl Chloride	118	ug/L	20	23.5	27 - 138
1,2-Dichloroethane-d4 (S)	81	%			62 - 133
4-Bromofluorobenzene (S)	93.9	%			79 - 114
Dibromofluoromethane (S)	81.3	%			78 - 116
Toluene-d8 (S)	81.2	%			76 - 127

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QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

MATRIX SPIKE: 2782887 DUPLICATE: 2782888 ORIGINAL: 2328639006

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	0	ug/L	20	24.91	24.2307	125*	121	80 - 124	2.76	26
1,2-Dichloroethane-d4 (S)	76.4	%				76.4	75.7	62 - 133		
4-Bromofluorobenzene (S)	91.1	%				91.1	92.2	79 - 114		
Dibromofluoromethane (S)	83.1	%				83.1	84.9	78 - 116		
Toluene-d8 (S)	80.5	%				80.5	81.8	76 - 127		

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: WCPR/44287 **Analysis Method:** SW-846 7.3CN

QC Batch Method: SW-846 7.3CN

Associated Lab Samples: 2326619001, 2326619002

METHOD BLANK: 2780486

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	ppm	10

LABORATORY CONTROL SAMPLE: 2780487

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Cyanide, Reactive	12.3	ppm	10	1.2J	0 - 92

SAMPLE DUPLICATE: 2780501 ORIGINAL: 2328003001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Cyanide, Reactive	.00499	ppm	.00498	.2	20

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: WCPR/44289 **Analysis Method:** SW846 7.3

QC Batch Method: SW846 7.3

Associated Lab Samples: 2326619001, 2326619002

METHOD BLANK: 2780510

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	4.4J	ppm	6.2

LABORATORY CONTROL SAMPLE: 2780511

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Sulfide, Reactive	65.9	ppm	568	374	49 - 148

SAMPLE DUPLICATE: 2780512 ORIGINAL: 2328003001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Sulfide, Reactive	15.57664	ppm	11.55954	29.6*	20

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: WETC/207544 **Analysis Method:** S2540G-11

QC Batch Method: S2540G-11

Associated Lab Samples: 2326619003, 2326619004

SAMPLE DUPLICATE: 2776802 ORIGINAL: 2326620001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	11.5333	%	11.3157	1.9	10
Total Solids	88.4666	%	88.6842	.25	5

SAMPLE DUPLICATE: 2776803 ORIGINAL: 2326626003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	20.3439	%	20.2898	.27	10
Total Solids	79.656	%	79.7101	.07	5

SAMPLE DUPLICATE: 2776804 ORIGINAL: 2326627005

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	18.1384	%	18.3783	1.31	10
Total Solids	81.8615	%	81.6216	.29	5

SAMPLE DUPLICATE: 2776805 ORIGINAL: 2324865001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	66.7782	%	66.6947	.13	10
Total Solids	33.2217	%	33.3052	.25	5

SAMPLE DUPLICATE: 2776806 ORIGINAL: 2326641003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	55.4037	%	51.4814	7.34	10
Total Solids	44.5962	%	48.5185	8.42*	5

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QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

SAMPLE DUPLICATE: 2776807 ORIGINAL: 2326689003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	24.019	%	22.2566	7.62	10
Total Solids	75.9809	%	77.7433	2.29	5

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: WETC/207911 **Analysis Method:** SW-846 7.3CN

QC Batch Method: SW-846 7.3CN

Associated Lab Samples:

METHOD BLANK: 2780799

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	mg/L	0.00010

METHOD BLANK: 2780801

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	mg/L	0.00010

METHOD BLANK: 2780803

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	mg/L	0.00010

METHOD BLANK: 2780805

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	mg/L	0.00010

METHOD BLANK: 2780807

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	mg/L	0.00010

METHOD BLANK: 2780809

Parameter	Blank Result	Units	Reporting Limit

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

Cyanide, Reactive	ND	mg/L	0.00010

METHOD BLANK: 2780811

Parameter	Blank Result	Units	Reporting Limit
Cyanide, Reactive	ND	mg/L	0.00010

QUALITY CONTROL DATA

Workorder: 2326619 ALG004|LMC MRC

QC Batch: WETC/207913 **Analysis Method:** SW846 7.3

QC Batch Method: SW846 7.3

Associated Lab Samples:

METHOD BLANK: 2780818

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

METHOD BLANK: 2780820

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

METHOD BLANK: 2780822

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

METHOD BLANK: 2780824

Parameter	Blank Result	Units	Reporting Limit
Sulfide, Reactive	ND	ppm	6.3

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 2326619 ALG004|LMC MRC

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
2782685	1	Lab Control Standard	SW846 8260B	1,1-Dichloroethene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 130 and the control limits were 63 to 128.				
2783648	2	Duplicate	SW-846 1010A	Flashpoint/Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
2783648	3	Duplicate	SW-846 1010A	Flashpoint/Ignitability
Sample did not flash up to 200 degrees F				

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2326619 ALG004|LMC MRC

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2326619001	DM-4568-071318	SW846 3510C	EXTR/52981	SW846 8082A	SVGC/49982
2326619002	DM-237-071318	SW846 3510C	EXTR/52981	SW846 8082A	SVGC/49982
2326619003	DM-10111213-071318 CD			S2540G-11	WETC/207544
2326619004	DM-9-071318 CD			S2540G-11	WETC/207544
2326619001	DM-4568-071318			SW846 9040C	WETC/207561
2326619002	DM-237-071318			SW846 9040C	WETC/207561
2326619003	DM-10111213-071318 CD	SW846 3546	EXTR/52998	SW846 8082A	SVGC/49984
2326619004	DM-9-071318 CD	SW846 3546	EXTR/52998	SW846 8082A	SVGC/49984
2326619001	DM-4568-071318	SW-846 7.3CN	WCPR/44287	SW-846 7.3CN	WETC/207911
2326619002	DM-237-071318	SW-846 7.3CN	WCPR/44287	SW-846 7.3CN	WETC/207911
2326619001	DM-4568-071318	SW846 7.3	WCPR/44289	SW846 7.3	WETC/207913
2326619002	DM-237-071318	SW846 7.3	WCPR/44289	SW846 7.3	WETC/207913
2326619003	DM-10111213-071318 CD	SW846 7470A	MDIG/72824	SW846 7470A	META/62971
2326619004	DM-9-071318 CD	SW846 7470A	MDIG/72824	SW846 7470A	META/62971
2326619003	DM-10111213-071318 CD	SW846 3510C	EXTR/53101	SW846 8270D	SVMS/31120
2326619004	DM-9-071318 CD	SW846 3510C	EXTR/53101	SW846 8270D	SVMS/31120
2326619003	DM-10111213-071318 CD	SW846 3015	MDIG/72835	SW846 6010C	META/62976
2326619004	DM-9-071318 CD	SW846 3015	MDIG/72835	SW846 6010C	META/62976
2326619004	DM-9-071318 CD	SW846 3015	MDIG/72835	SW846 6010C	META/63013
2326619001	DM-4568-071318	SW846 7470A	MDIG/72870	SW846 7470A	META/62998
2326619002	DM-237-071318	SW846 7470A	MDIG/72870	SW846 7470A	META/62998

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 2326619 ALG004|LMC MRC

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2326619001	DM-4568-071318			SW846 8260B	VOMS/47528
2326619002	DM-237-071318			SW846 8260B	VOMS/47528
2326619001	DM-4568-071318	SW846 3015	MDIG/72874	SW846 6010C	META/62989
2326619002	DM-237-071318	SW846 3015	MDIG/72874	SW846 6010C	META/62989
2326619001	DM-4568-071318	SW846 3510C	EXTR/53134	SW846 8270D	SVMS/31137
2326619002	DM-237-071318	SW846 3510C	EXTR/53134	SW846 8270D	SVMS/31137
2326619003	DM-10111213-071318 CD			SW846 8260B	VOMS/47539
2326619004	DM-9-071318 CD			SW846 8260B	VOMS/47539

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F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:

Tracking #:

MD180713003,4

* 2 3 2 6 6 1 9 *

Co. Name: AECOM

Contact (Report to): Ravi Damera / Holly Brown Phone: 301-674-3199

Address: 12420 Milestone Center Drive, Suite 150 Germantown, MD 20876

Bill to (if different than Report to): PO#: 95840ACM

Project Name/#: LMC MRC ALS Quote #:

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

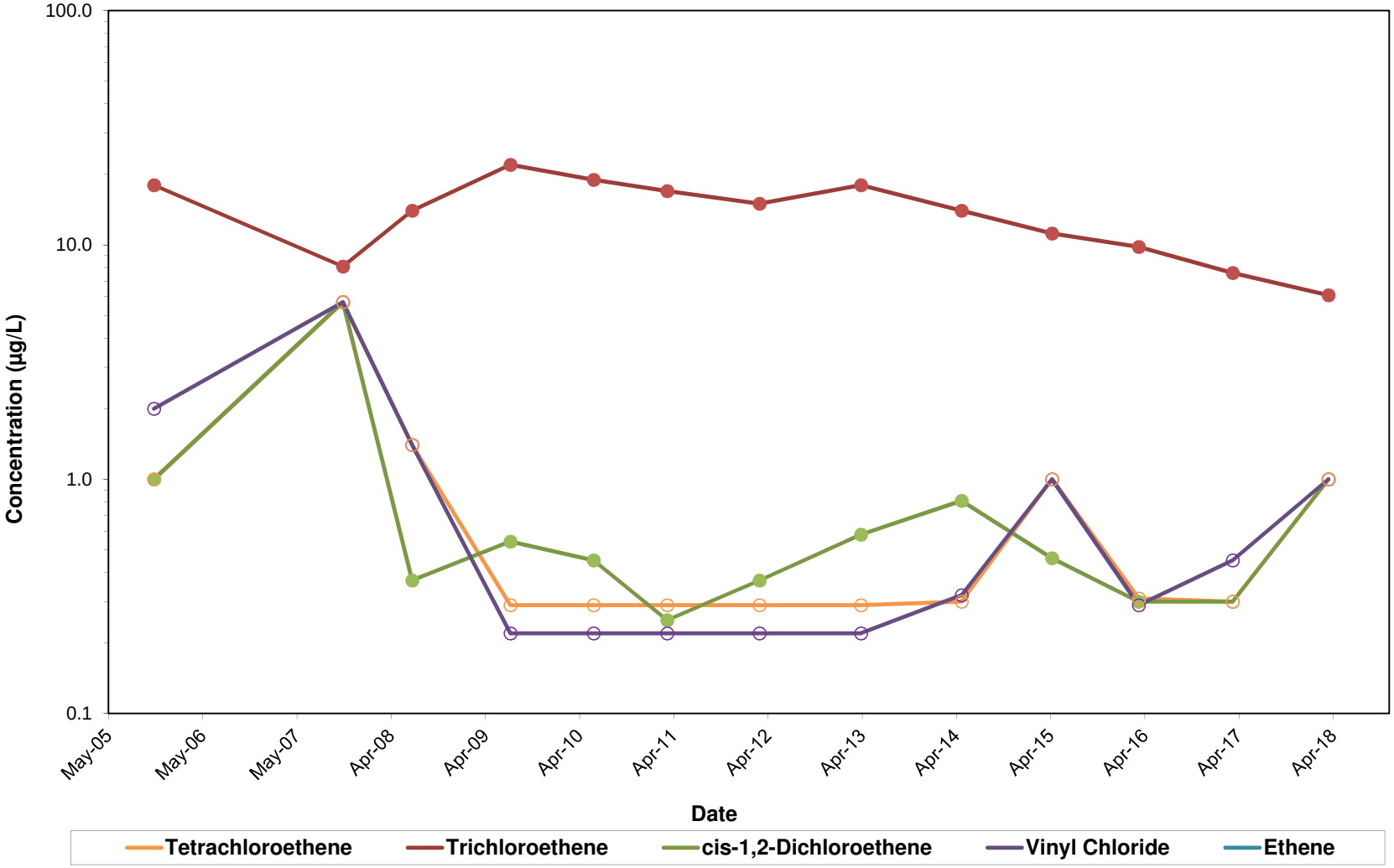
Email? [X] Y ravi.damera@aecom.com

Fax? [ ] Y No.:

| | Container Type | | |

APPENDIX G
Chlorinated Ethene Time-Series Trend Charts

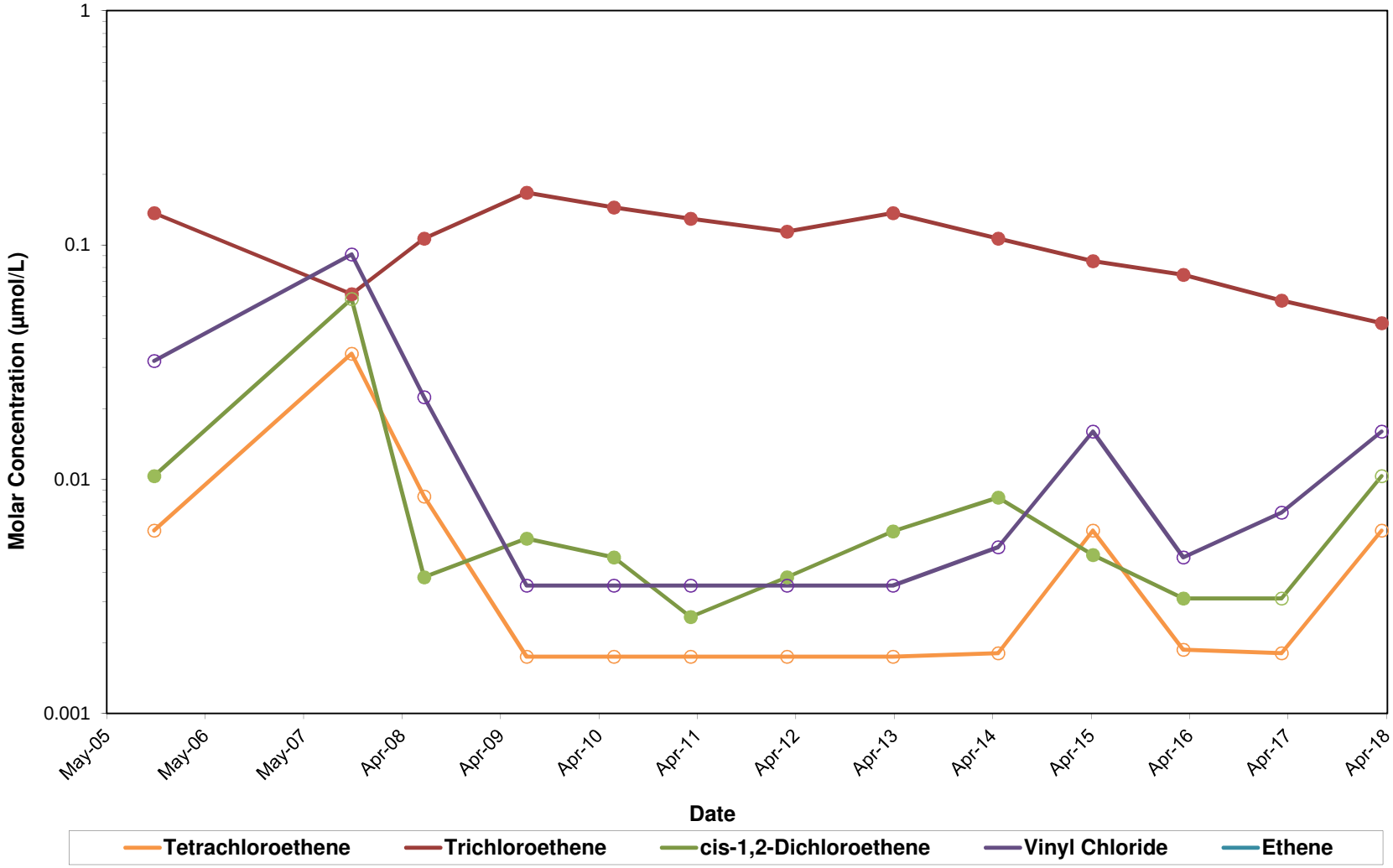
Block I West of Building A (shallow and deep plume)



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

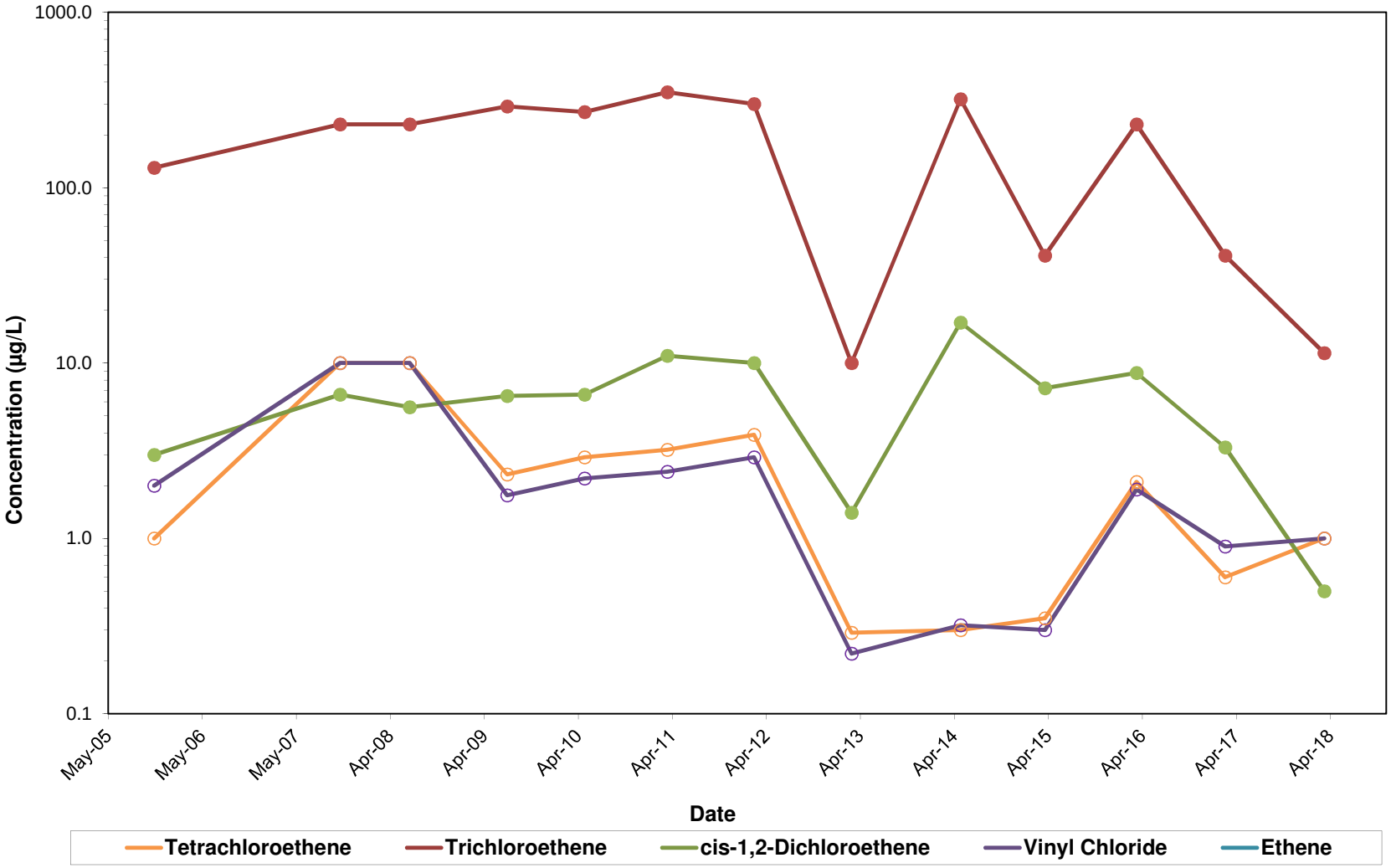
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW50A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

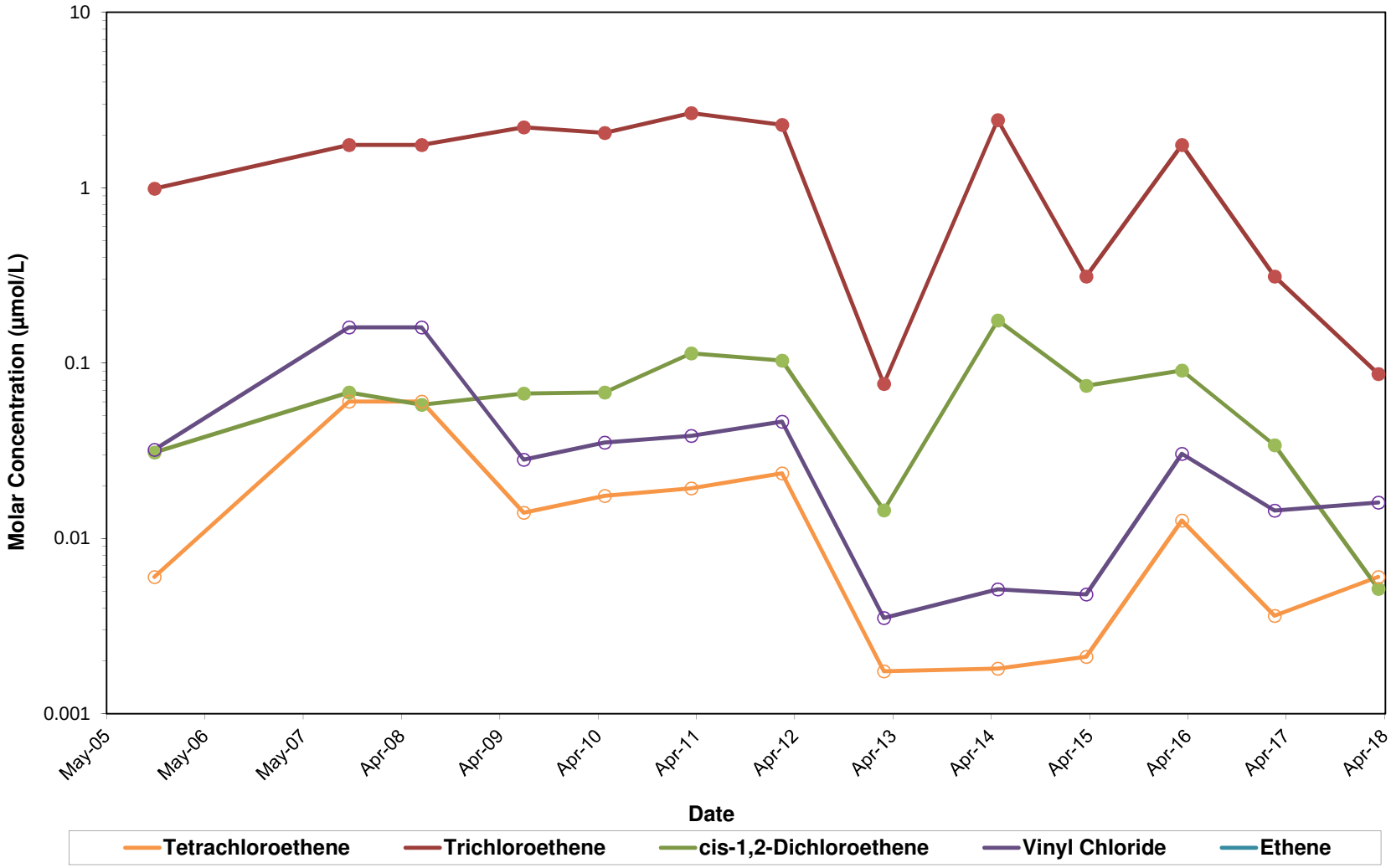
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW50A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

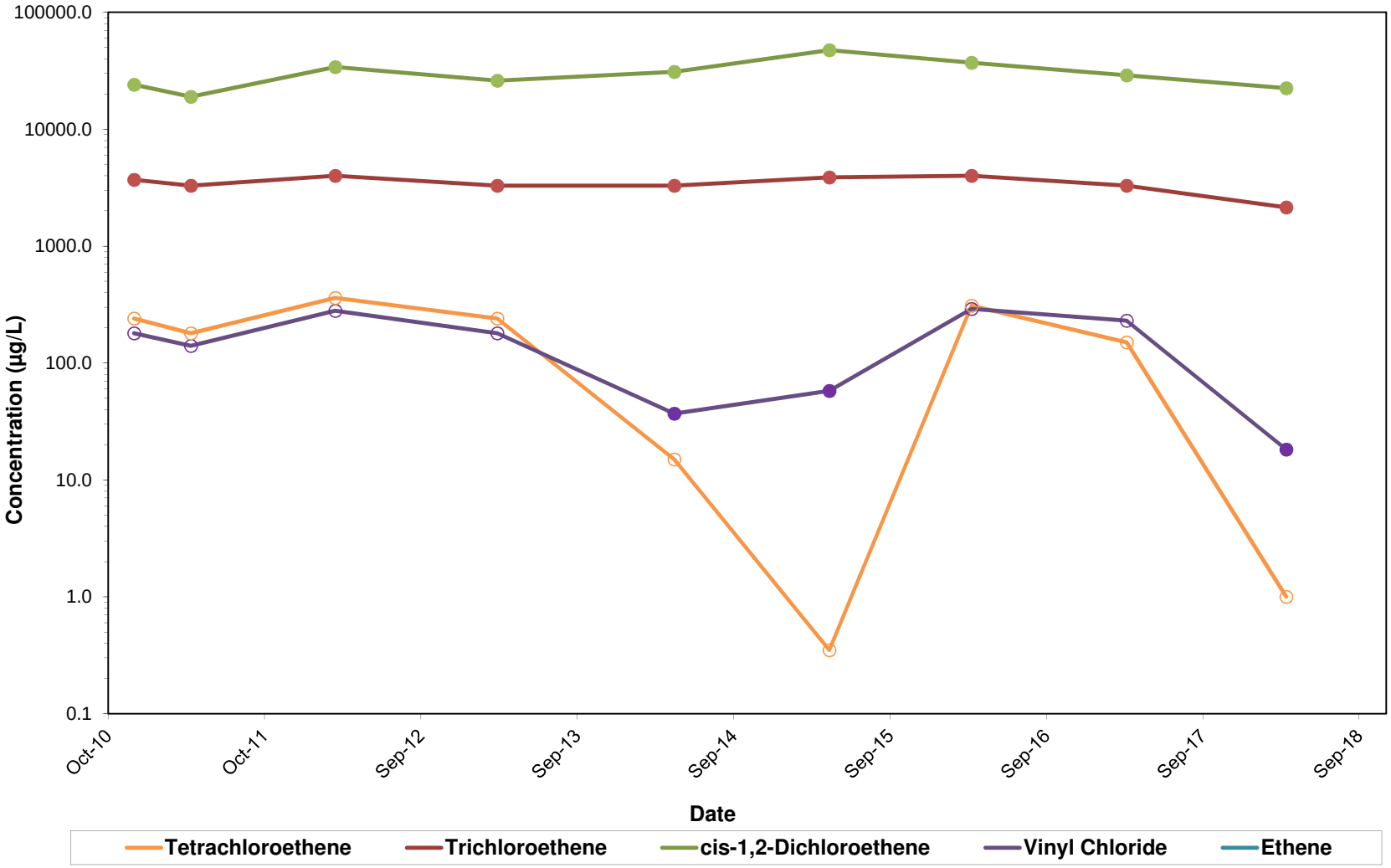
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW53A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

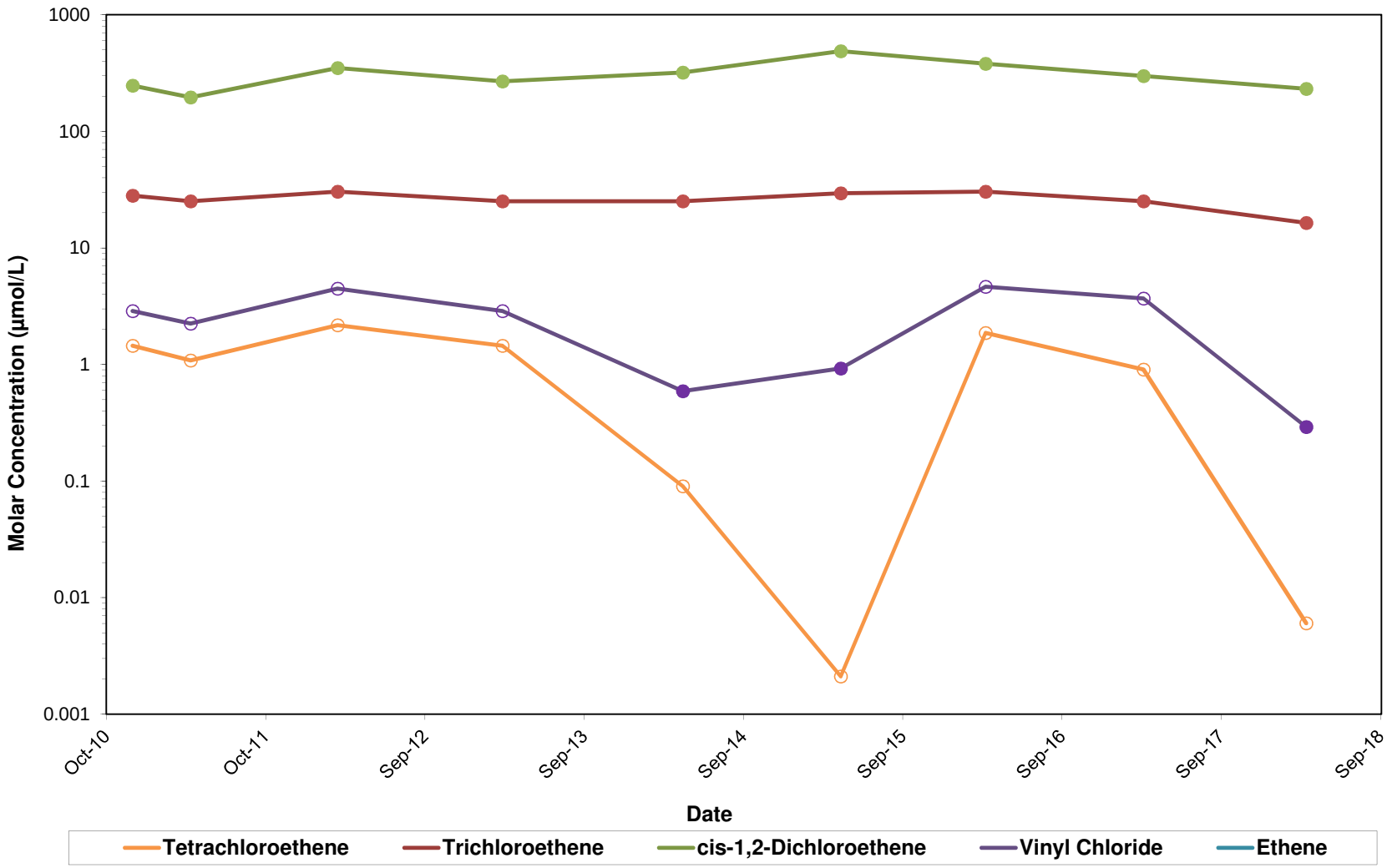
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW53A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

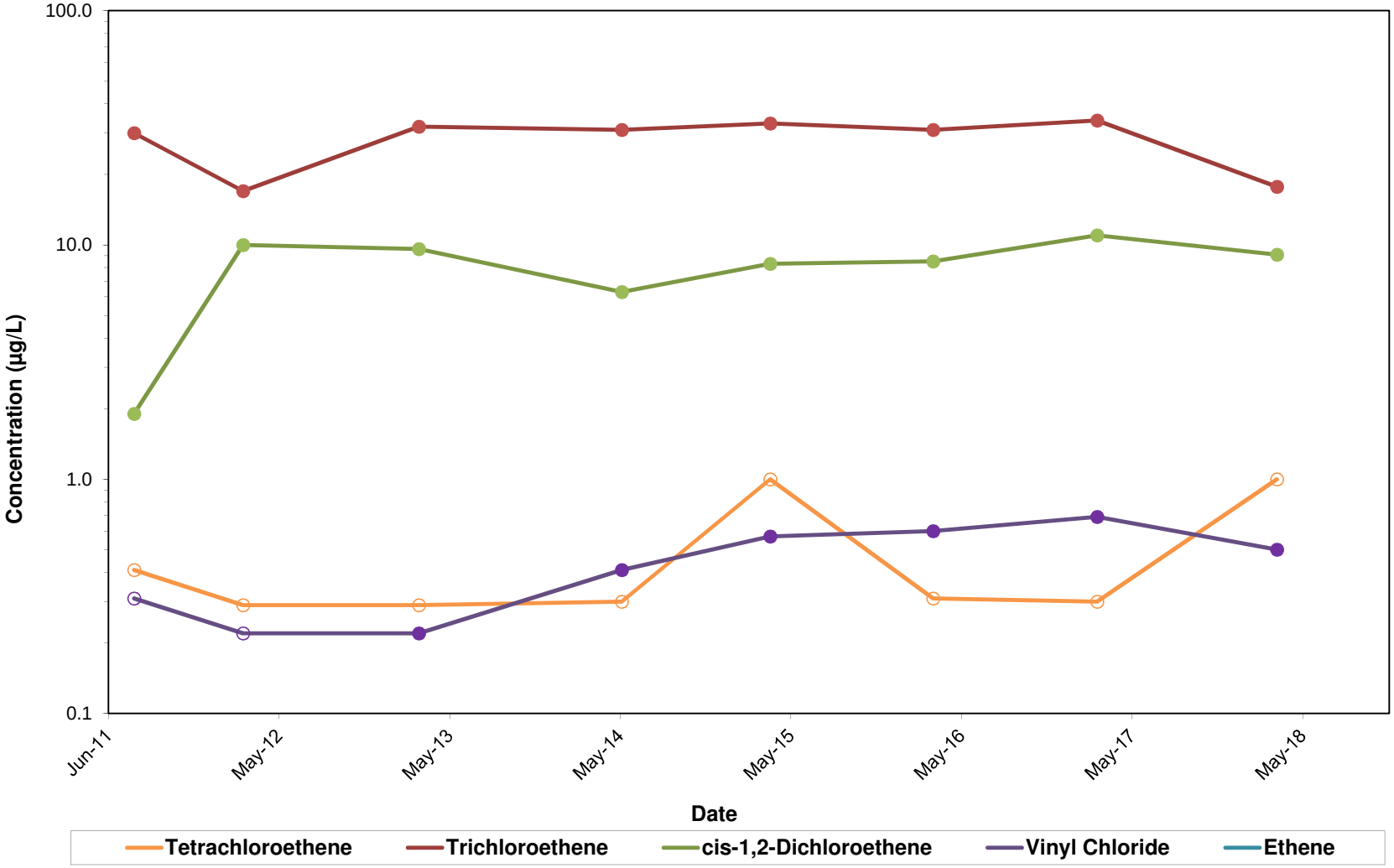
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW96A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

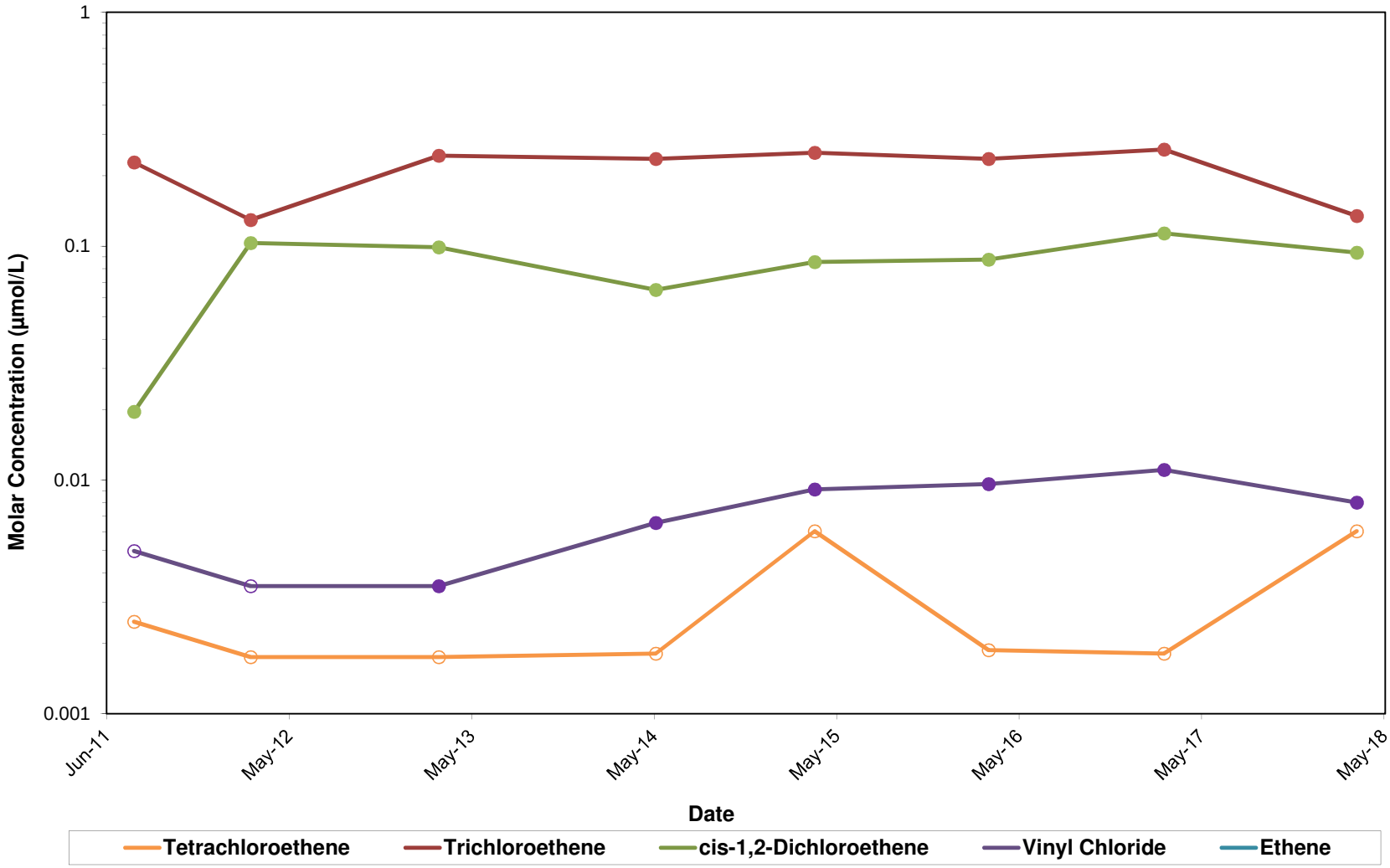
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW96A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

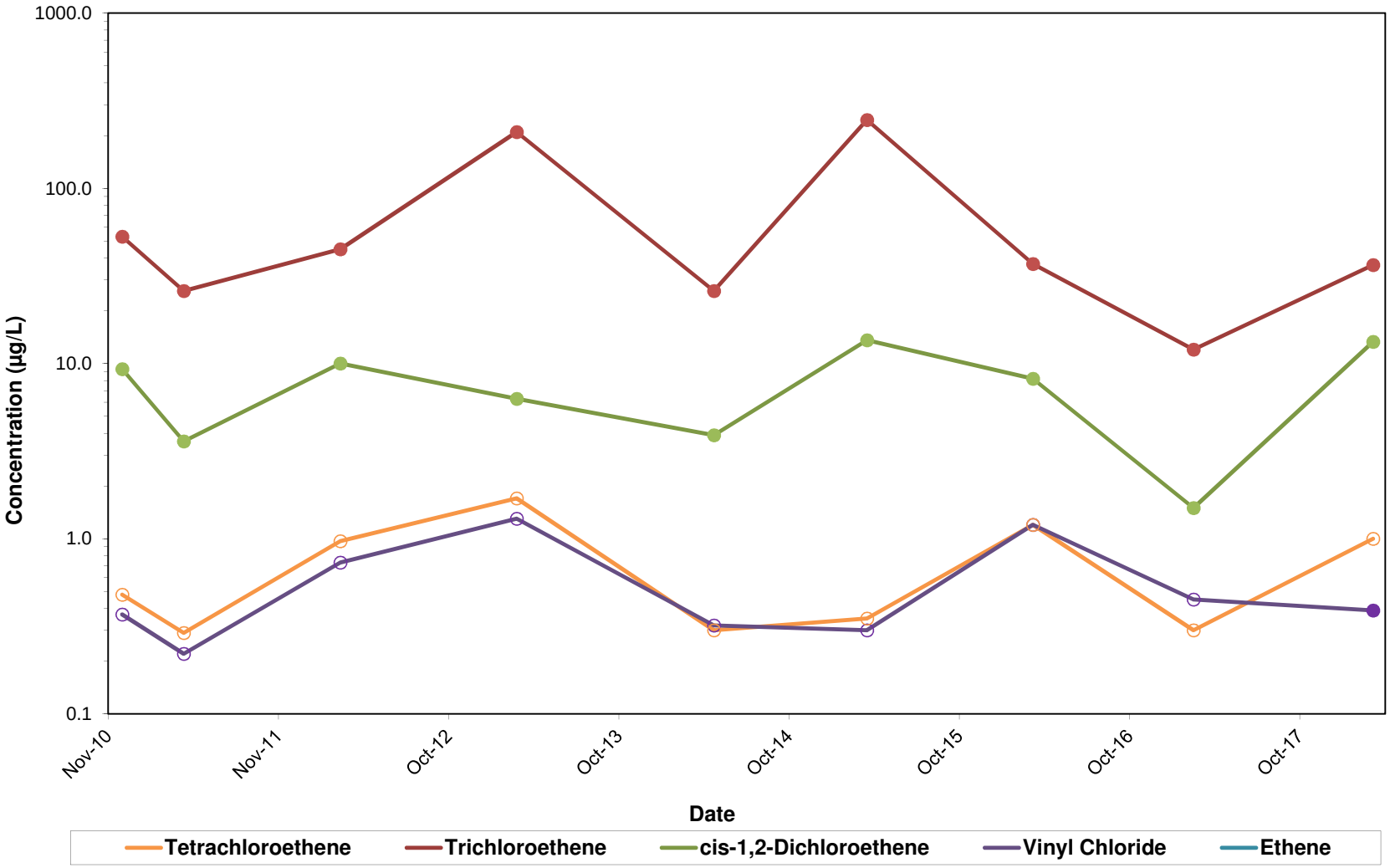
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW110A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

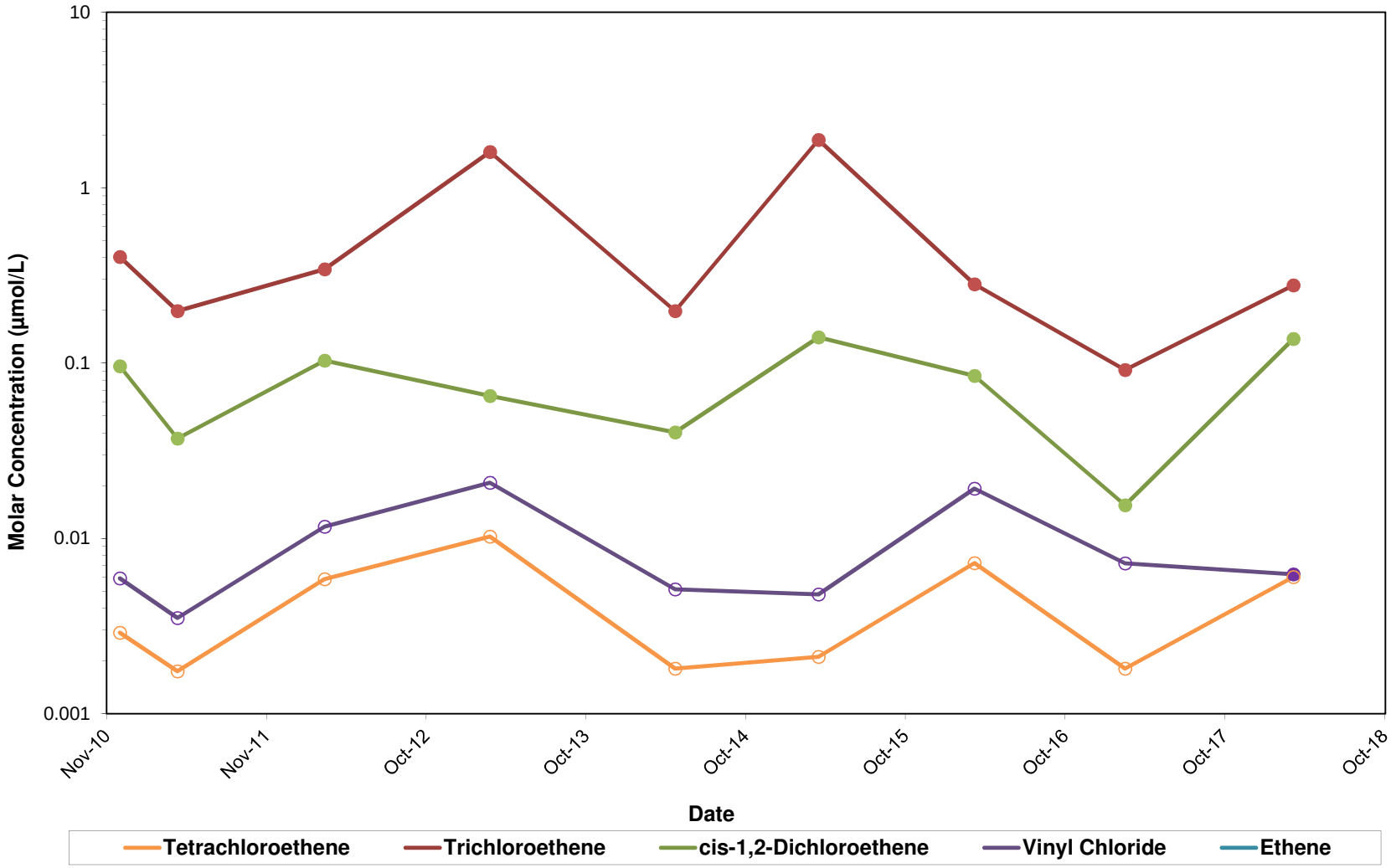
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW110A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

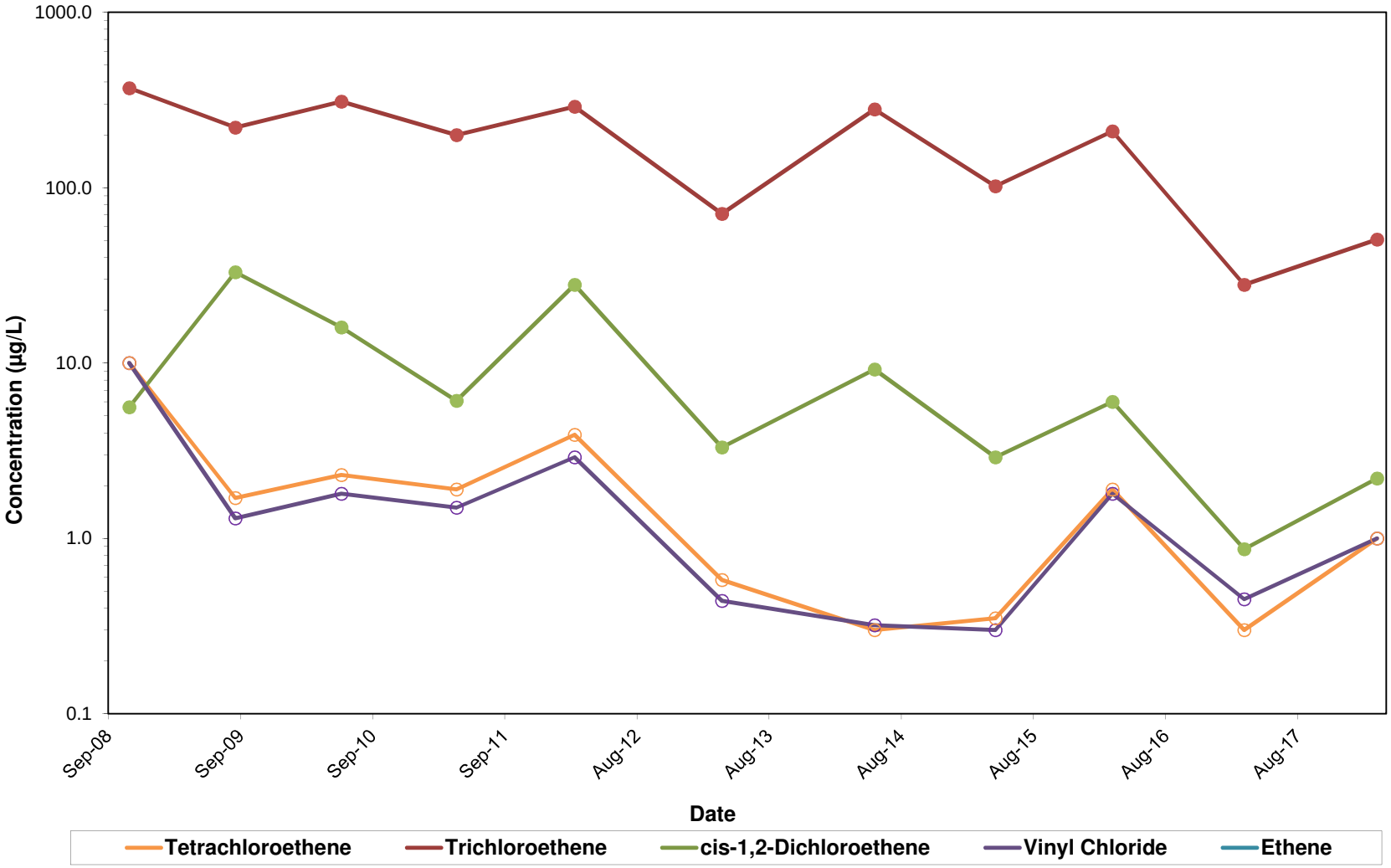
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW53B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

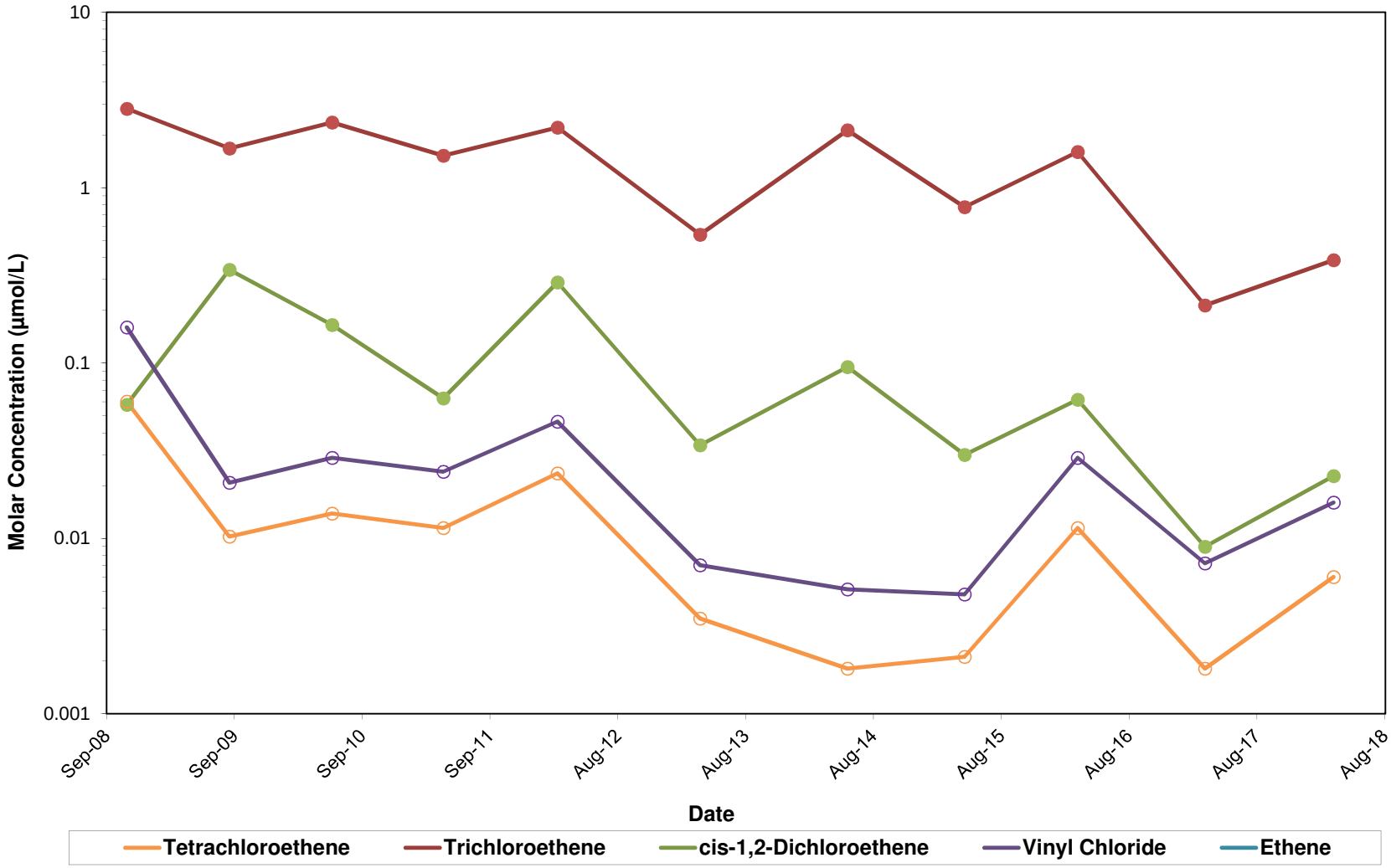
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW53B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

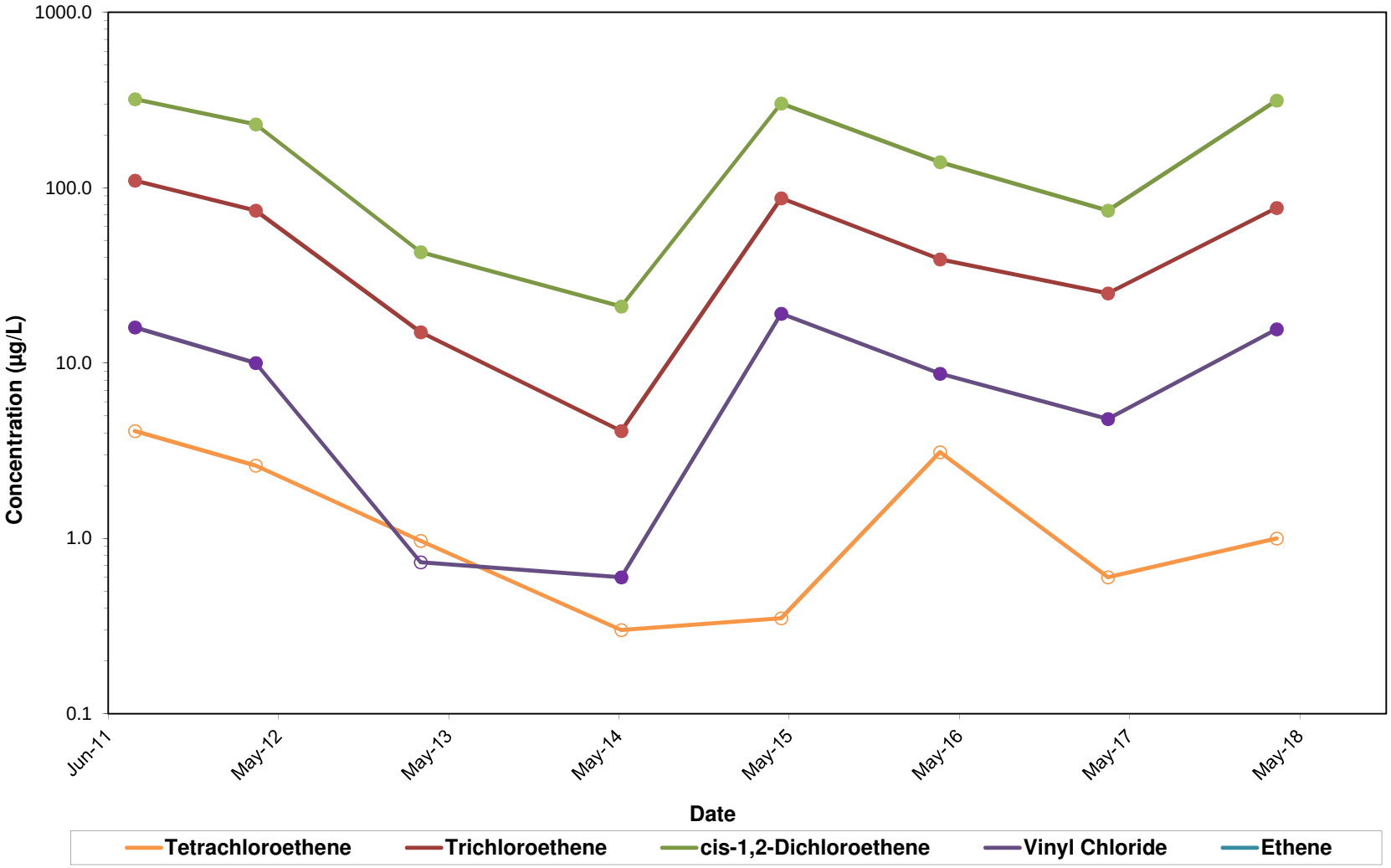
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW90B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

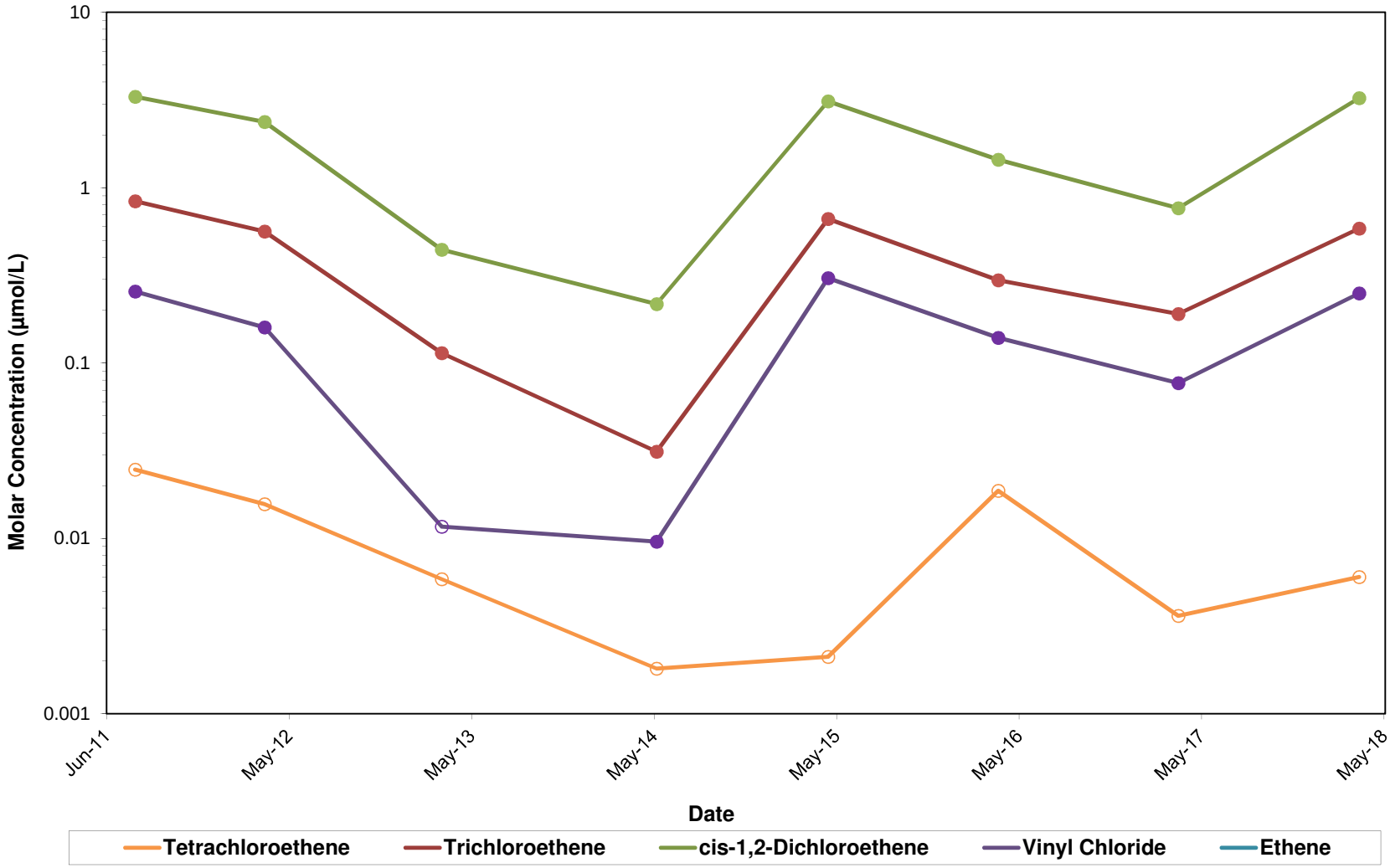
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW90B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

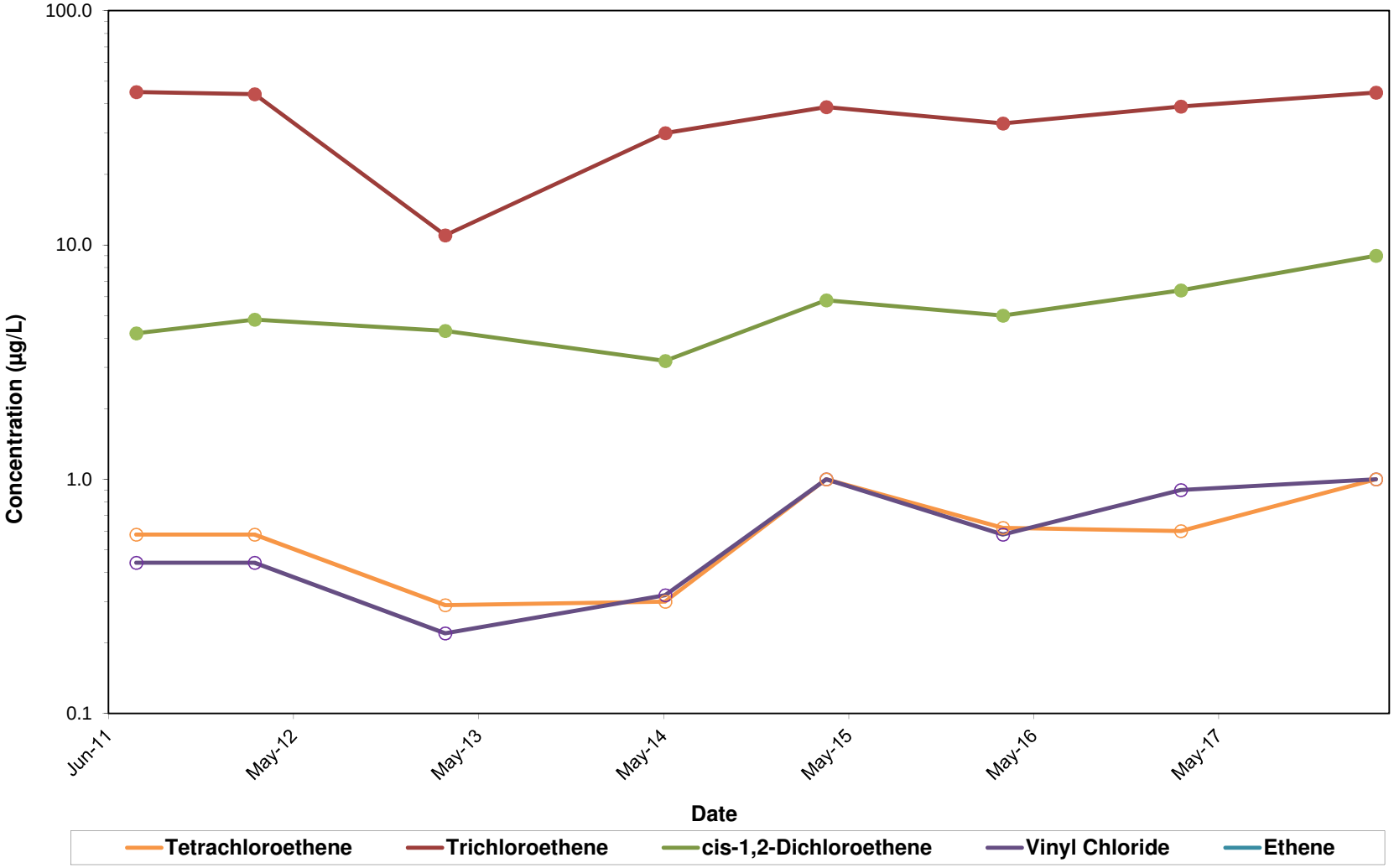
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW109B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

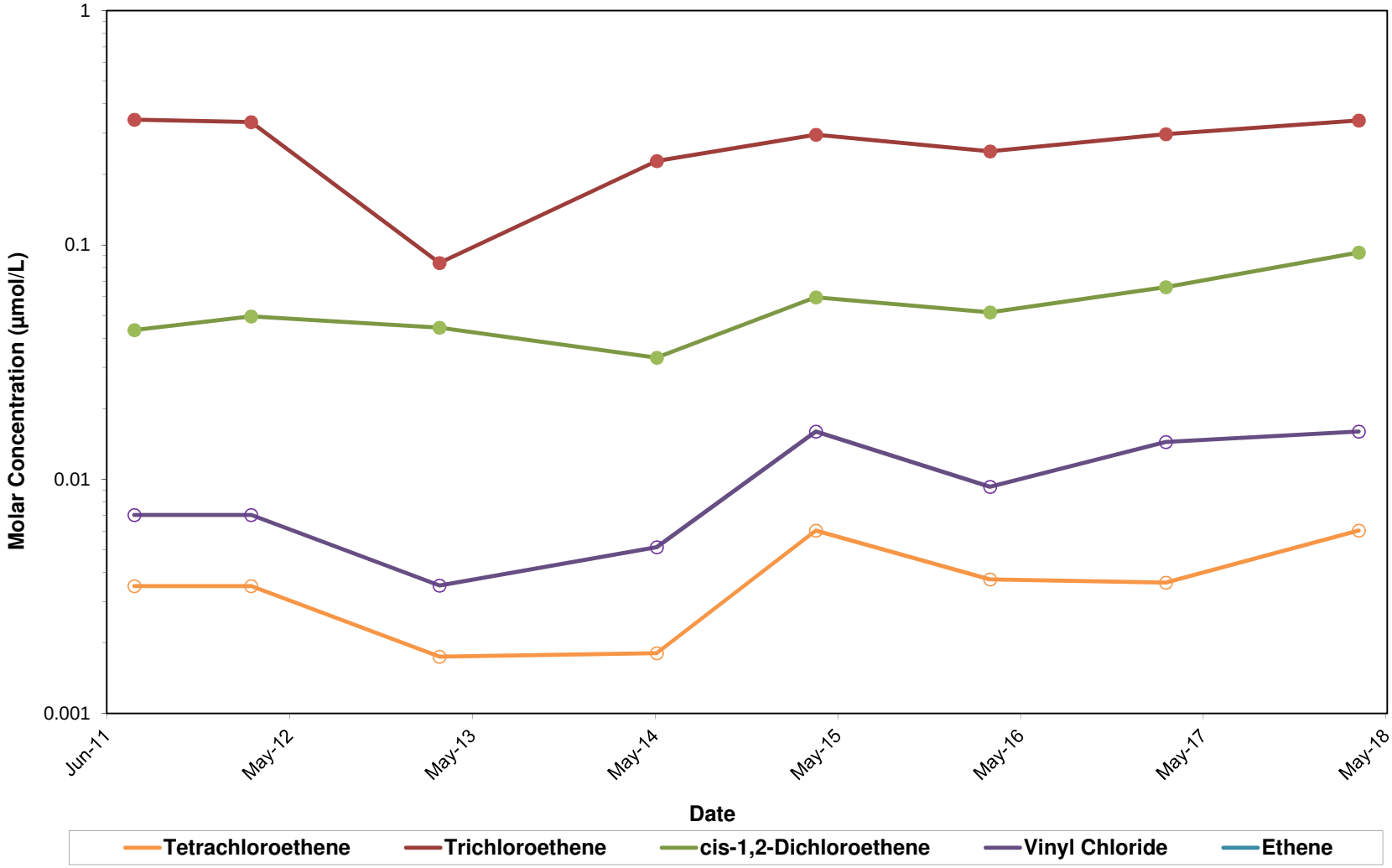
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW109B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

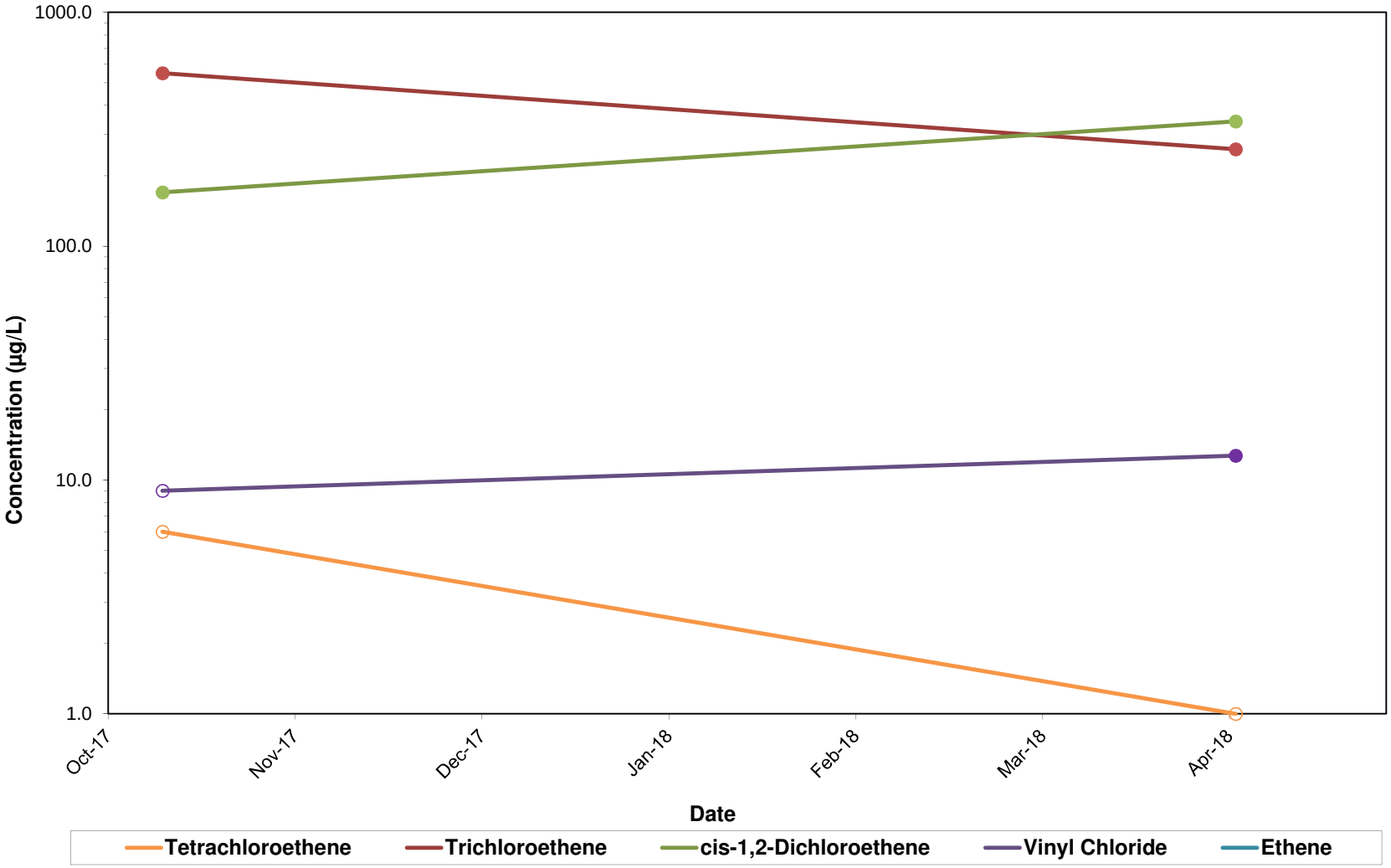
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW110B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

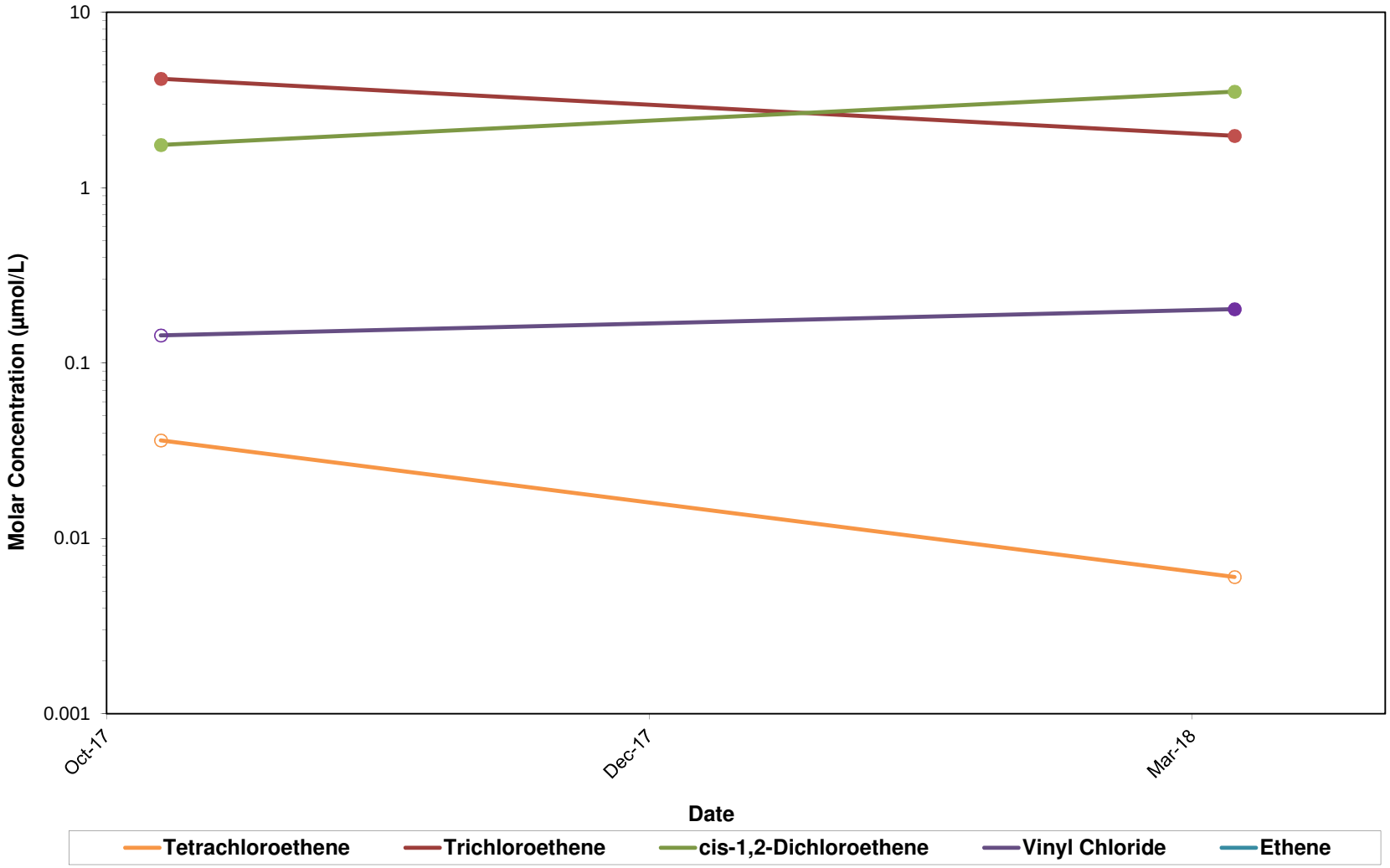
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW110B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

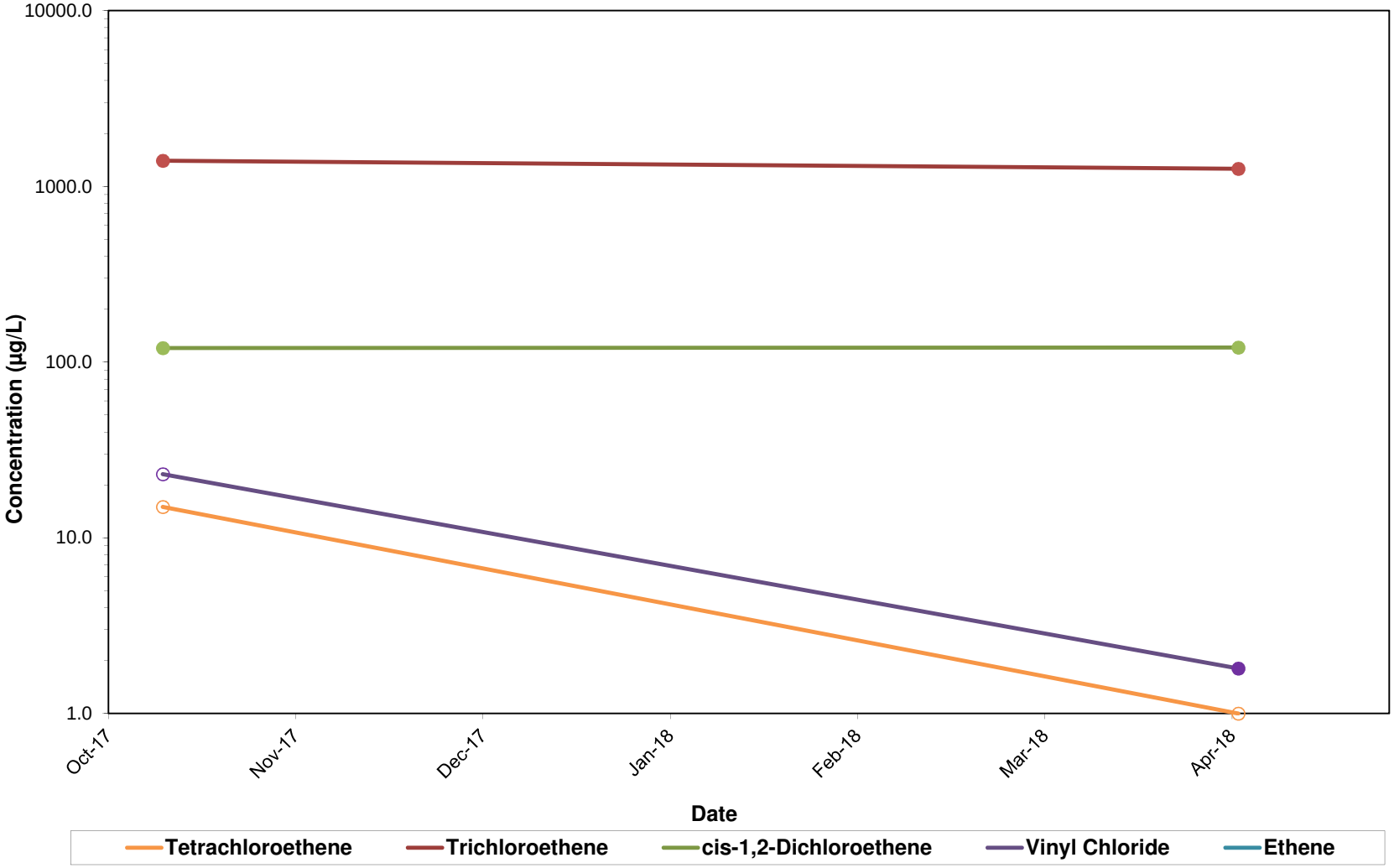
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW119B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

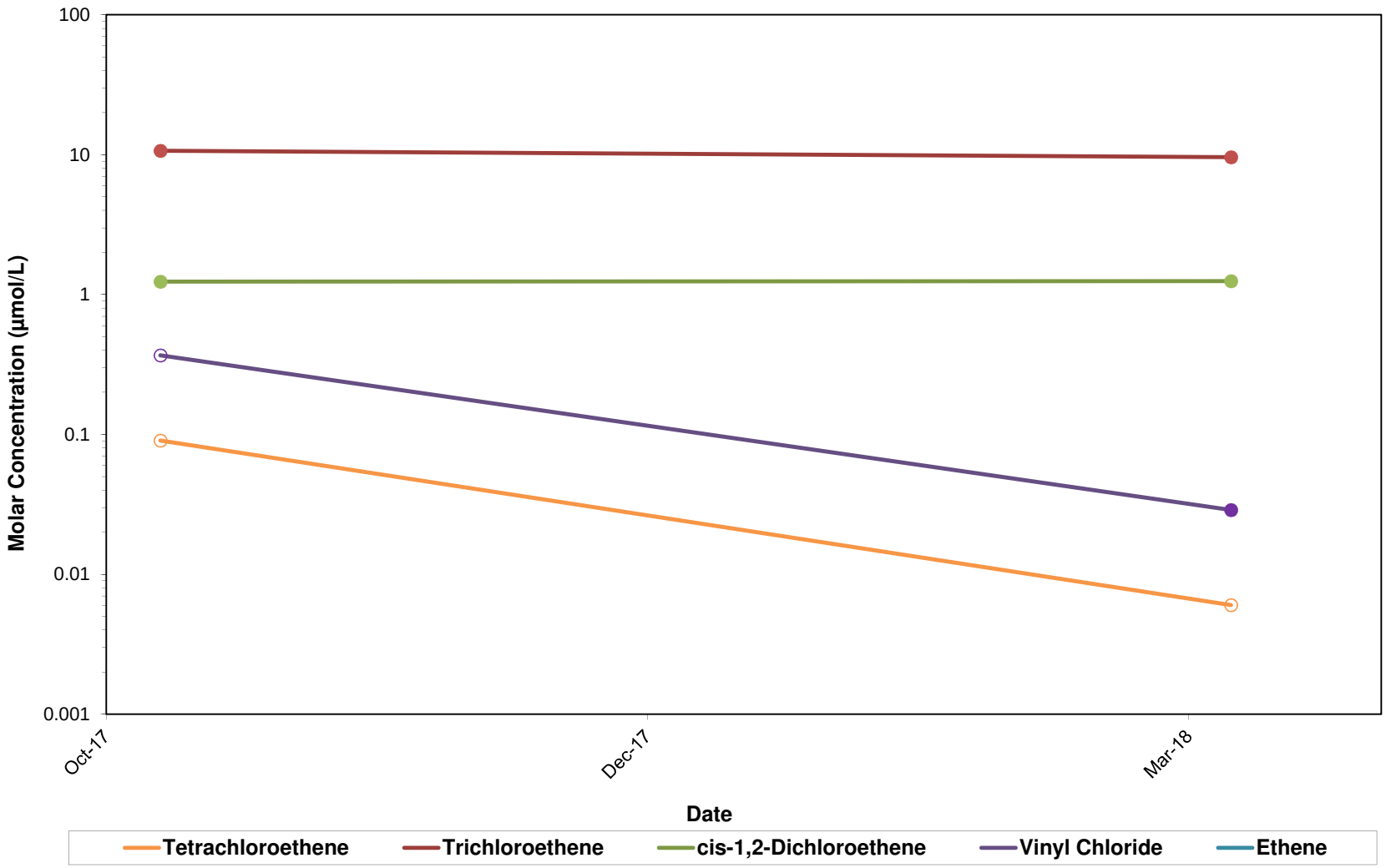
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW119B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

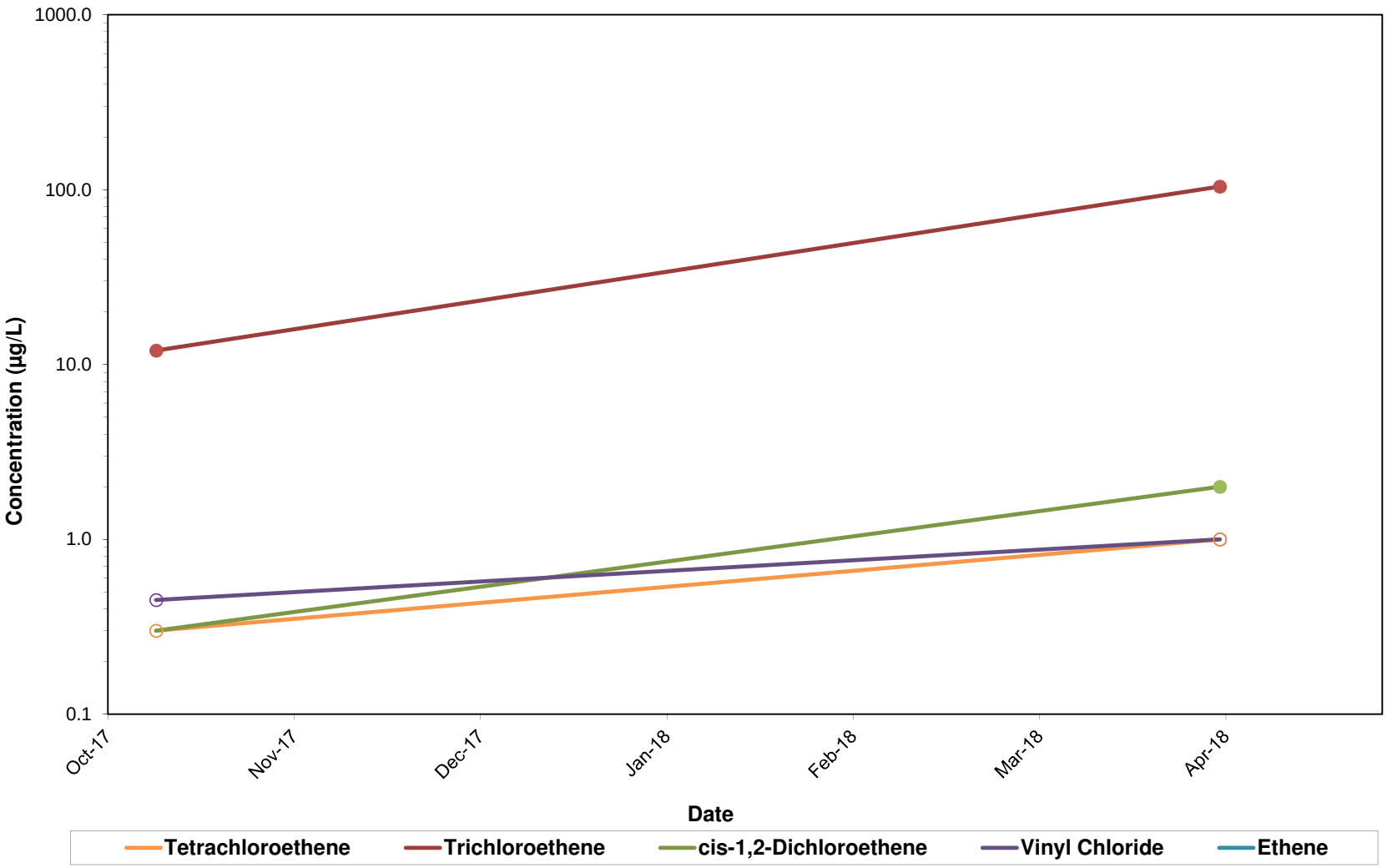
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW120B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

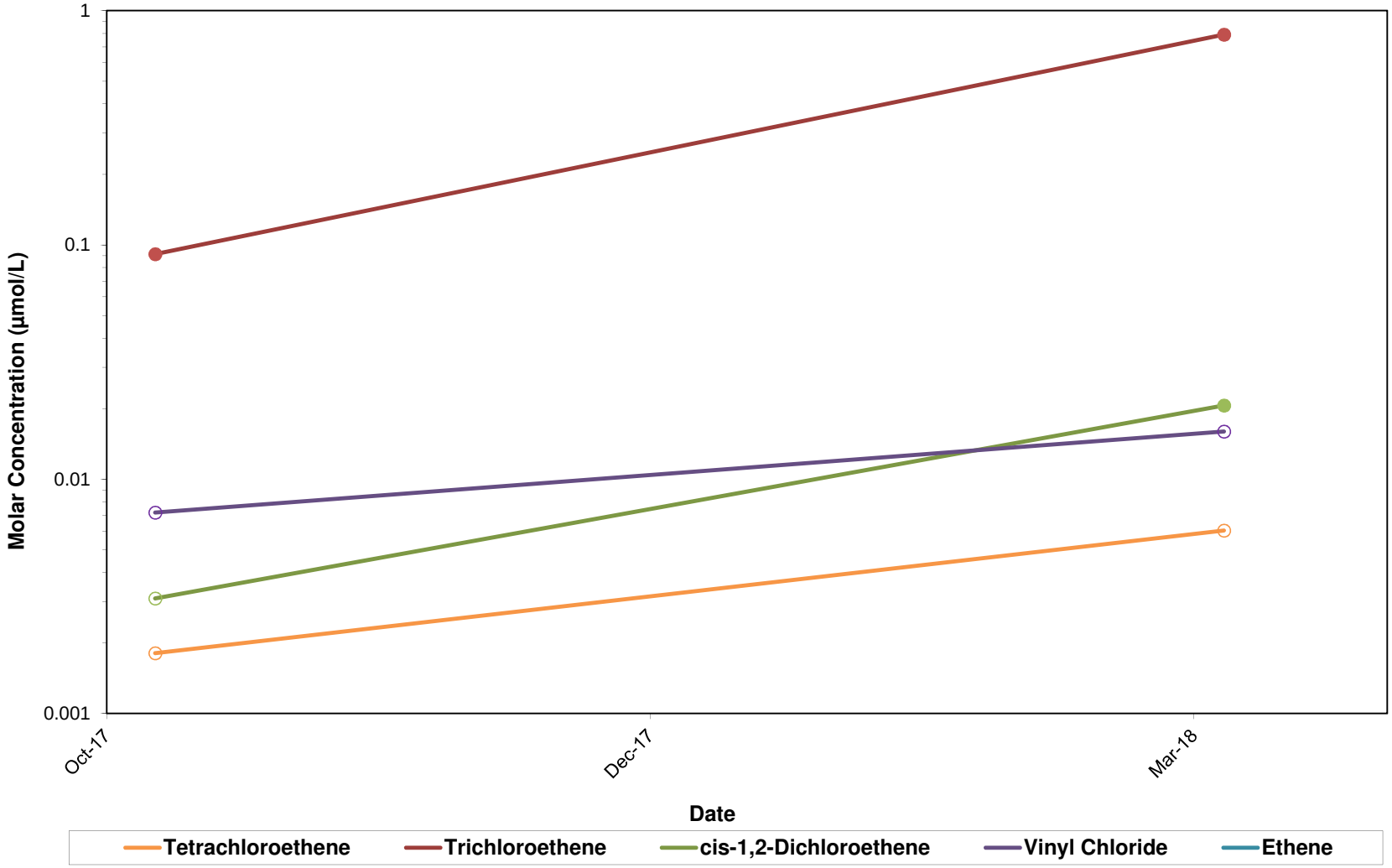
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW120B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

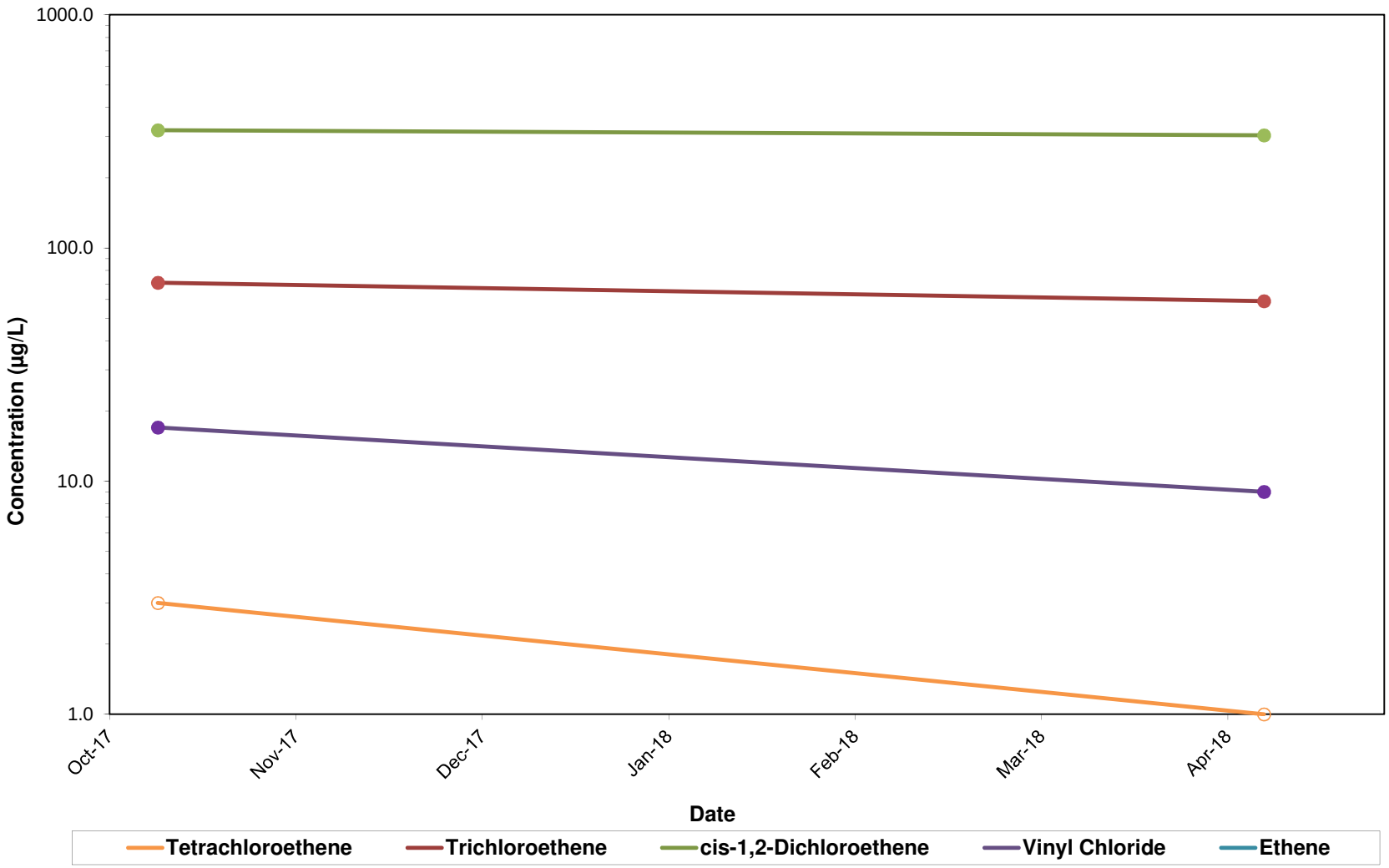
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW121B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

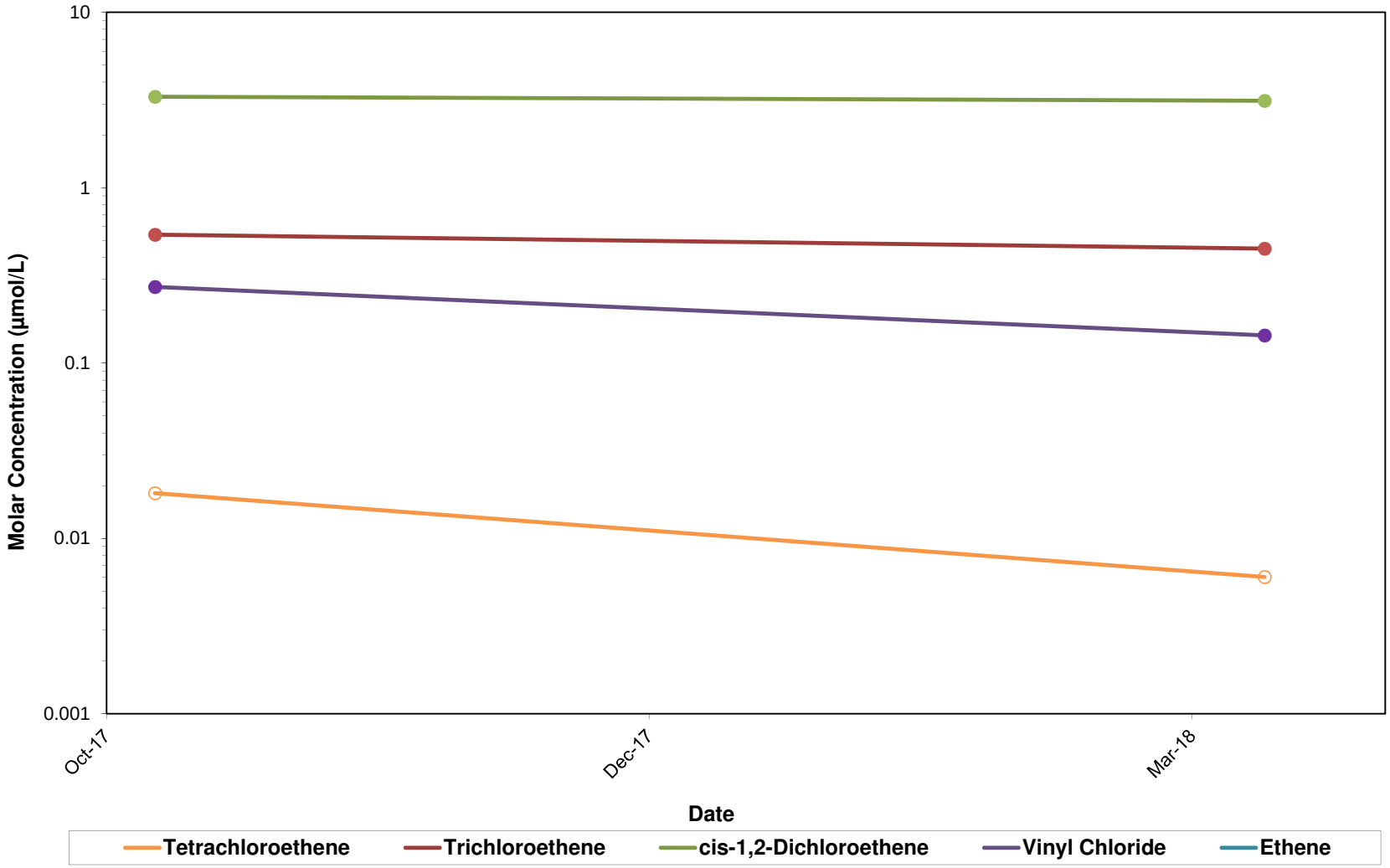
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW121B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW131B
Lockheed Martin Middle River Complex

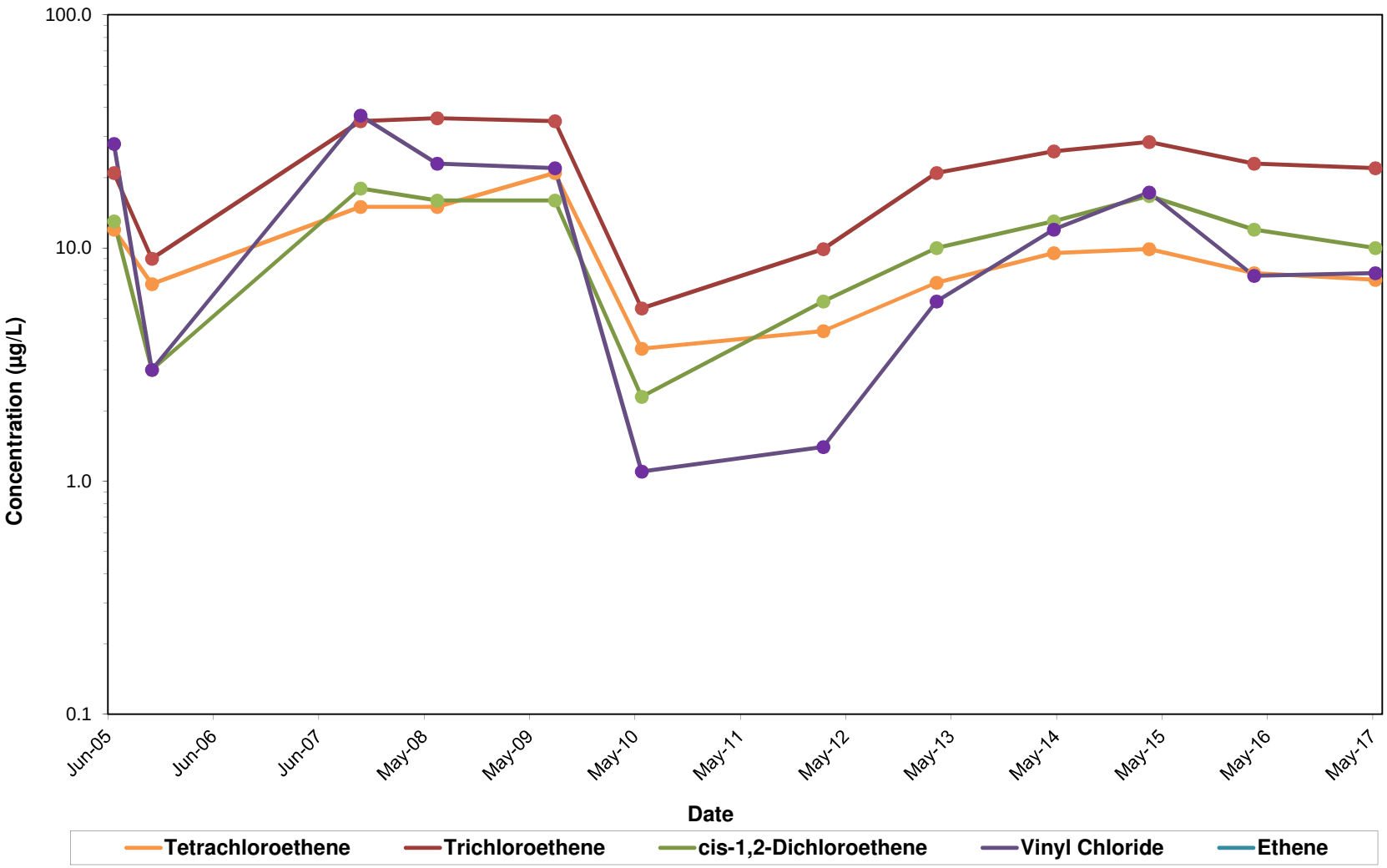


Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW131B
Lockheed Martin Middle River Complex

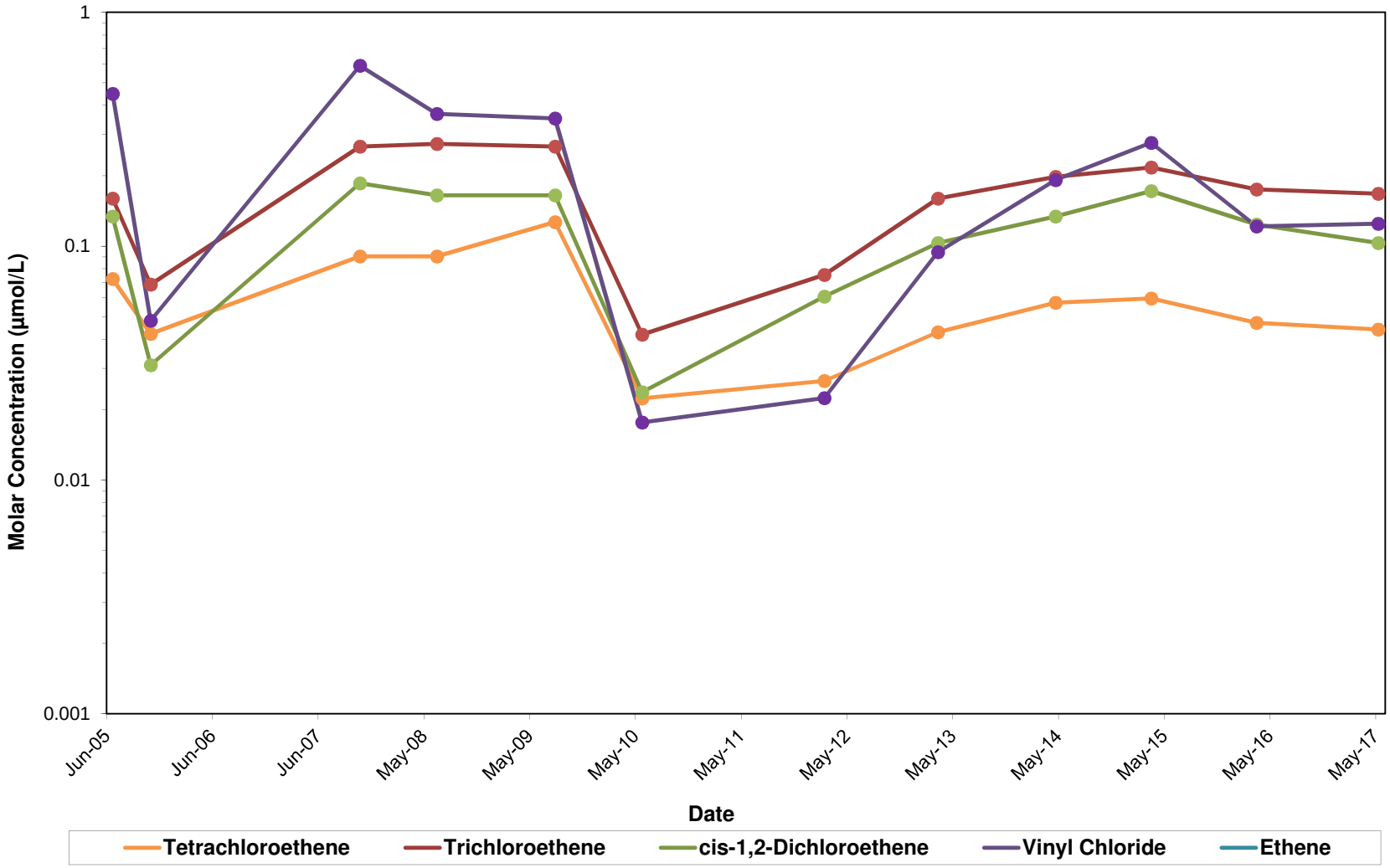
MW16A Plume



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW16A
Lockheed Martin Middle River Complex

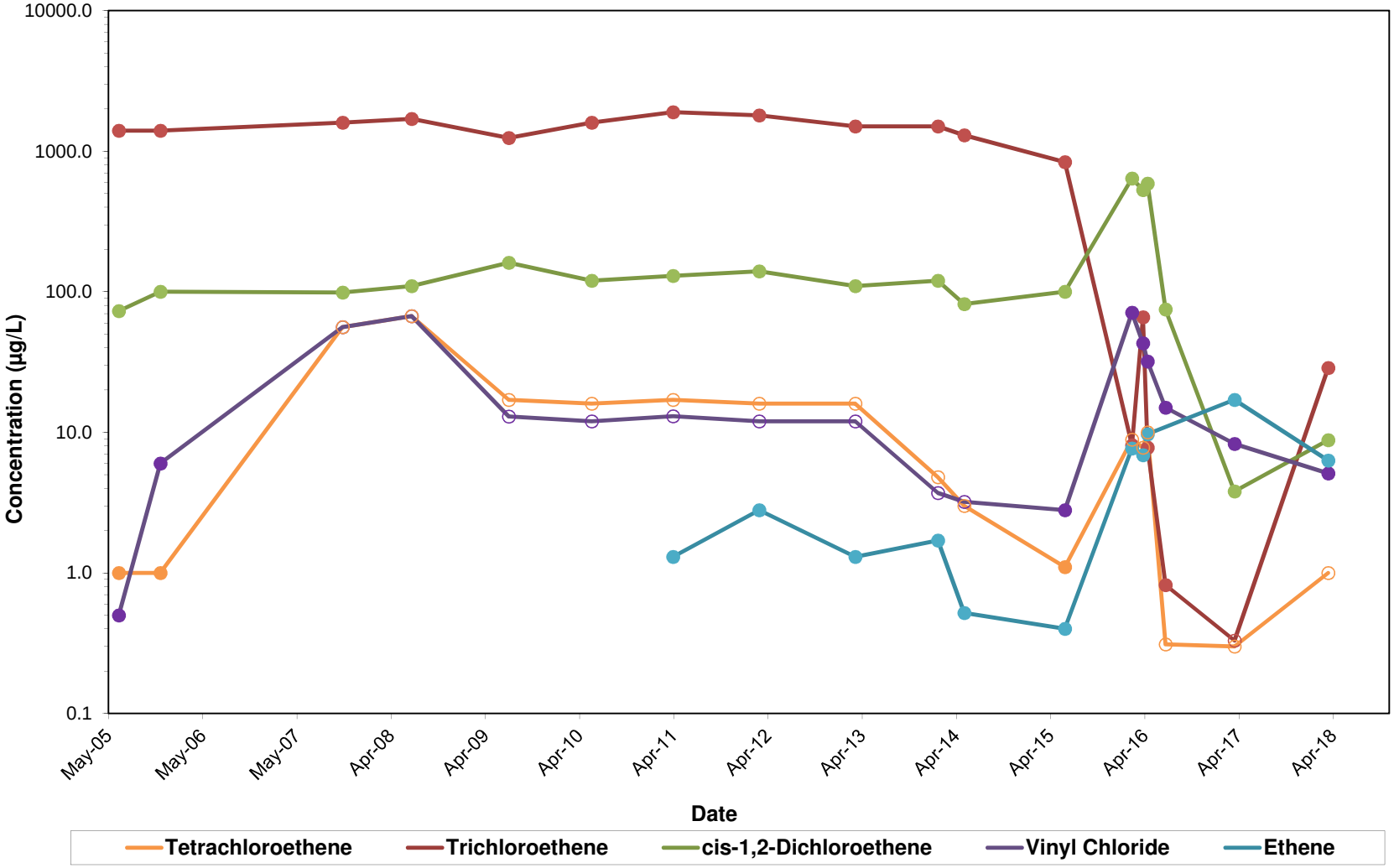


Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW16A
Lockheed Martin Middle River Complex

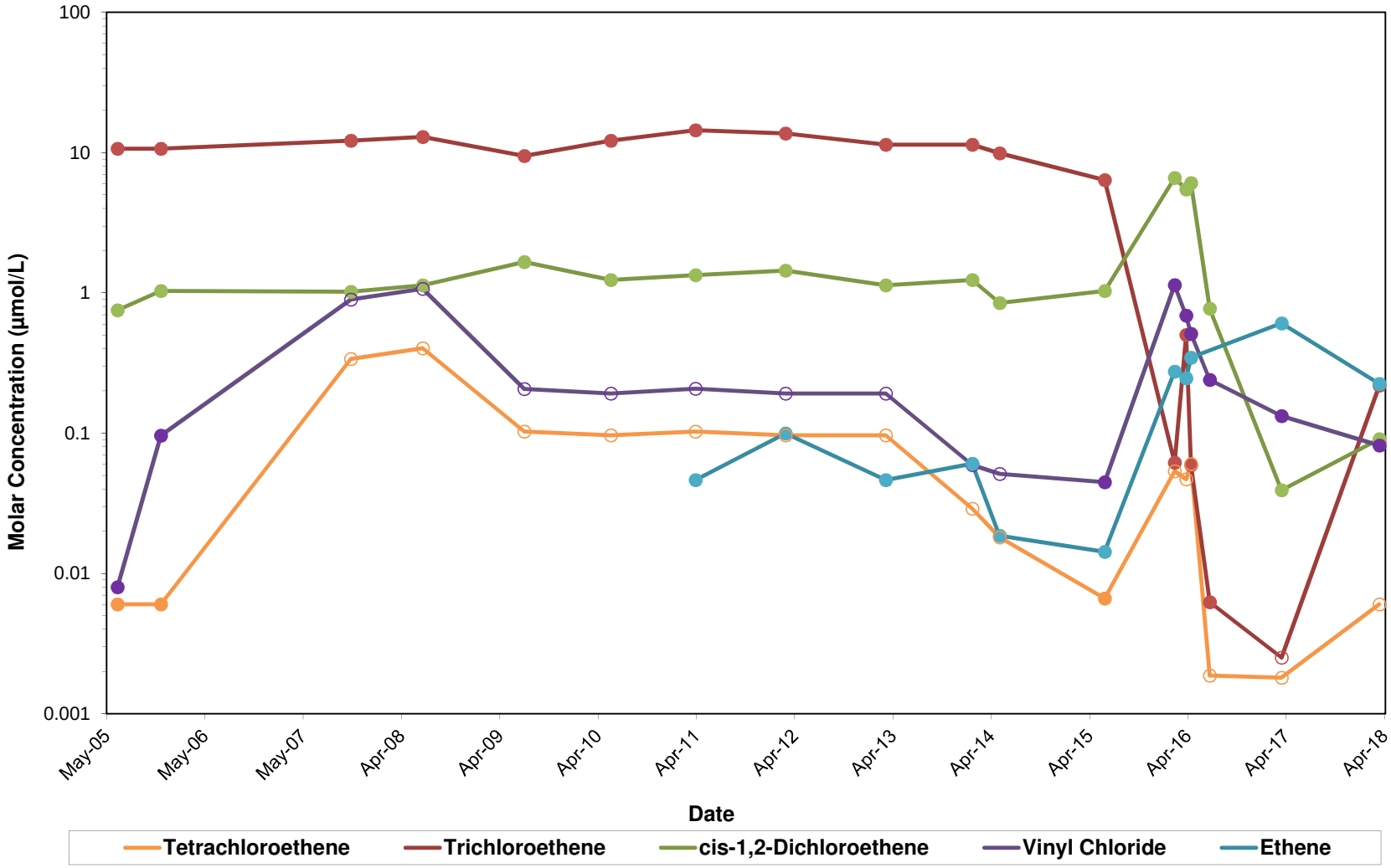
Block G Plume



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

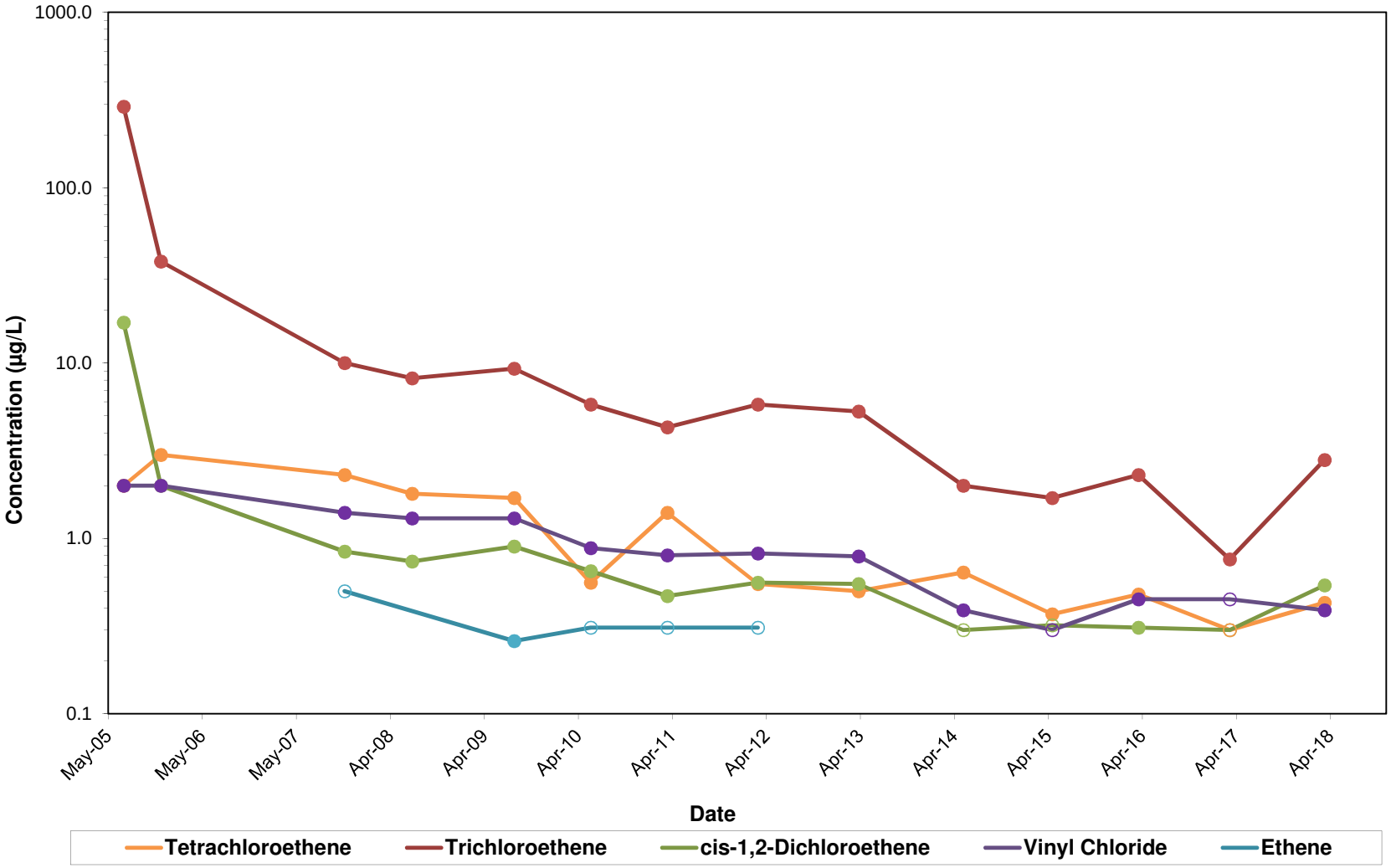
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW12A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

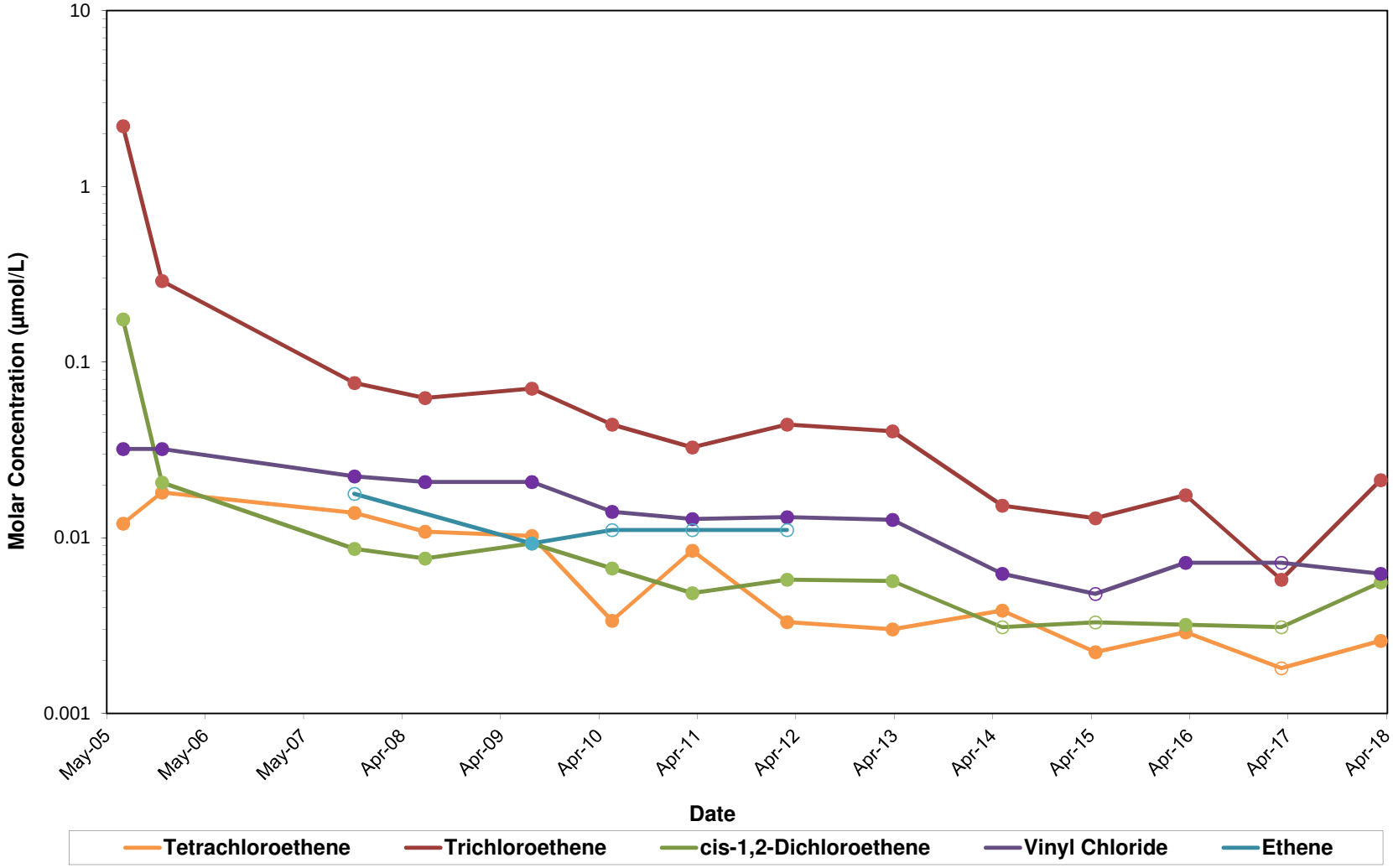
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW12A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

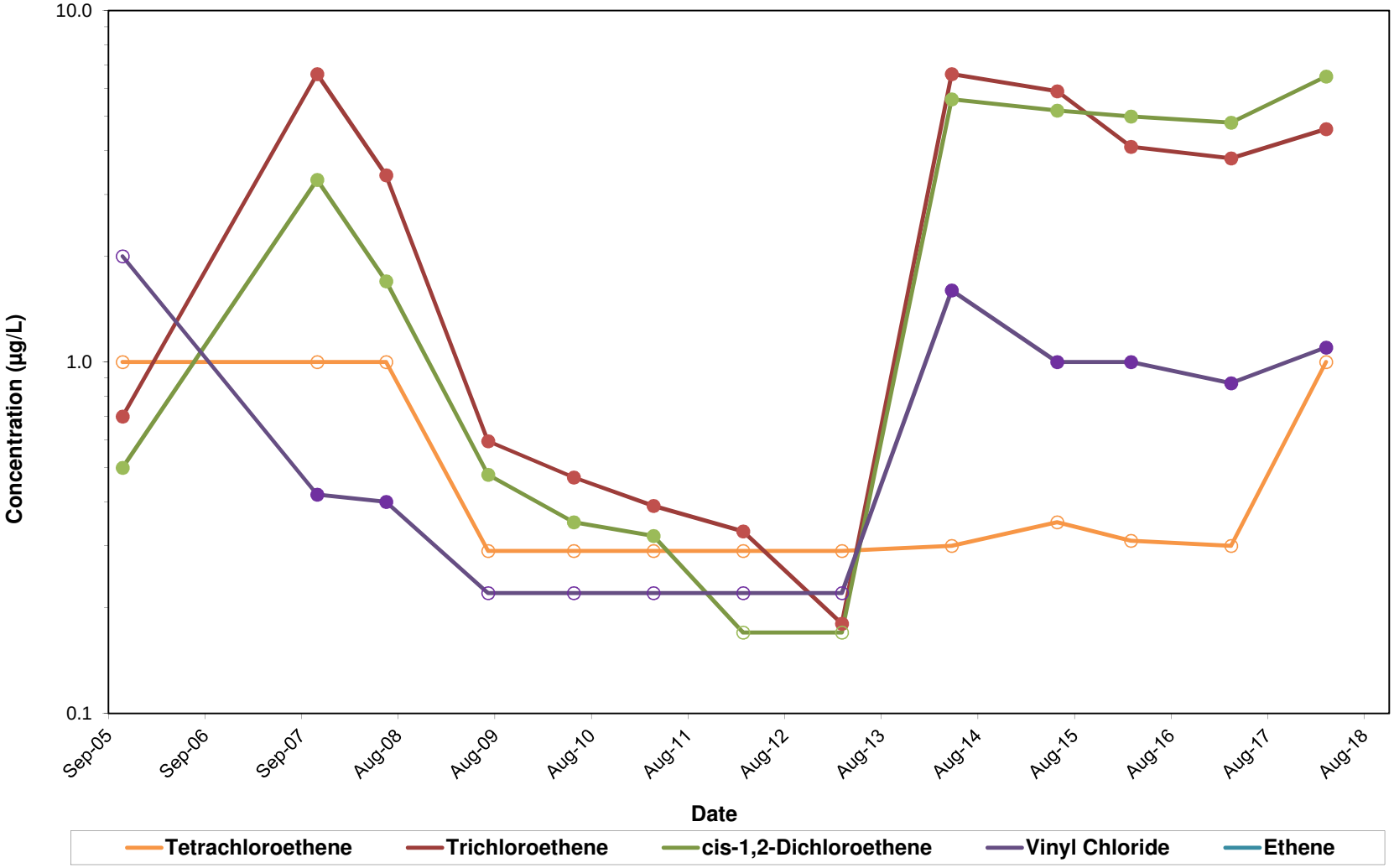
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW21A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

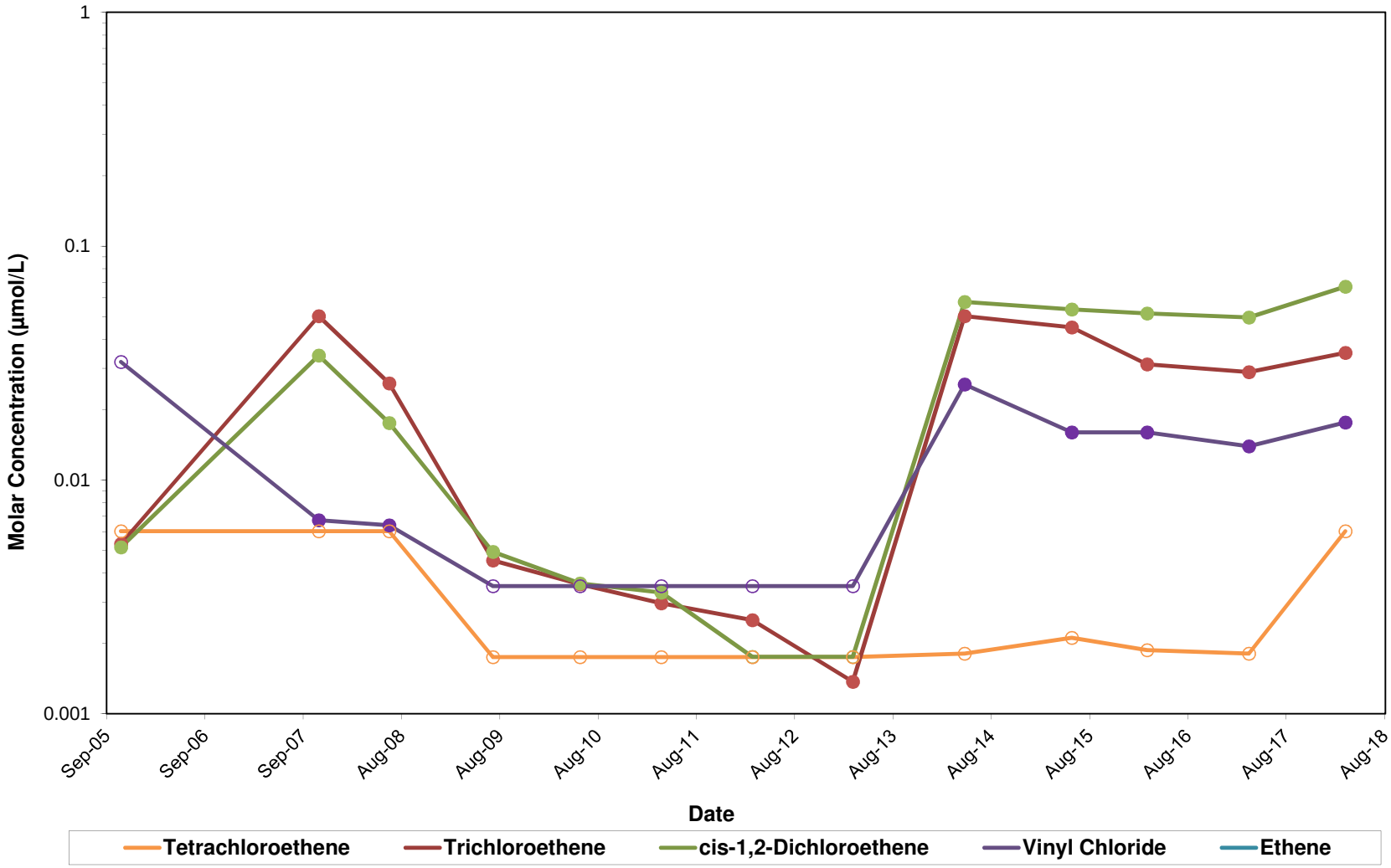
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW21A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

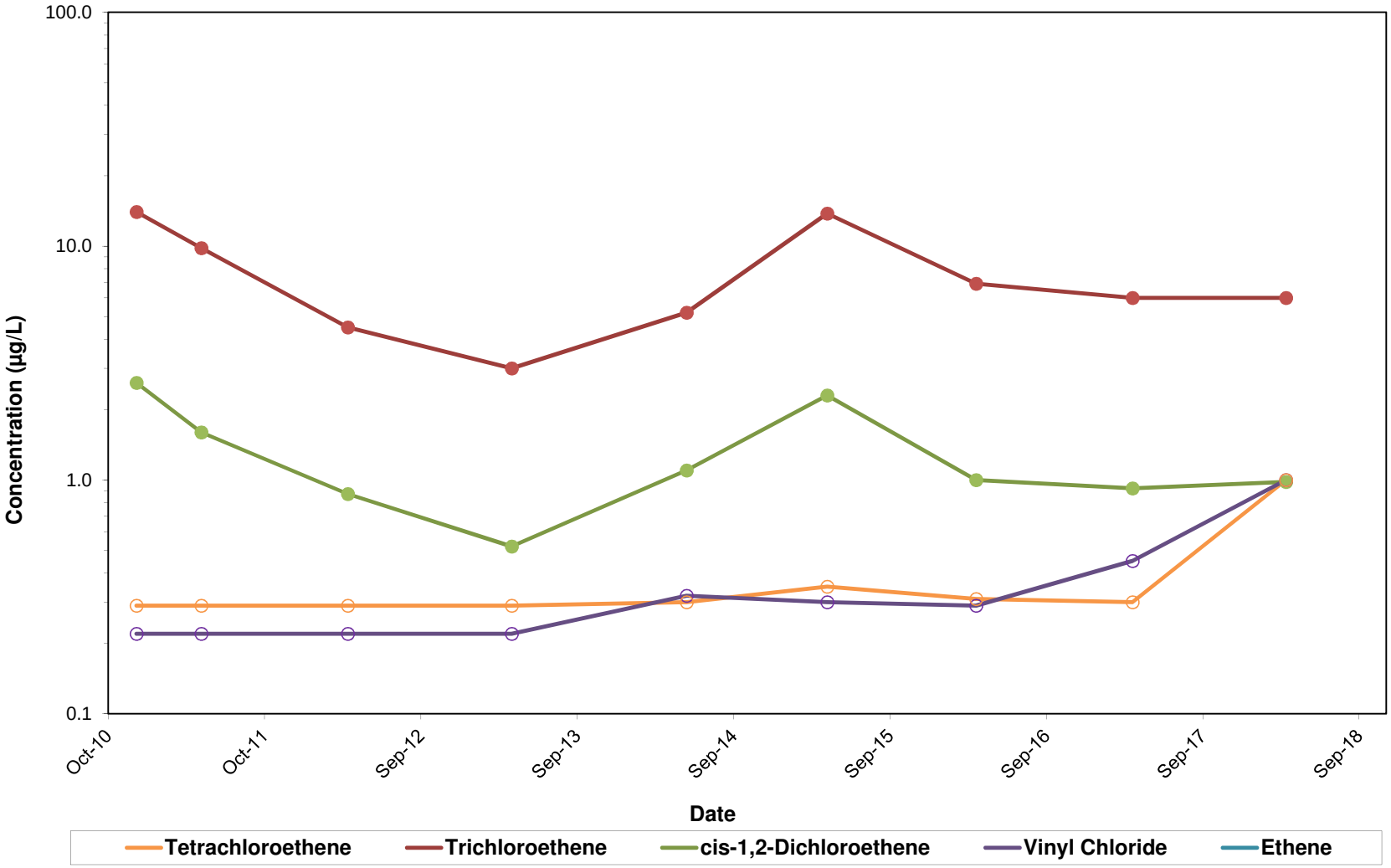
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW63A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

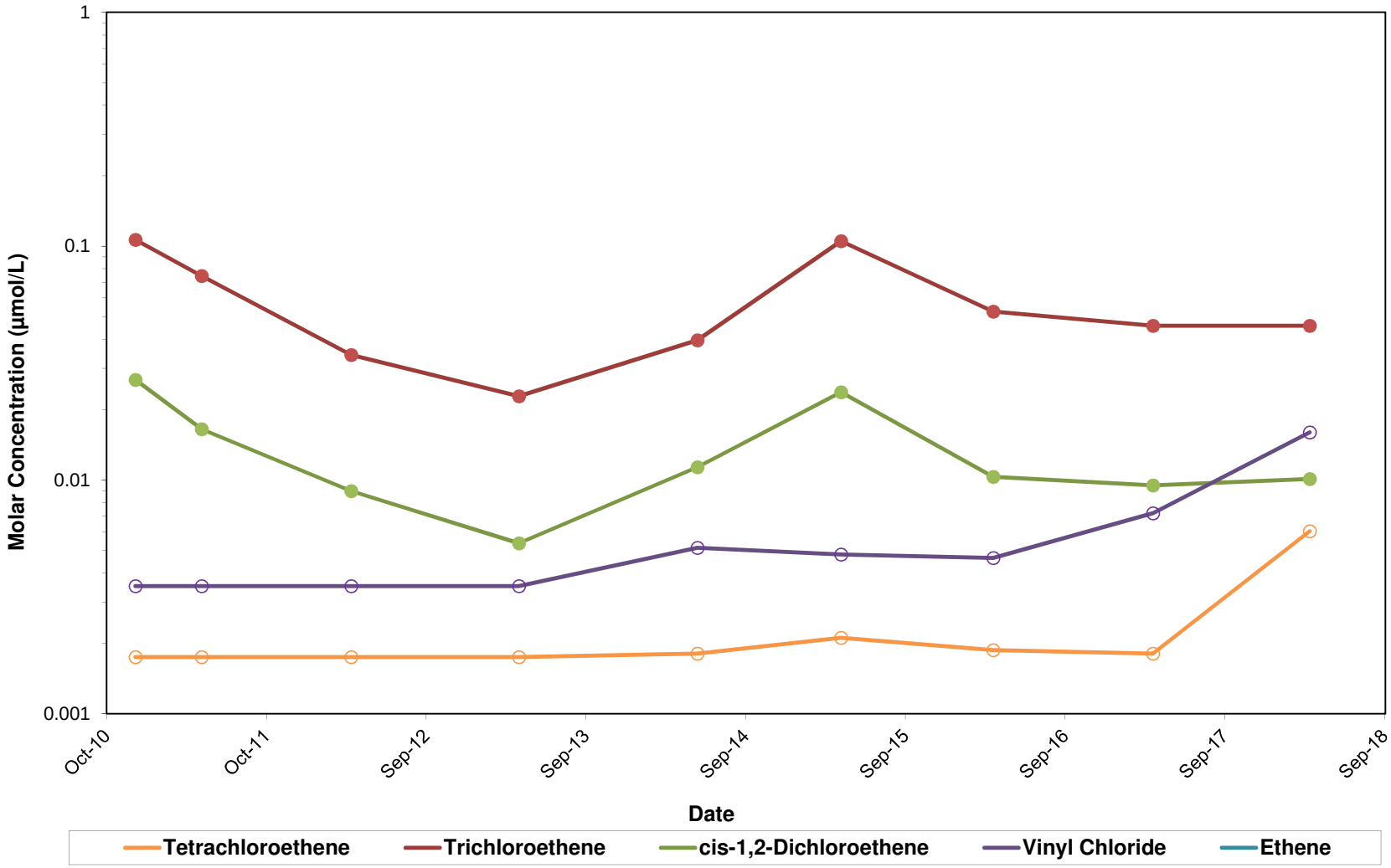
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW63A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

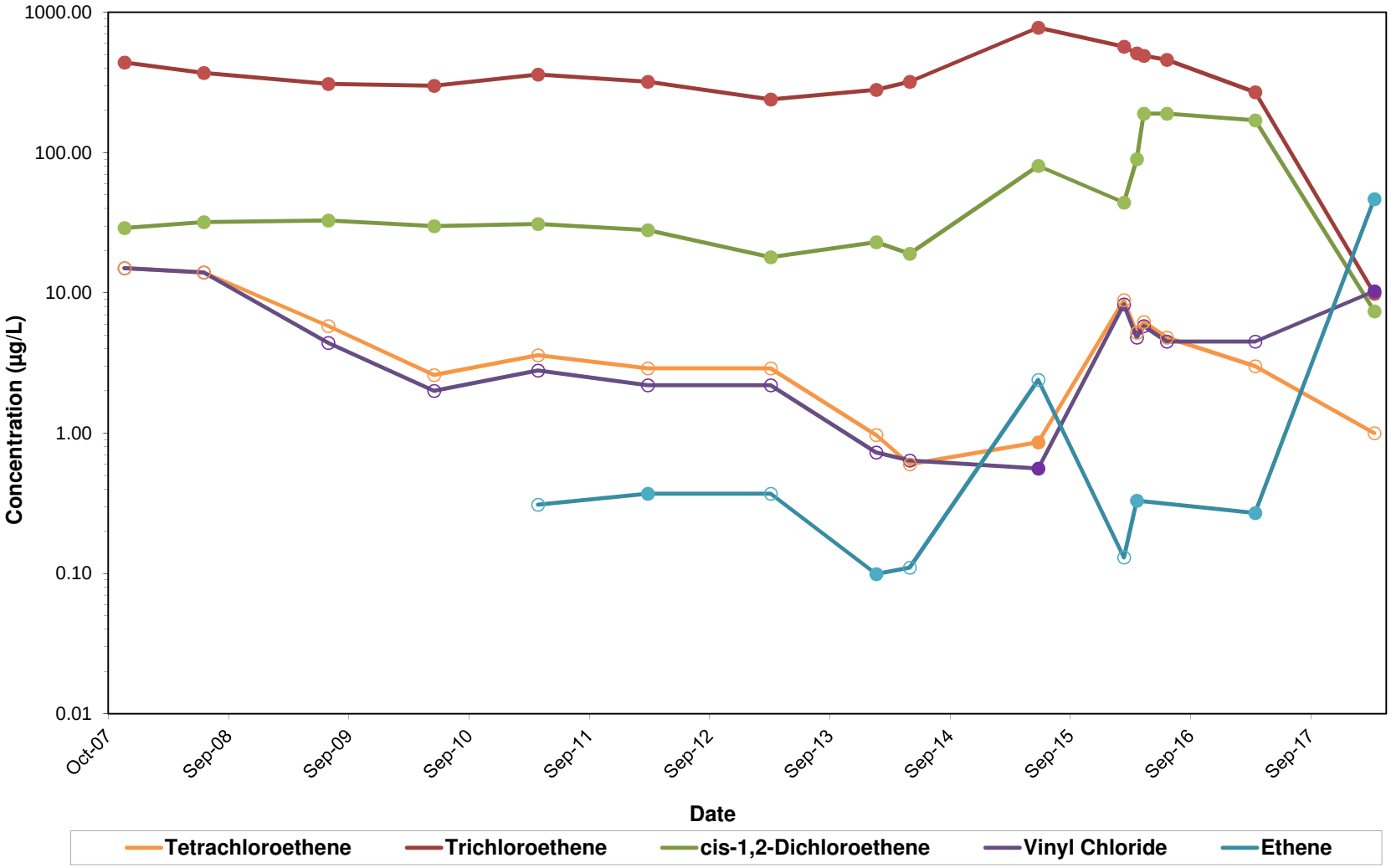
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW100A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

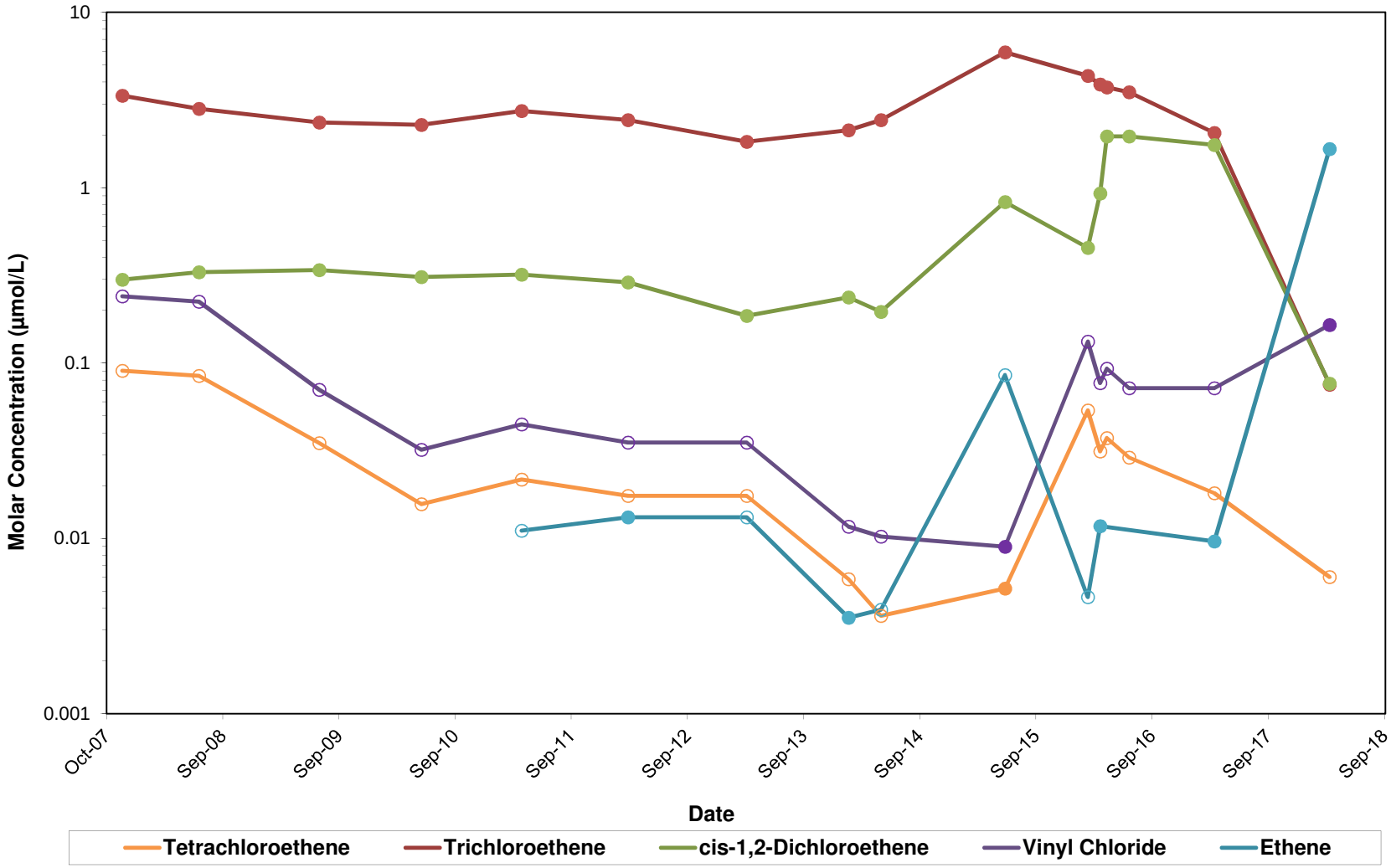
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW100A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

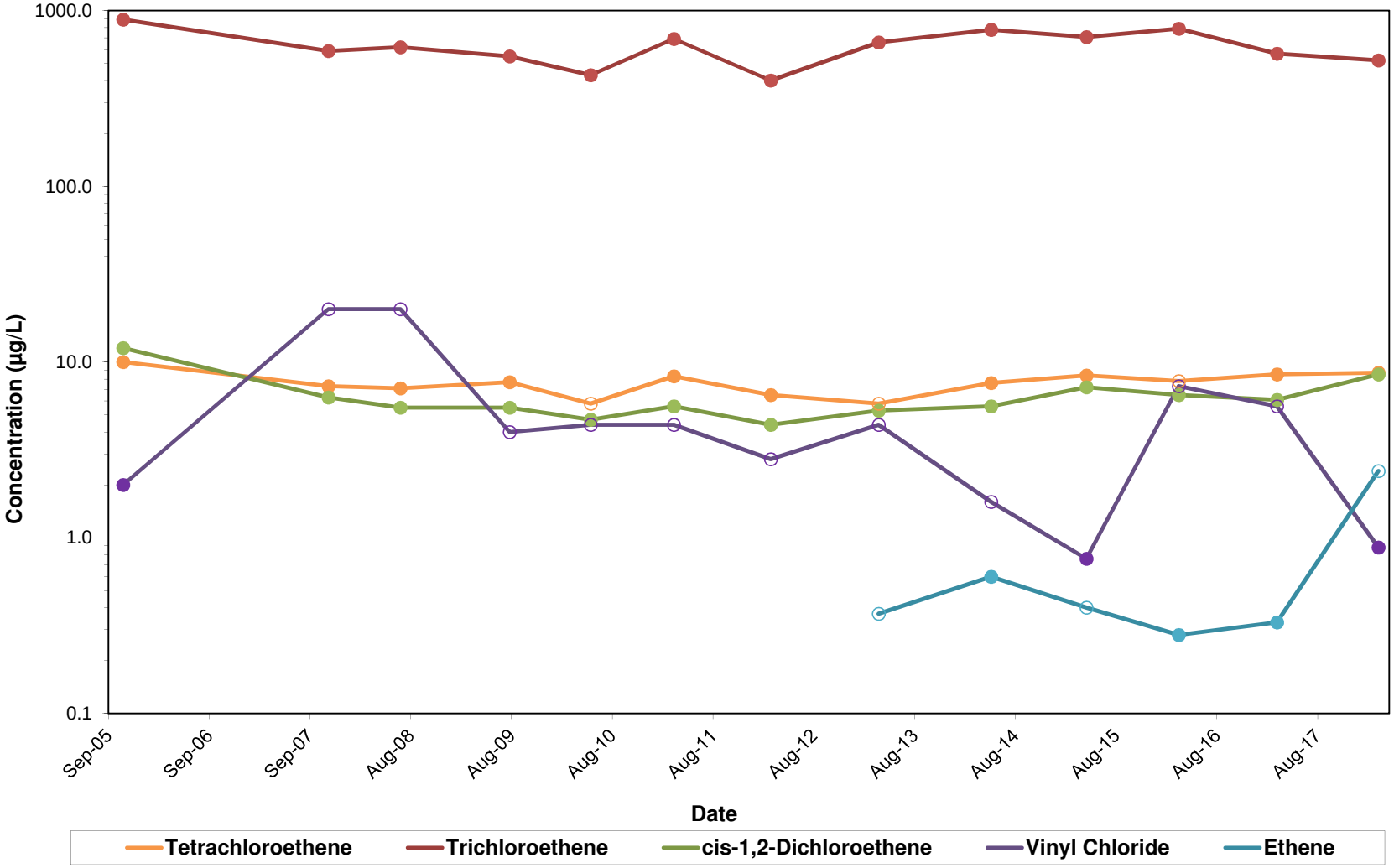
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW12B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

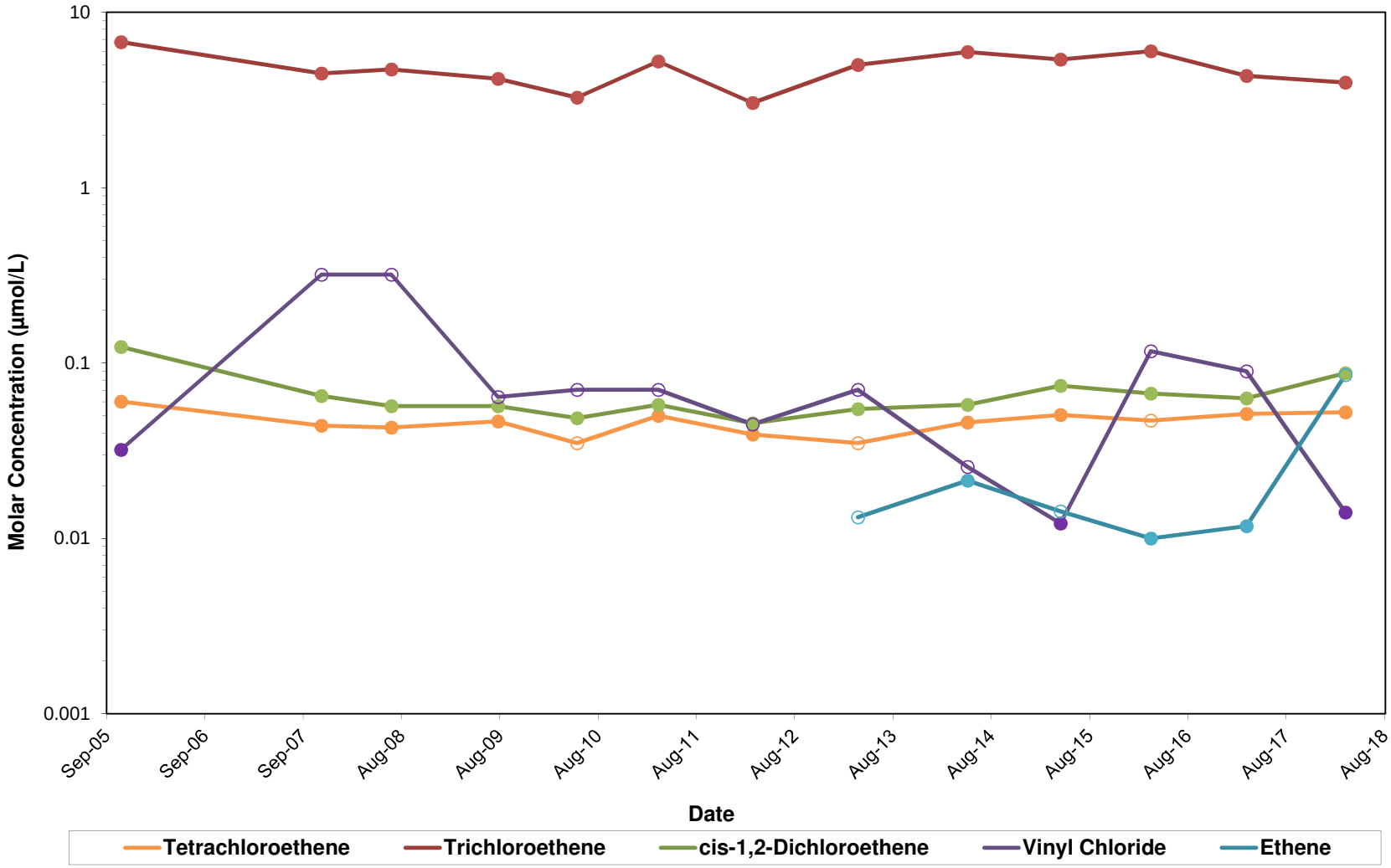
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW12B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

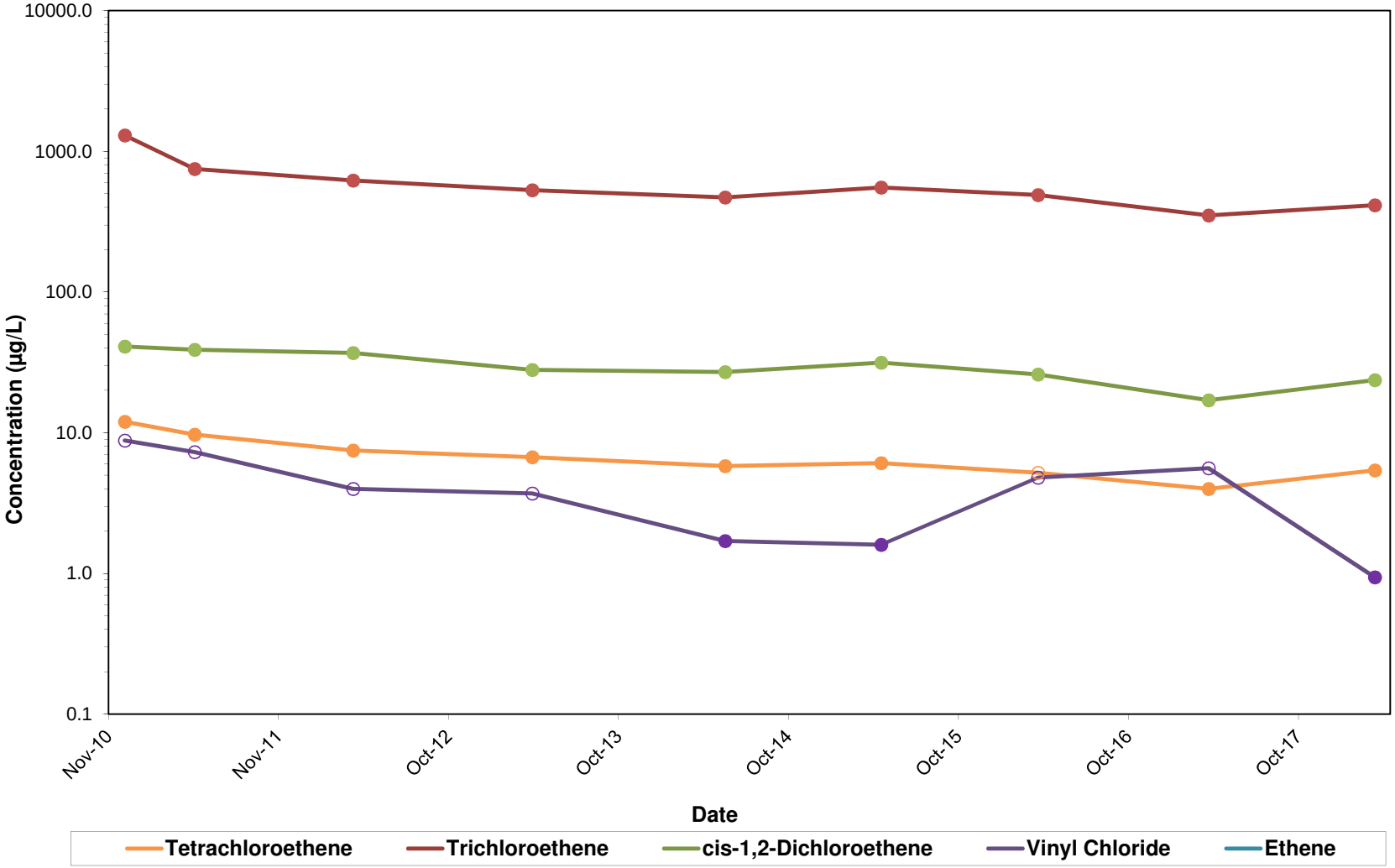
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW21B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

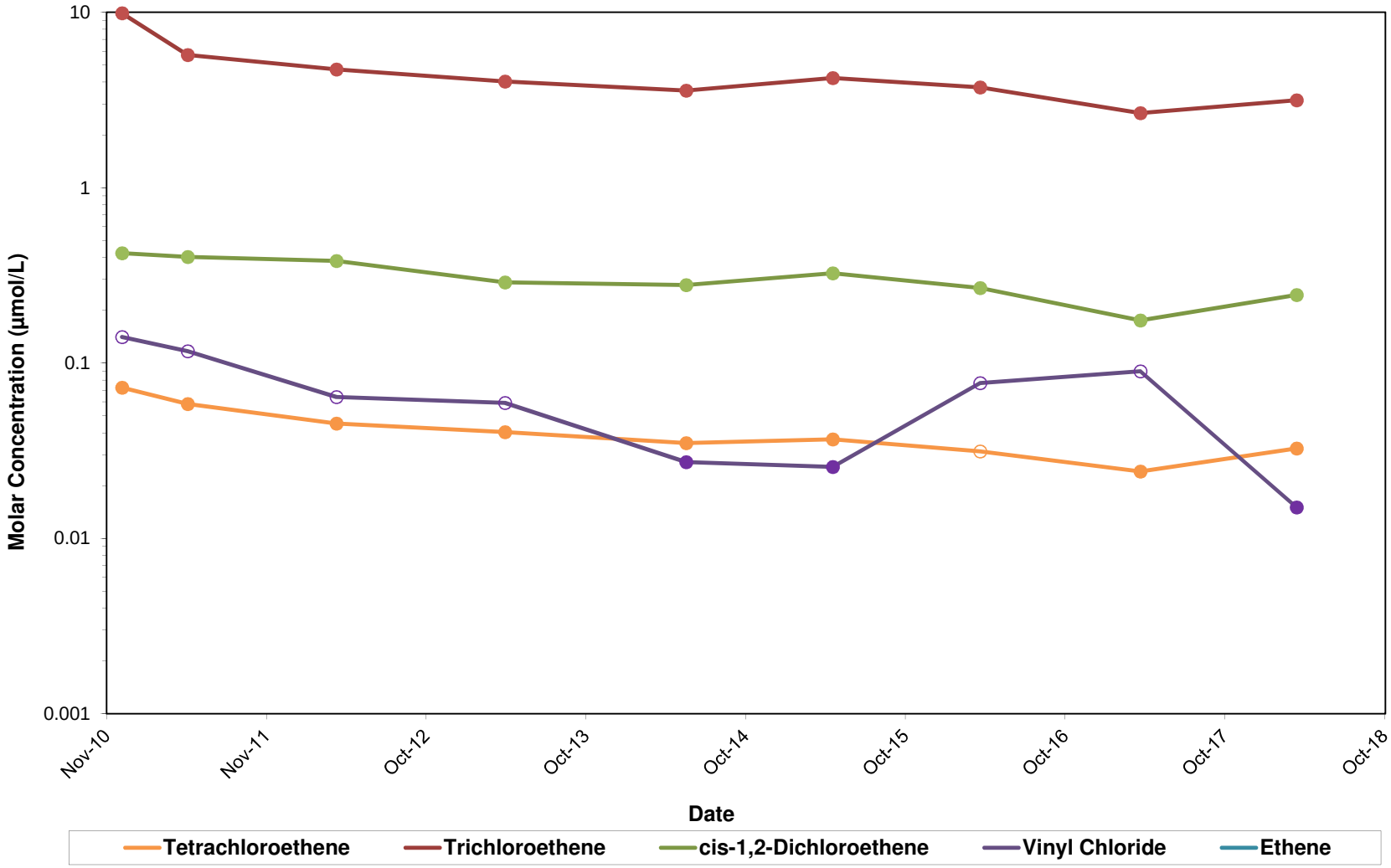
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW21B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

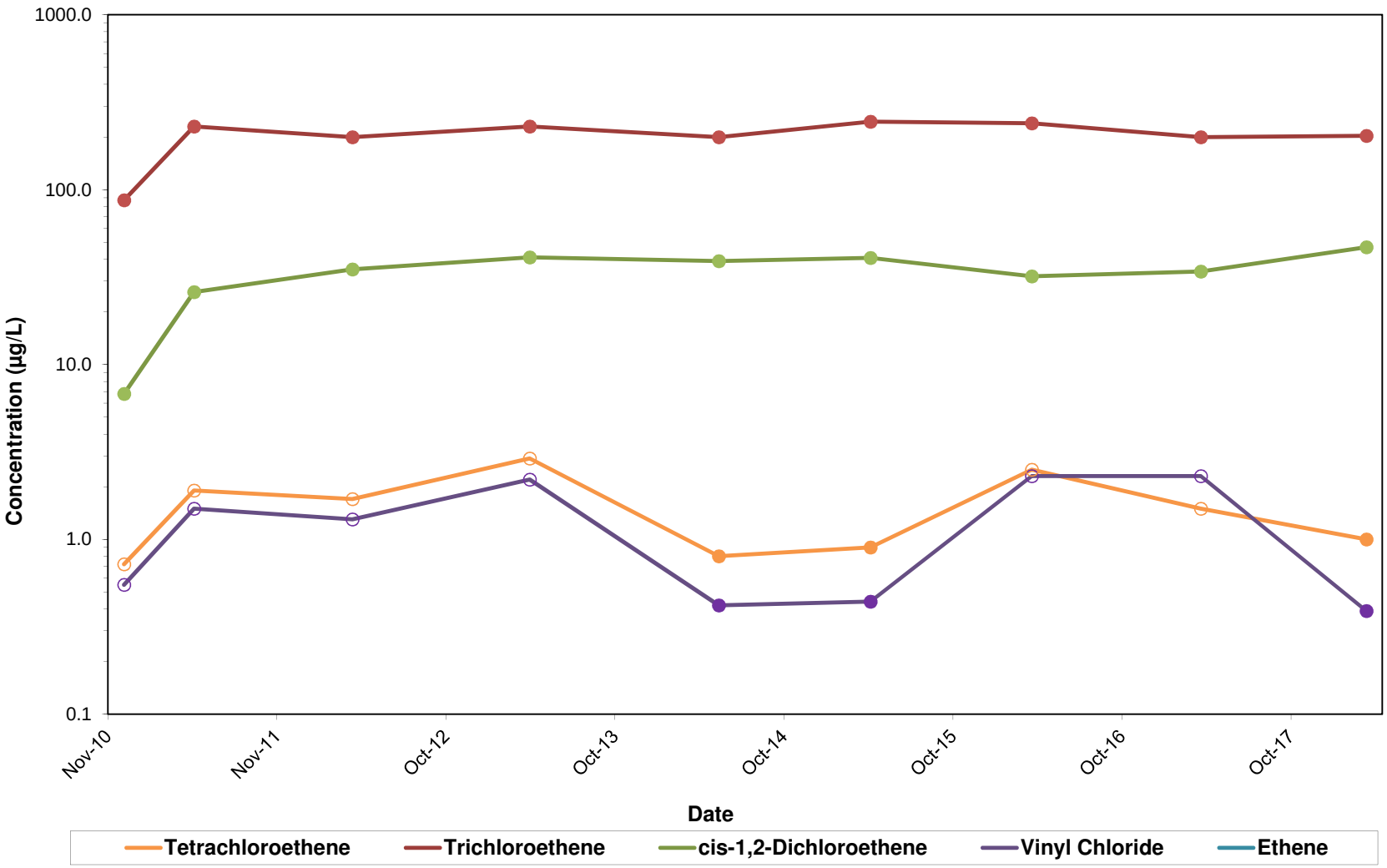
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW98B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

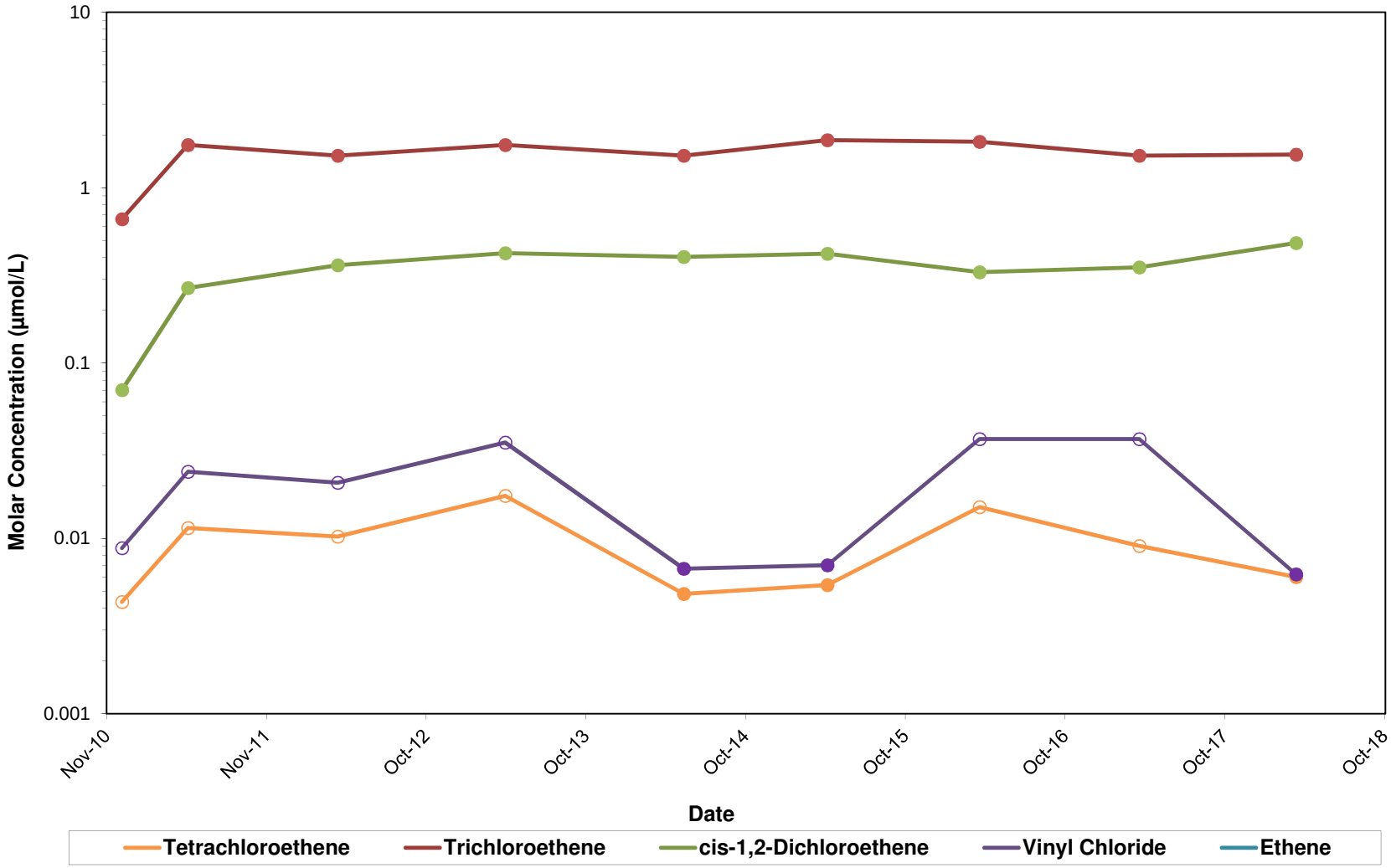
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW98B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

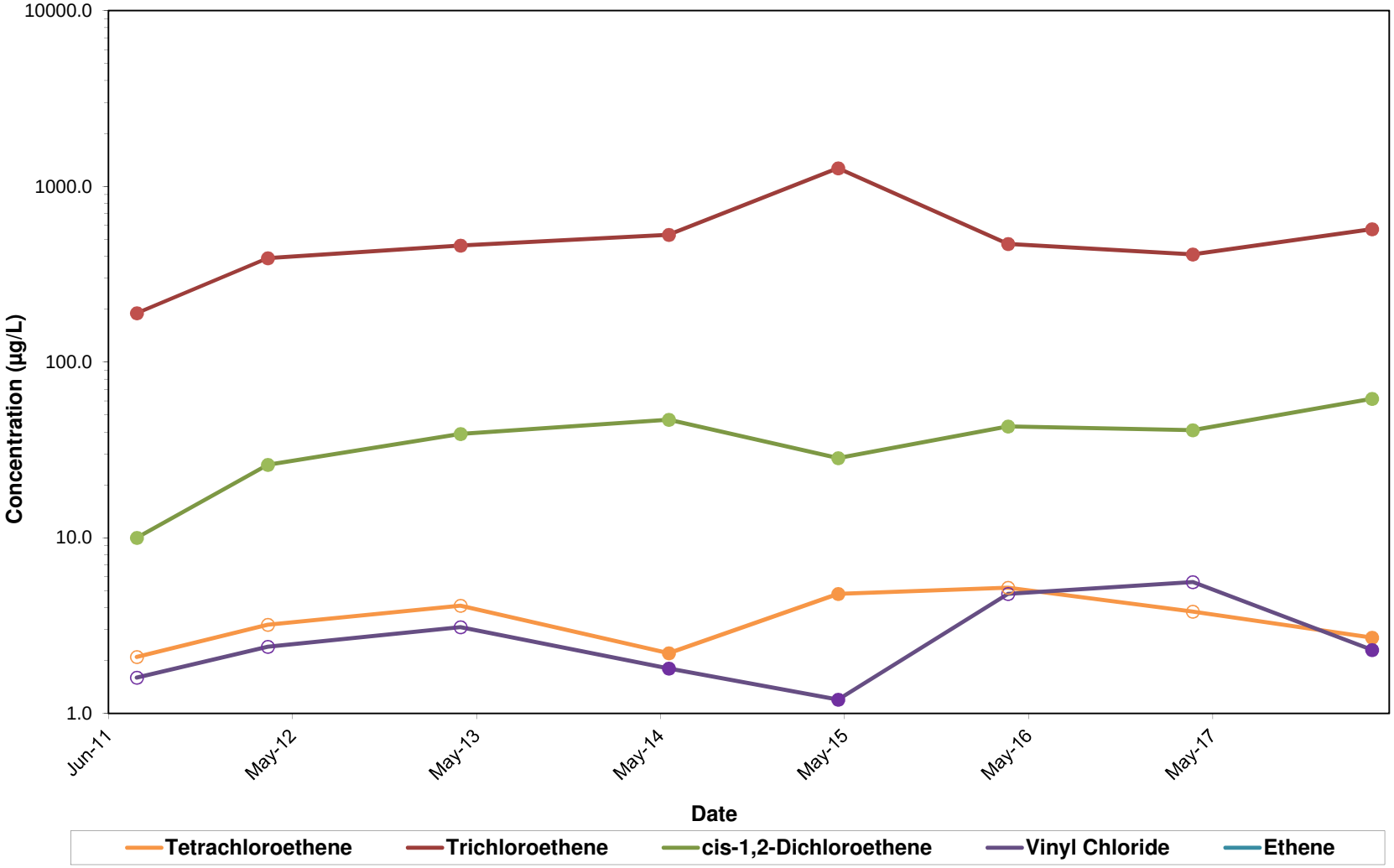
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW100B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

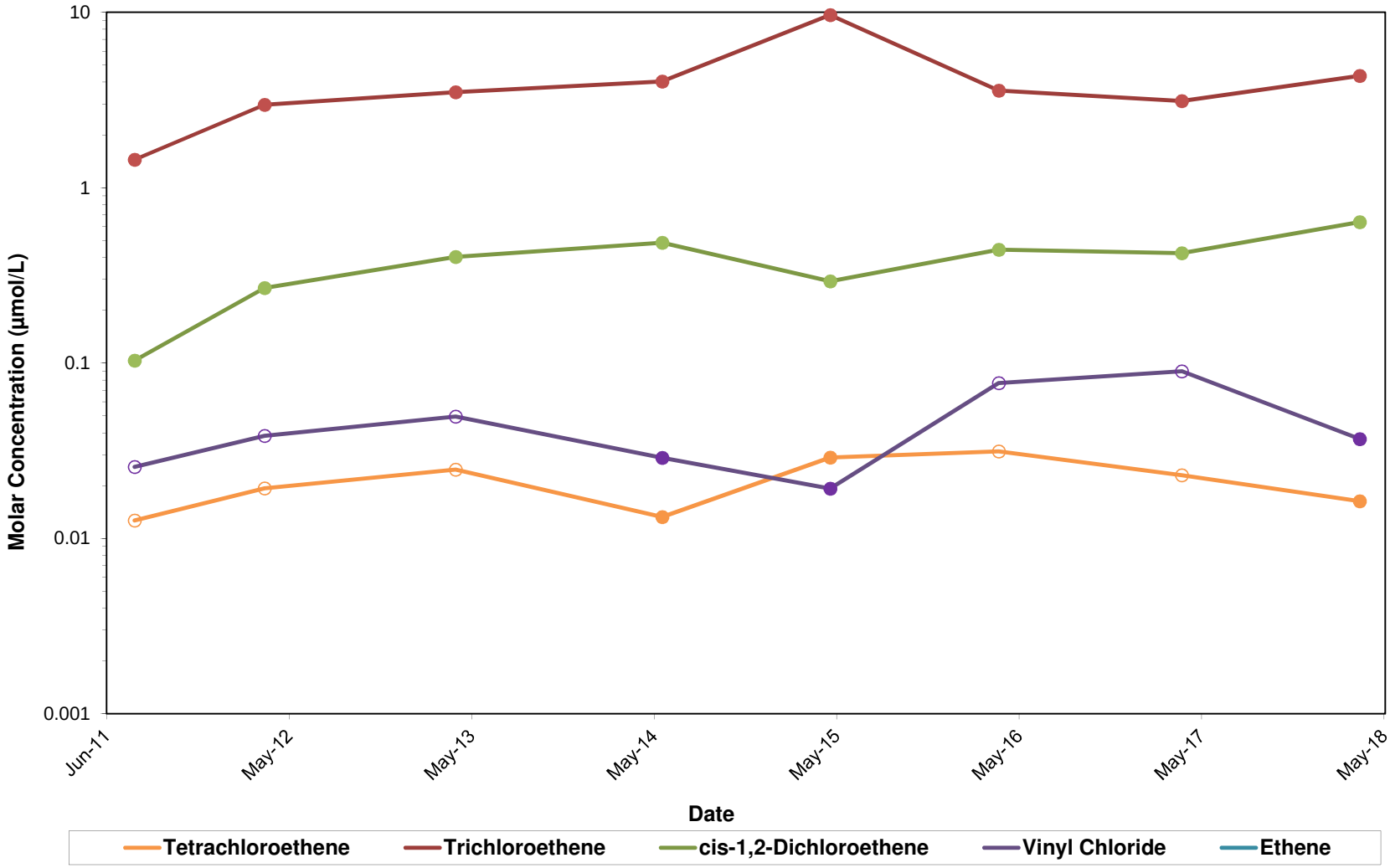
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW100B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

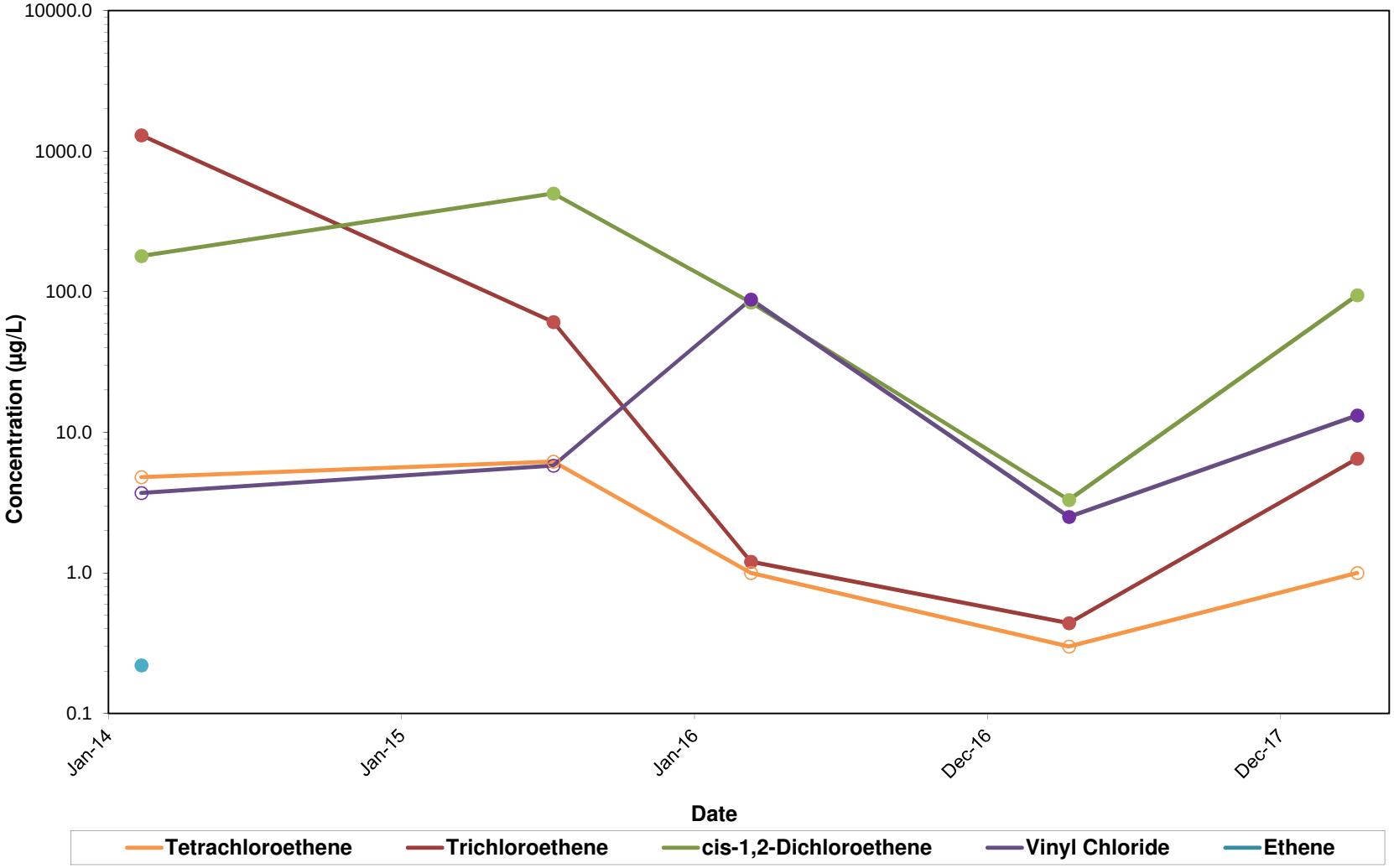
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW111B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

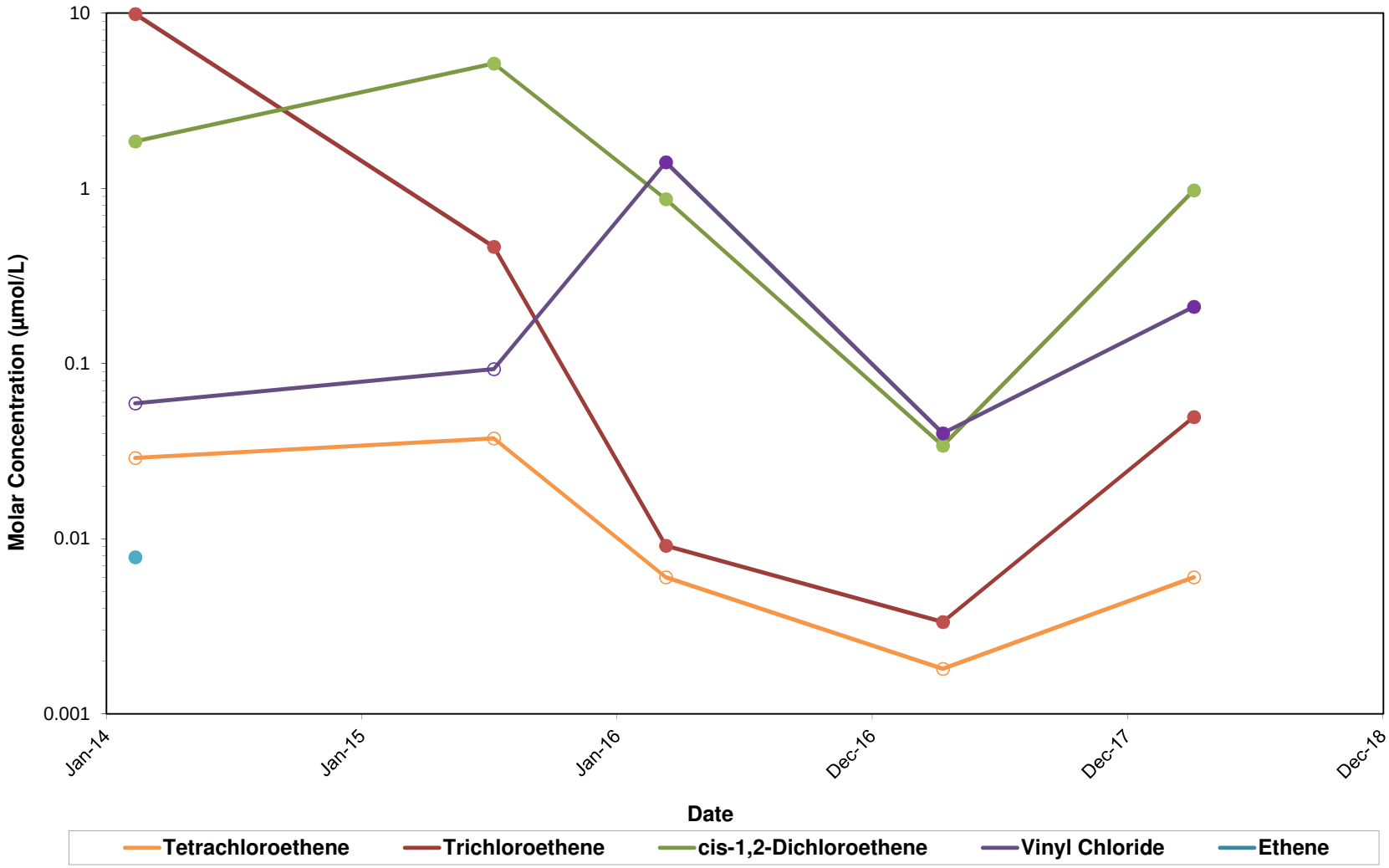
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW111B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SWMW-4I
Lockheed Martin Middle River Complex

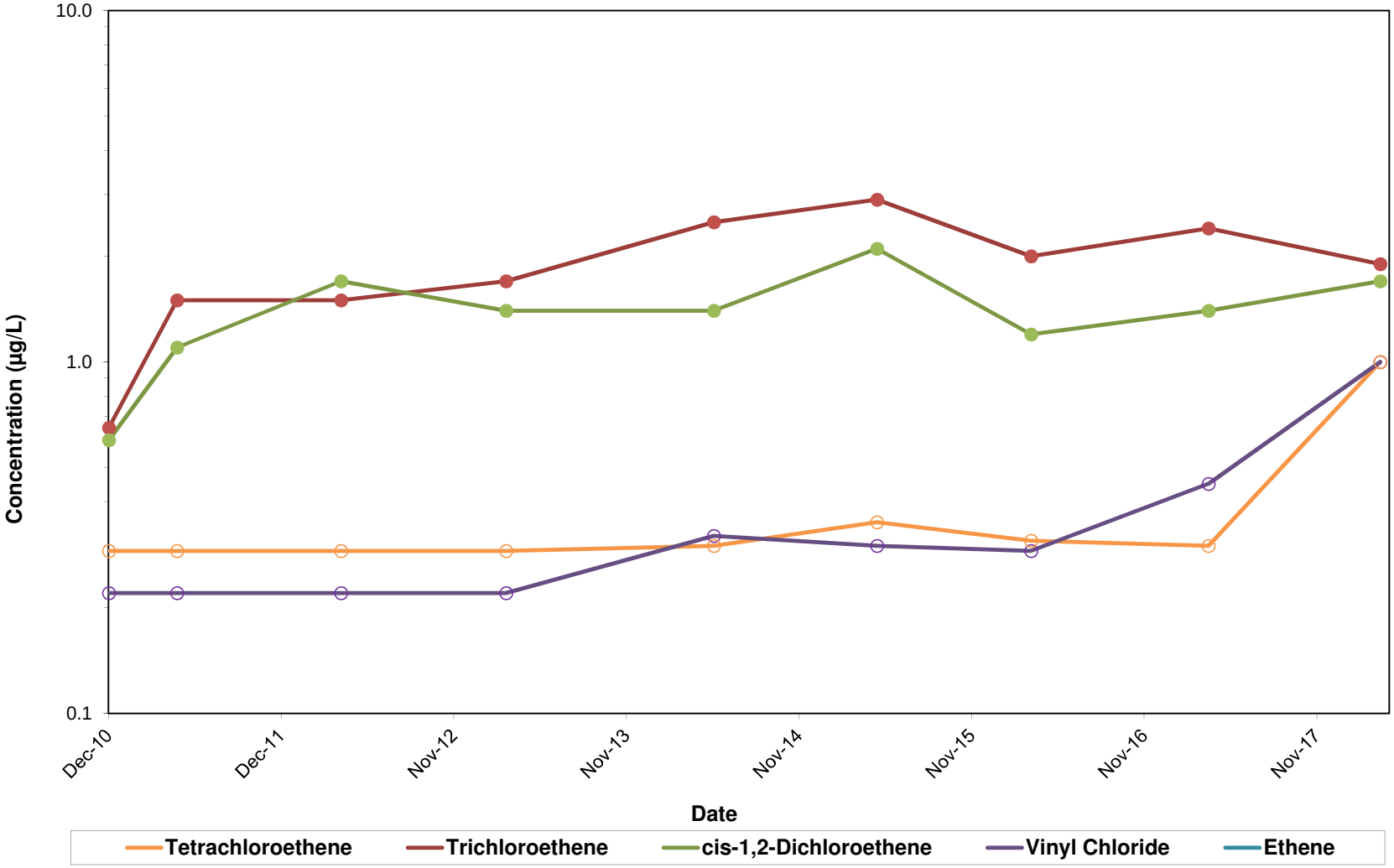


Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SWMW-4I
Lockheed Martin Middle River Complex

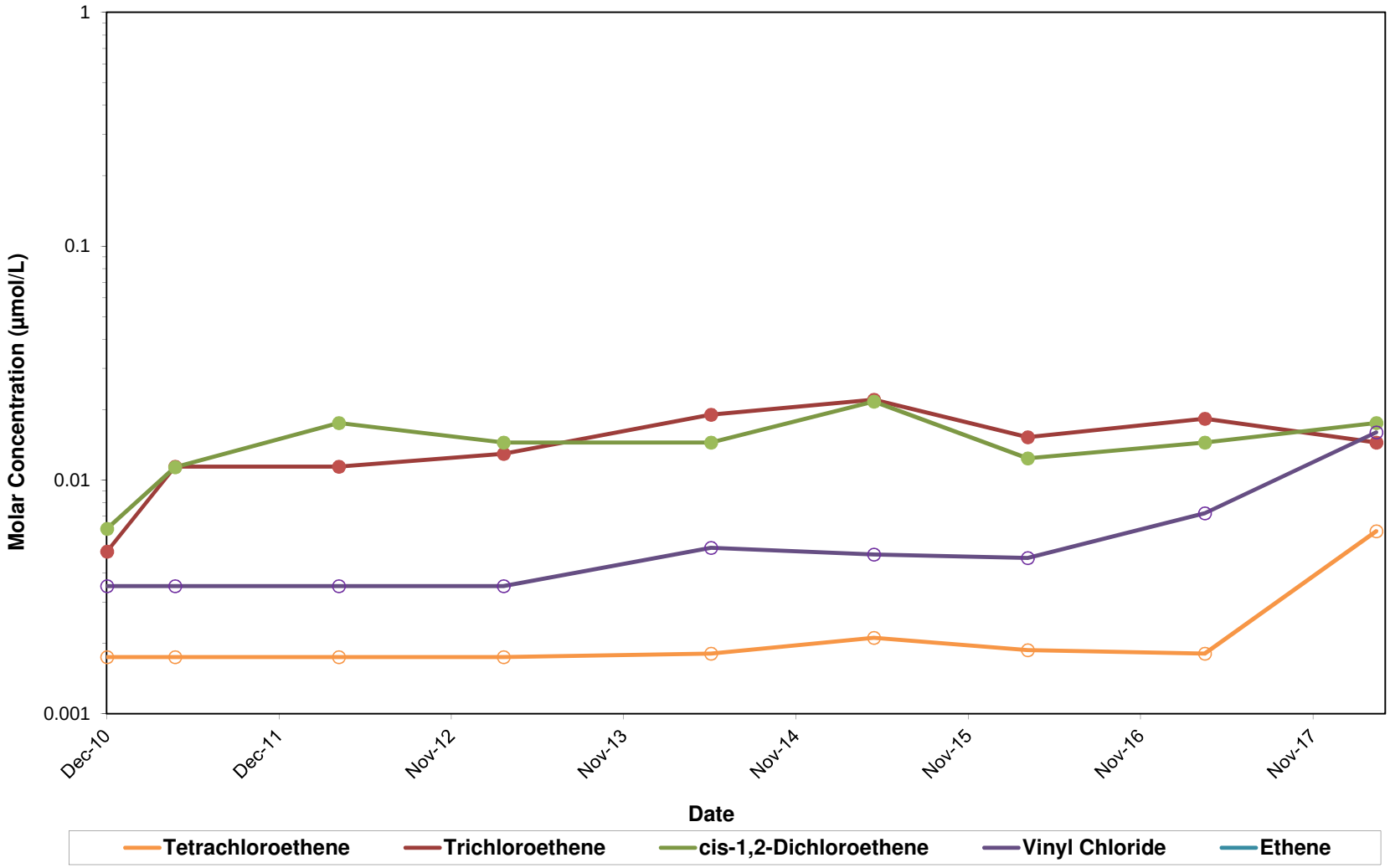
Block I, East of Building C



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

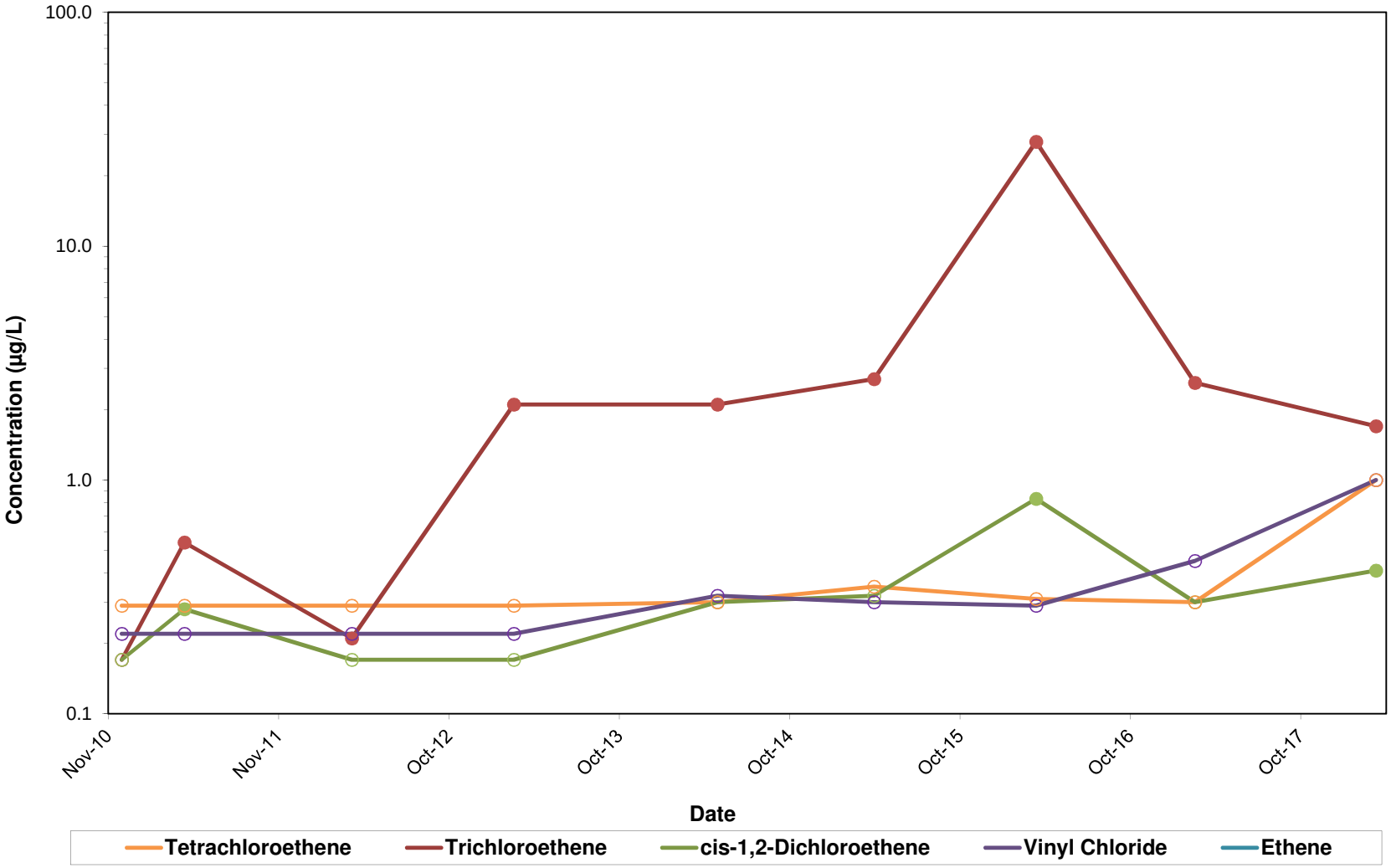
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW93A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

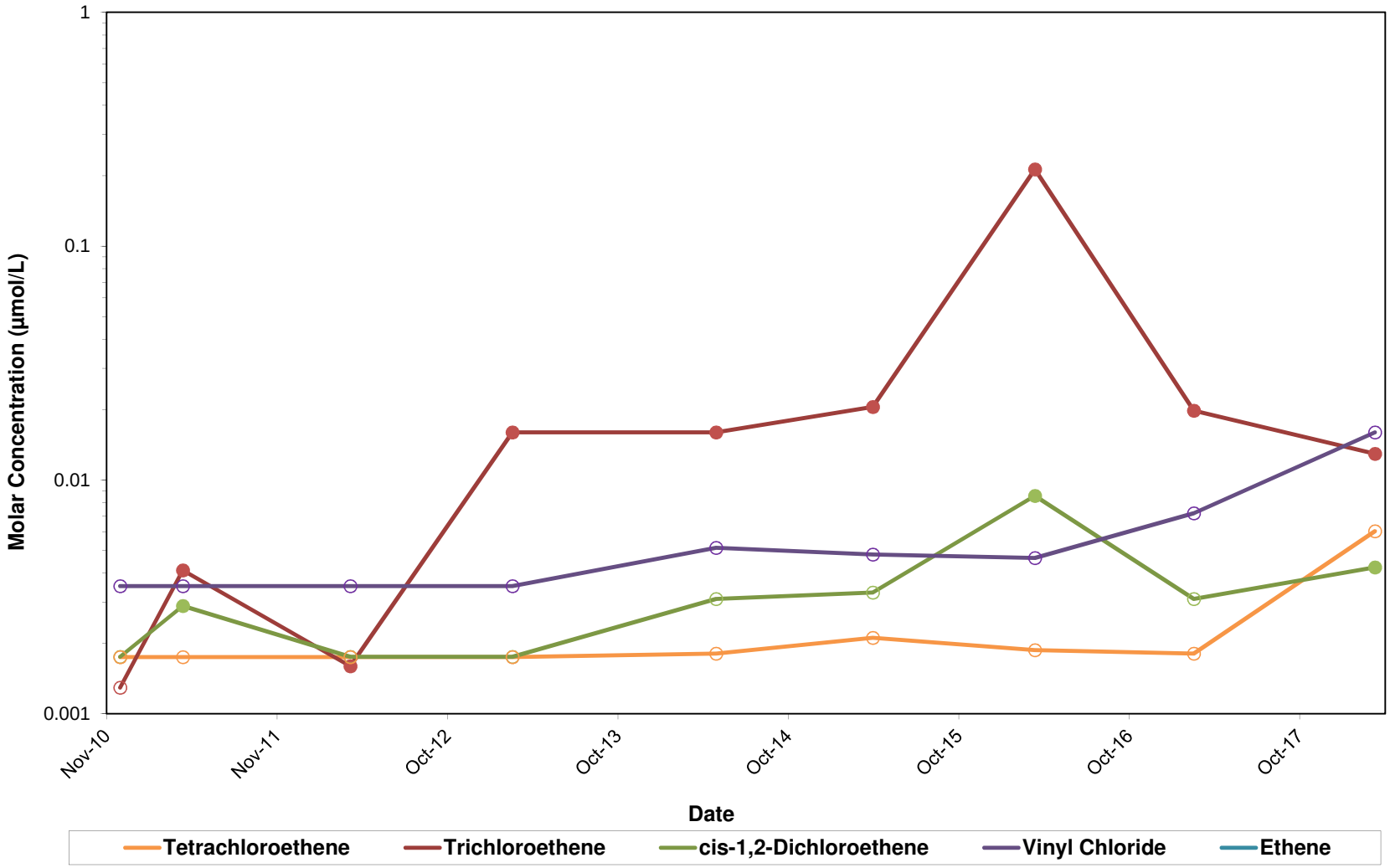
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW93A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW95B
Lockheed Martin Middle River Complex

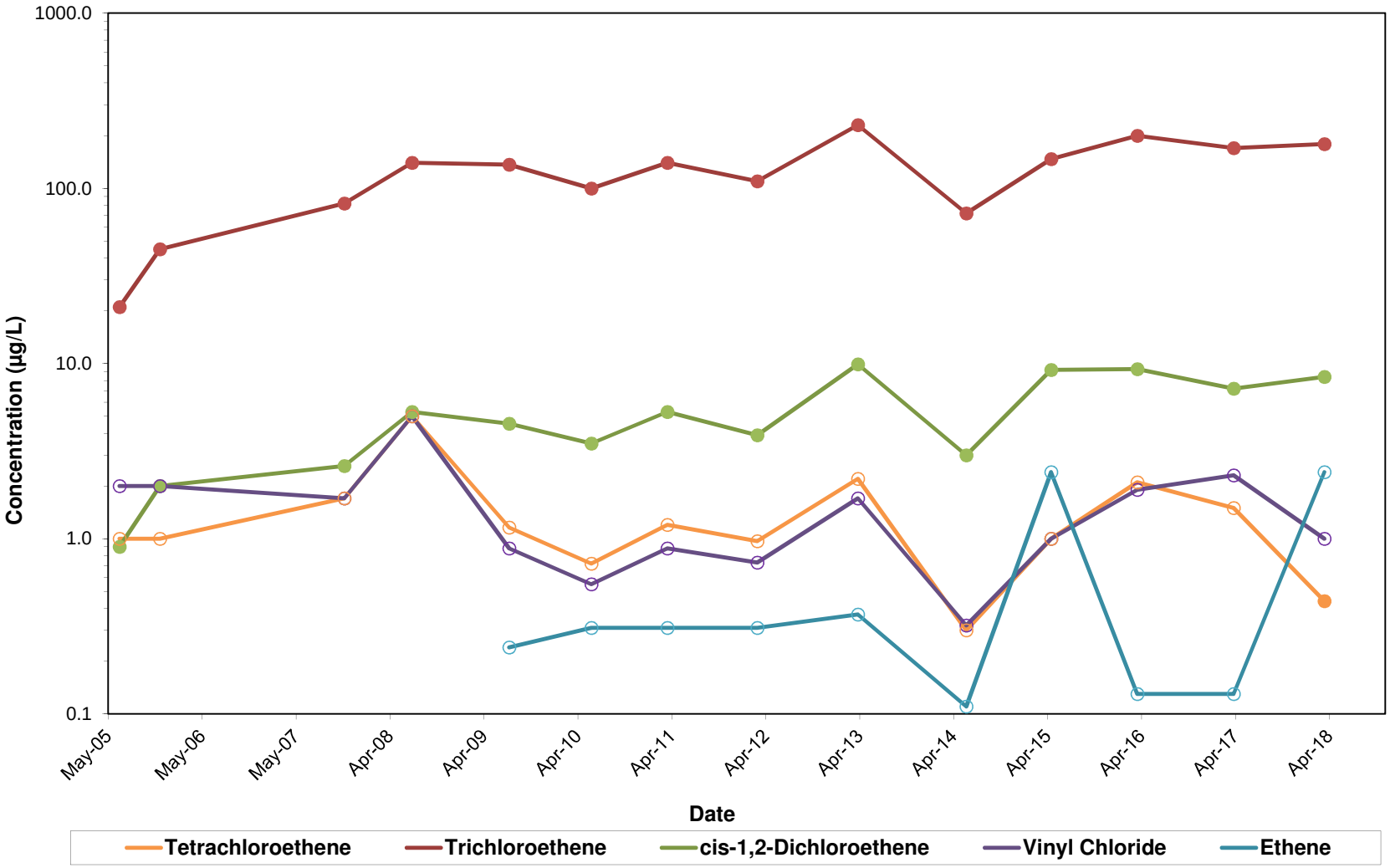


Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW95B
Lockheed Martin Middle River Complex

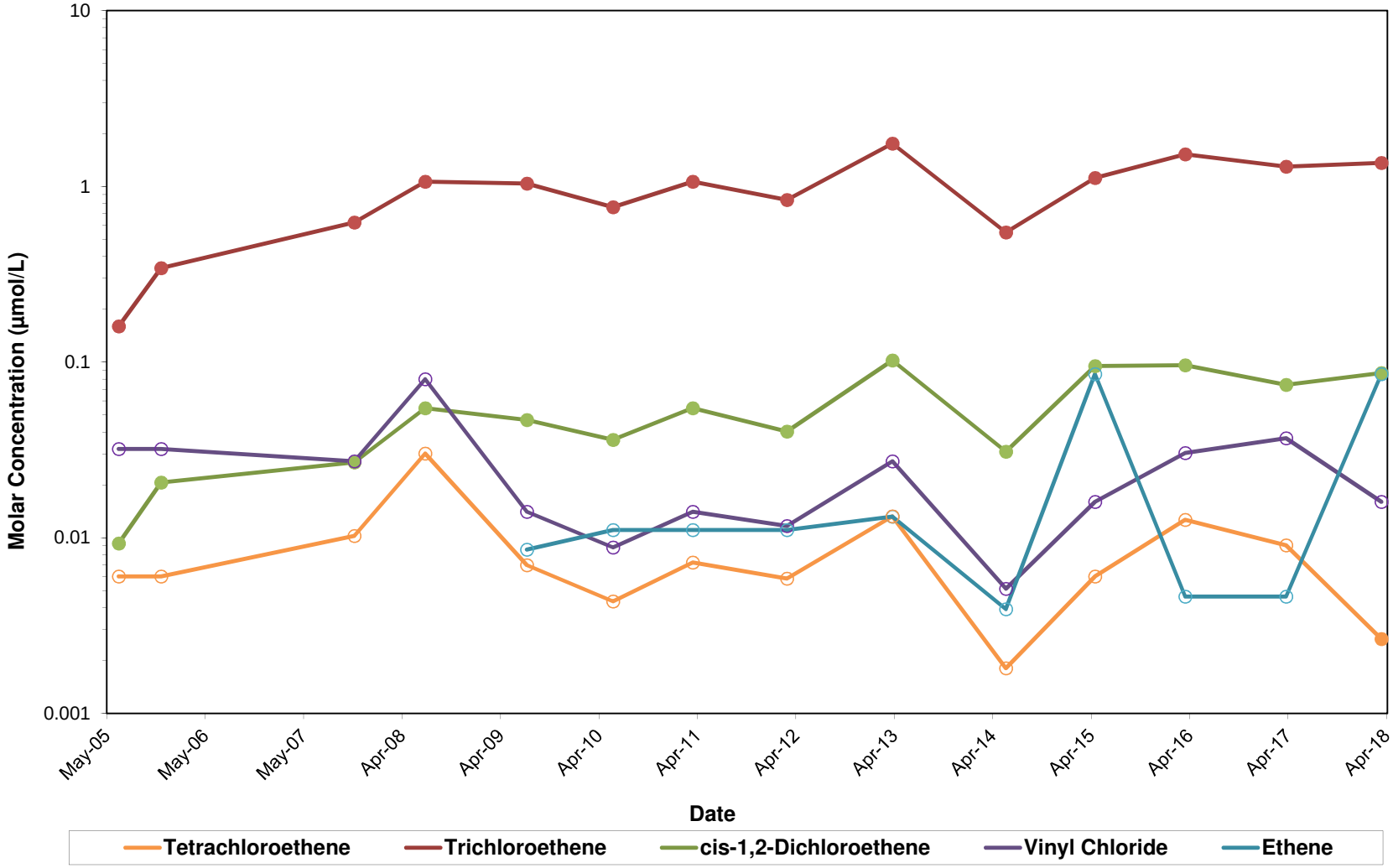
Block I, South of Building C



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

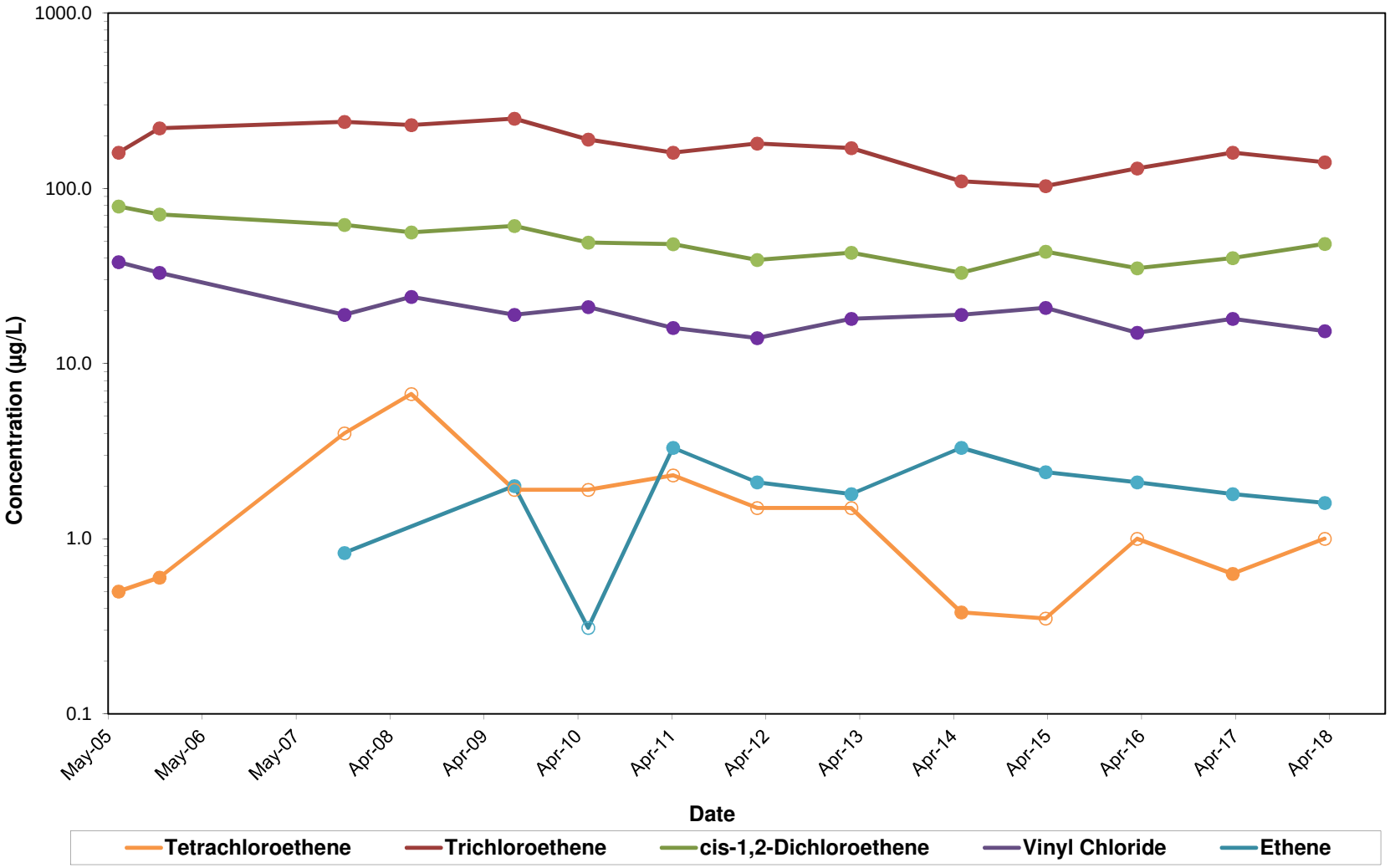
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW25A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

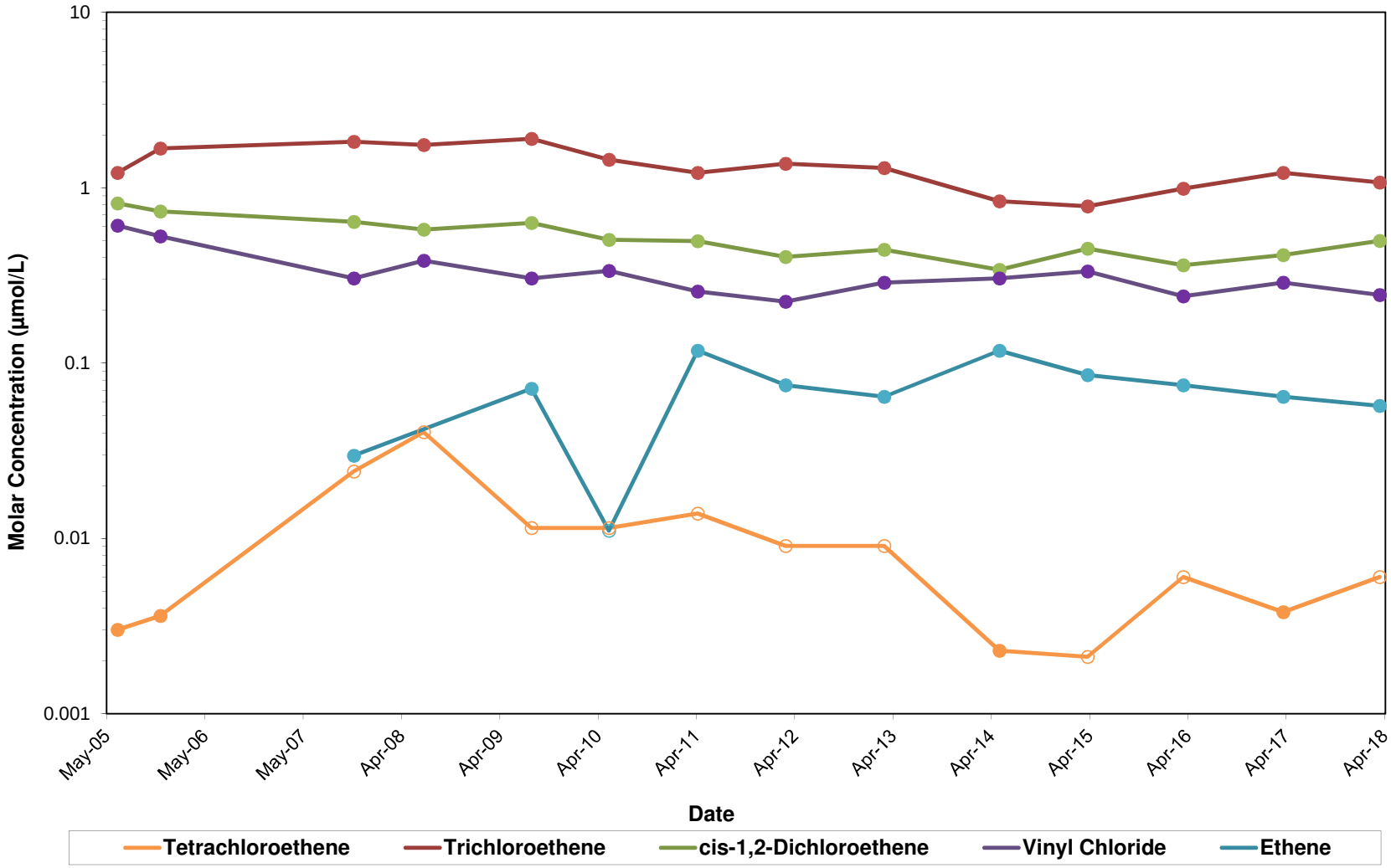
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW25A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

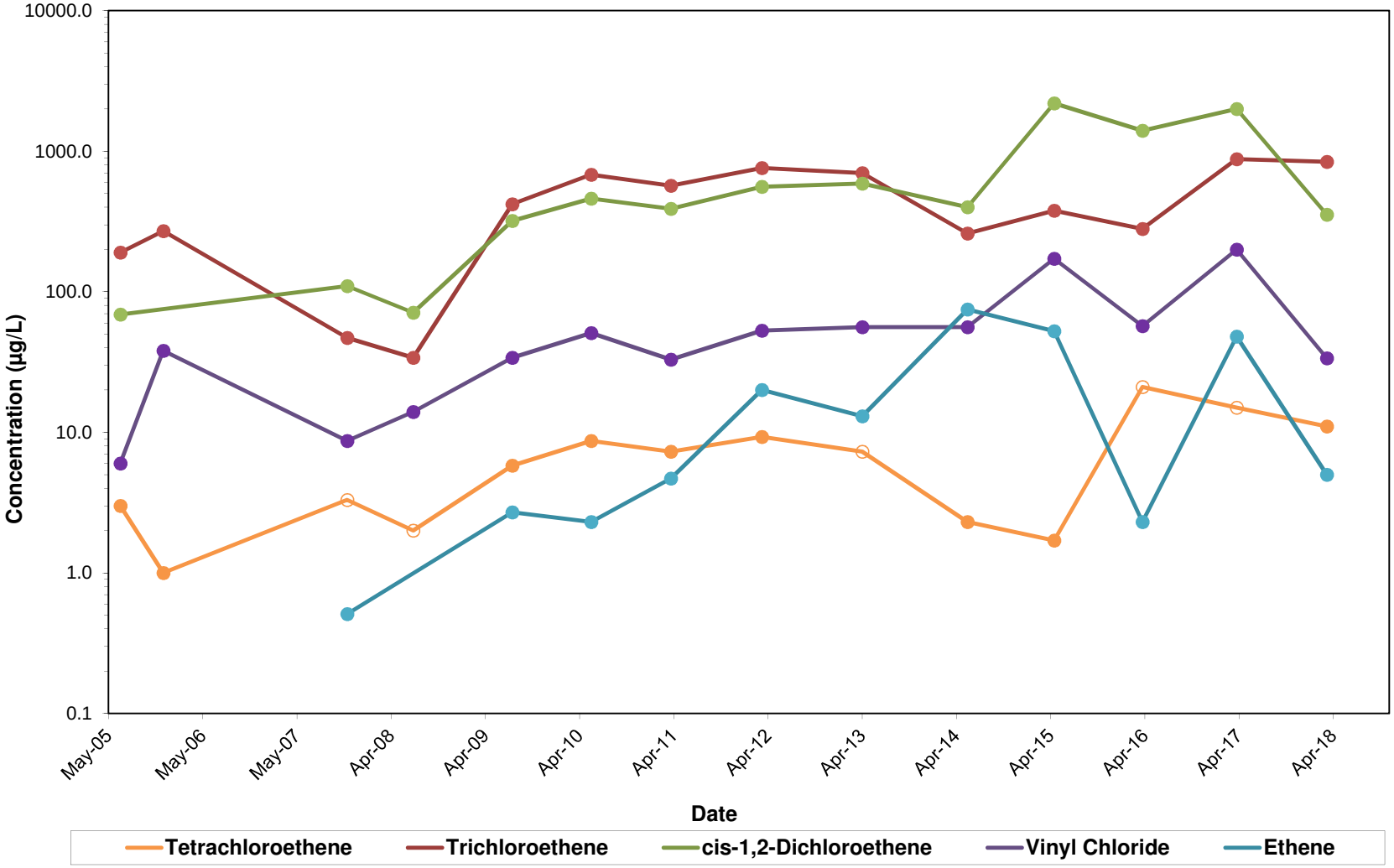
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW27A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

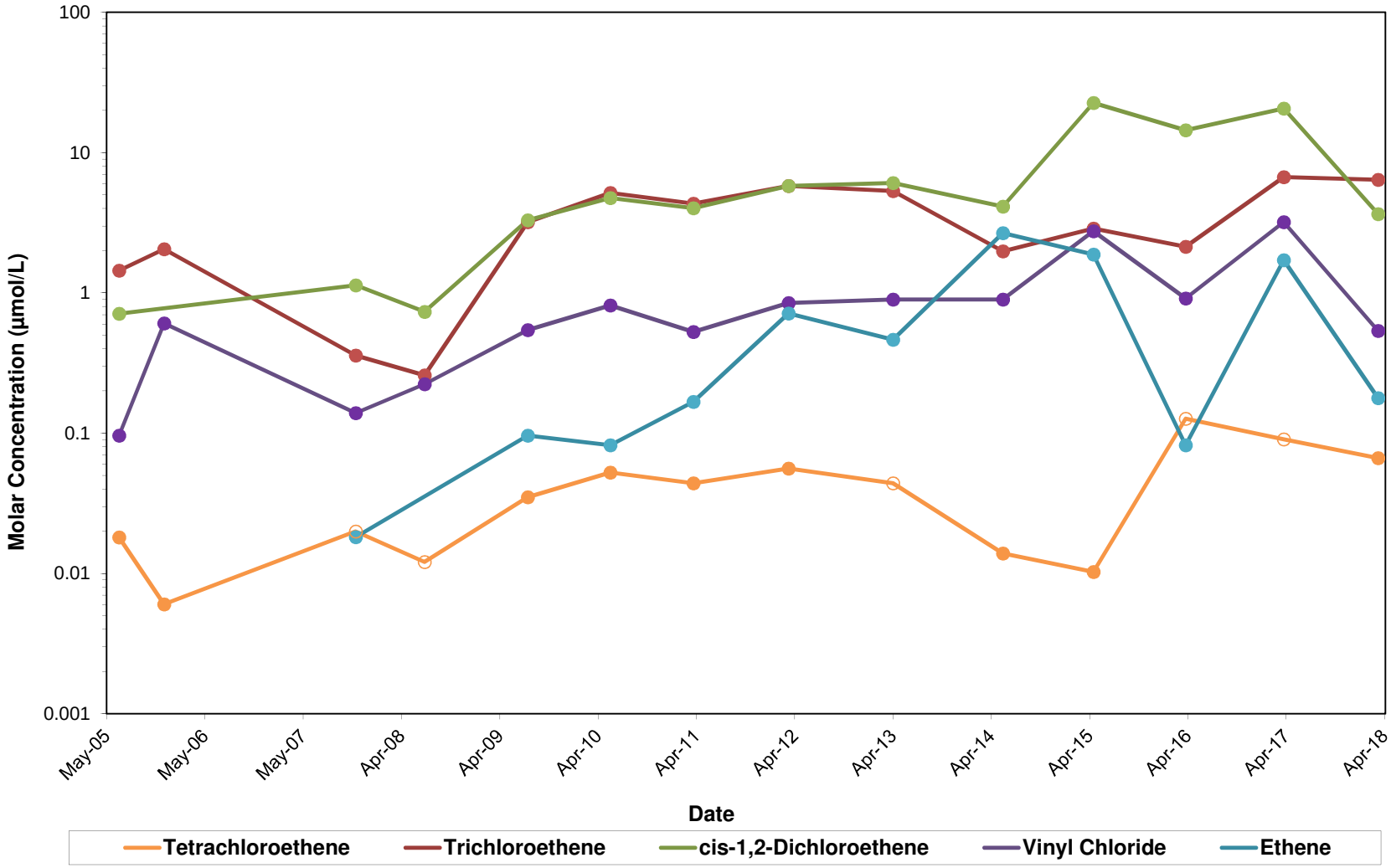
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW27A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

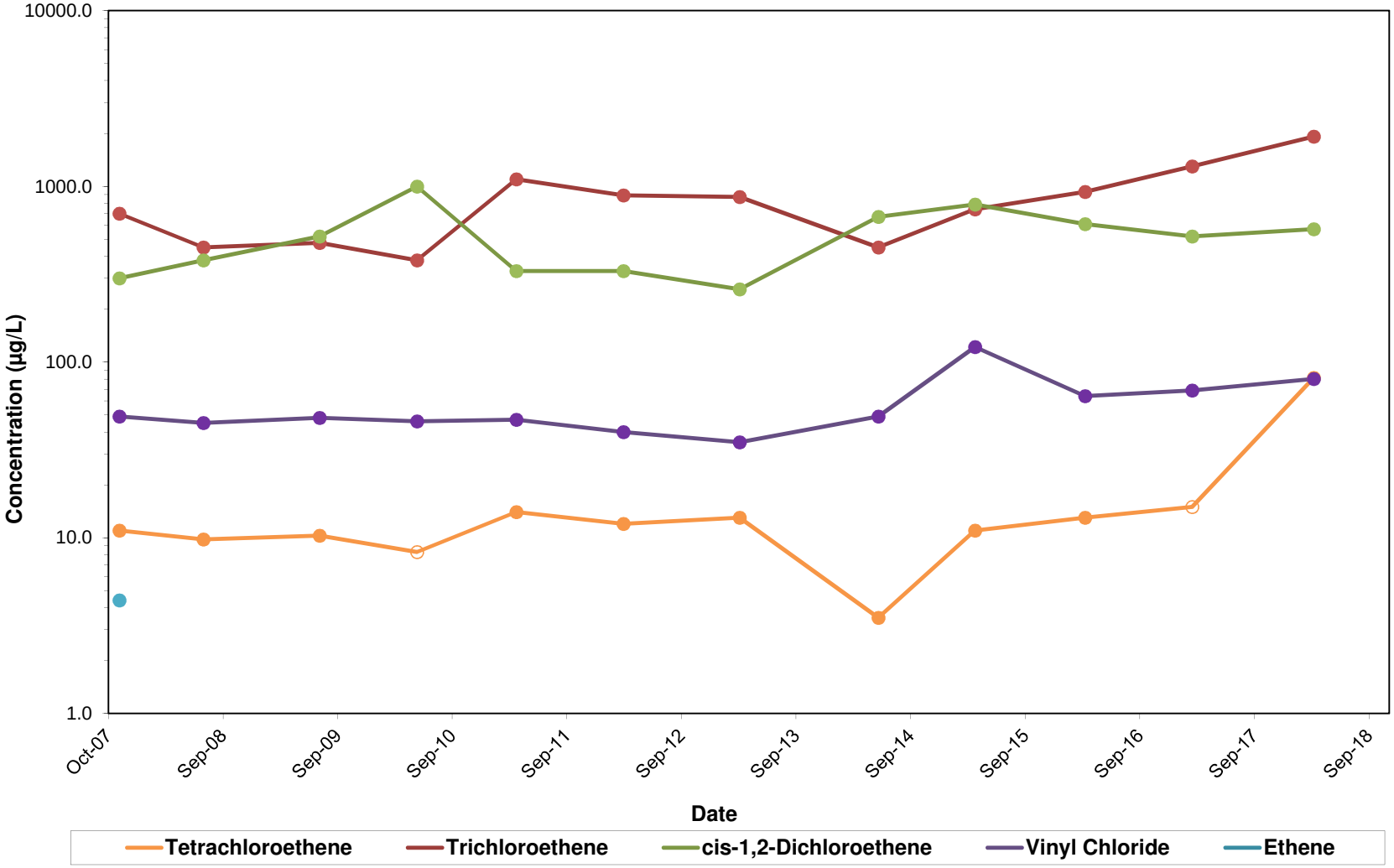
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW48A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

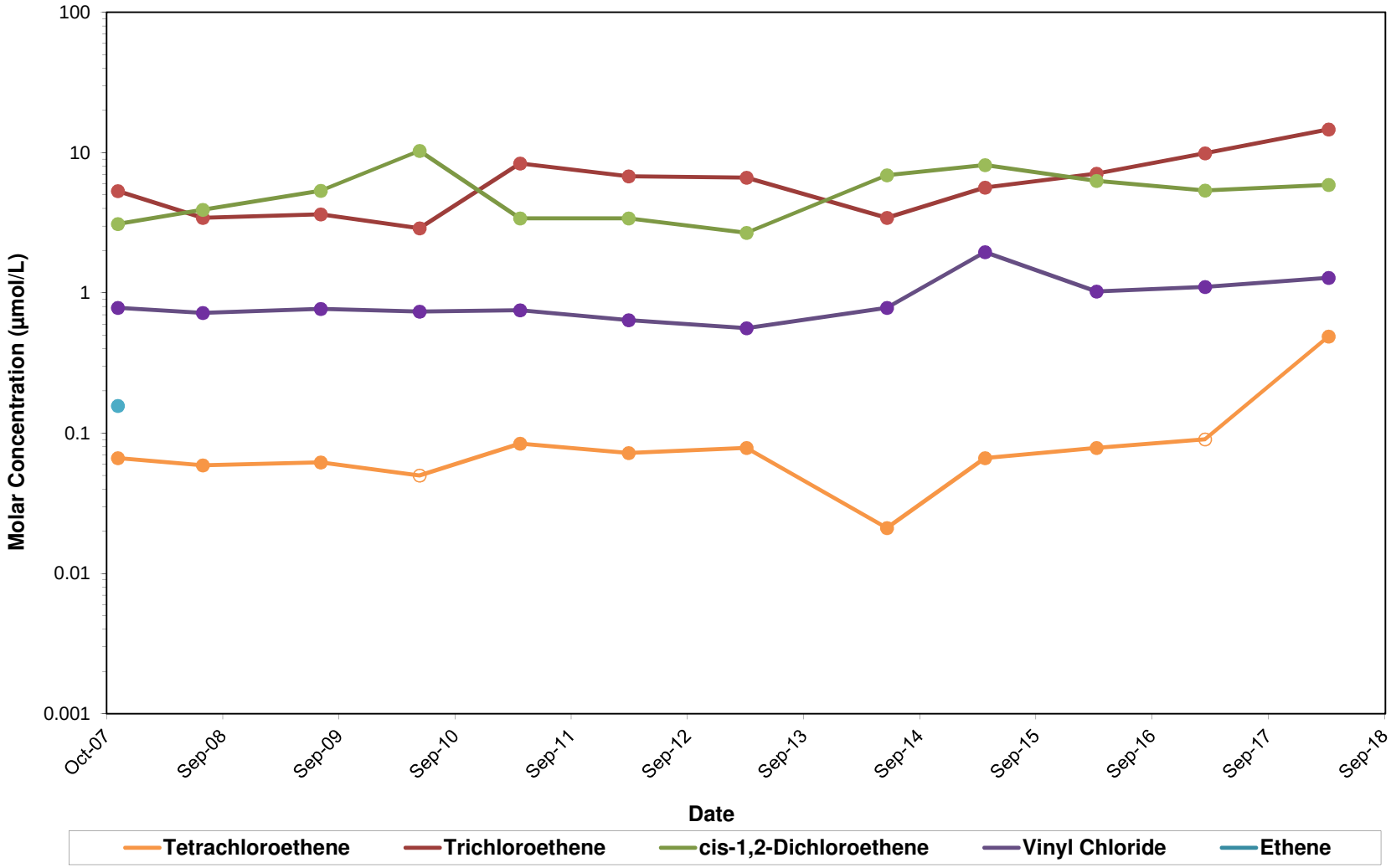
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW48A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

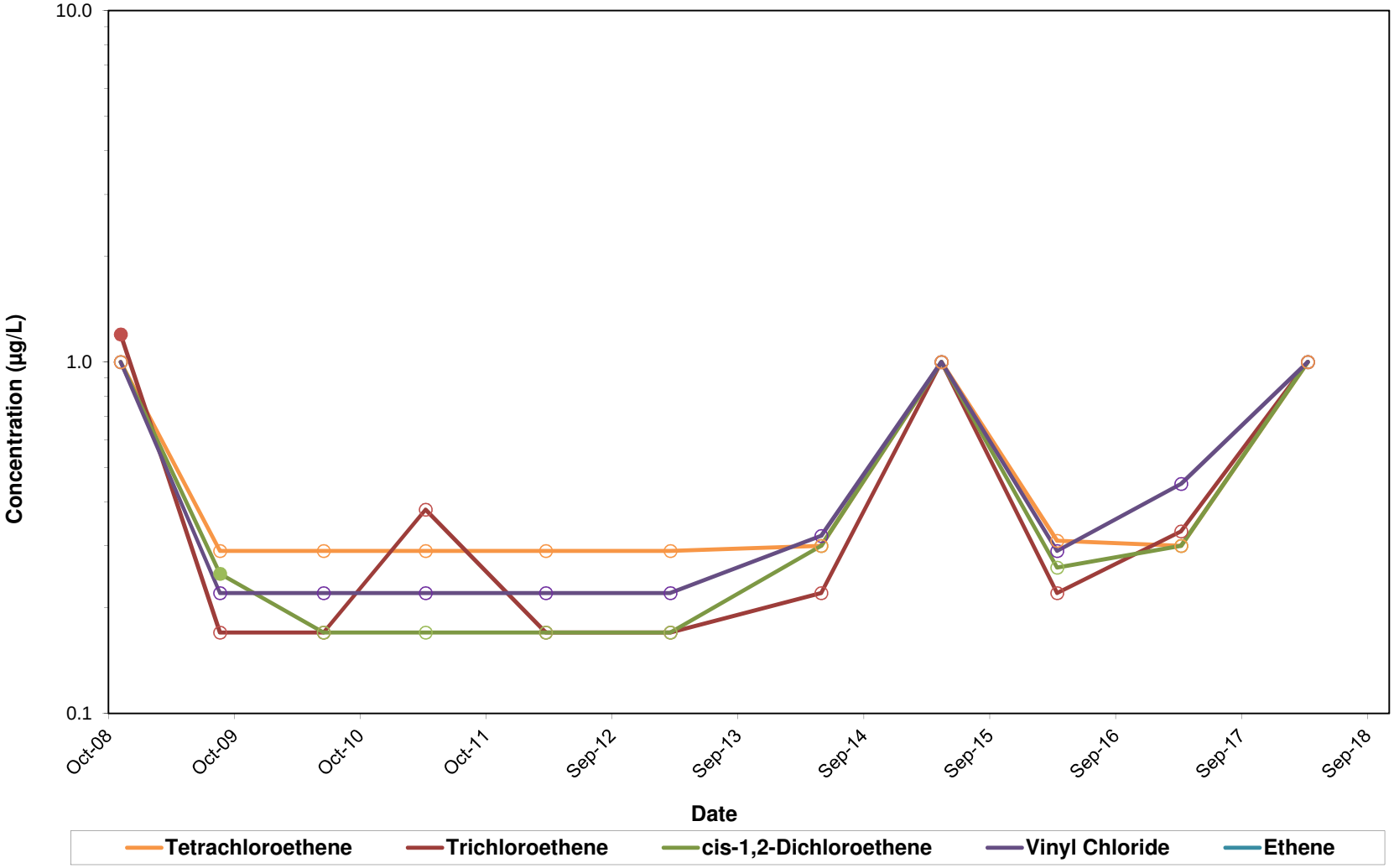
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW60A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

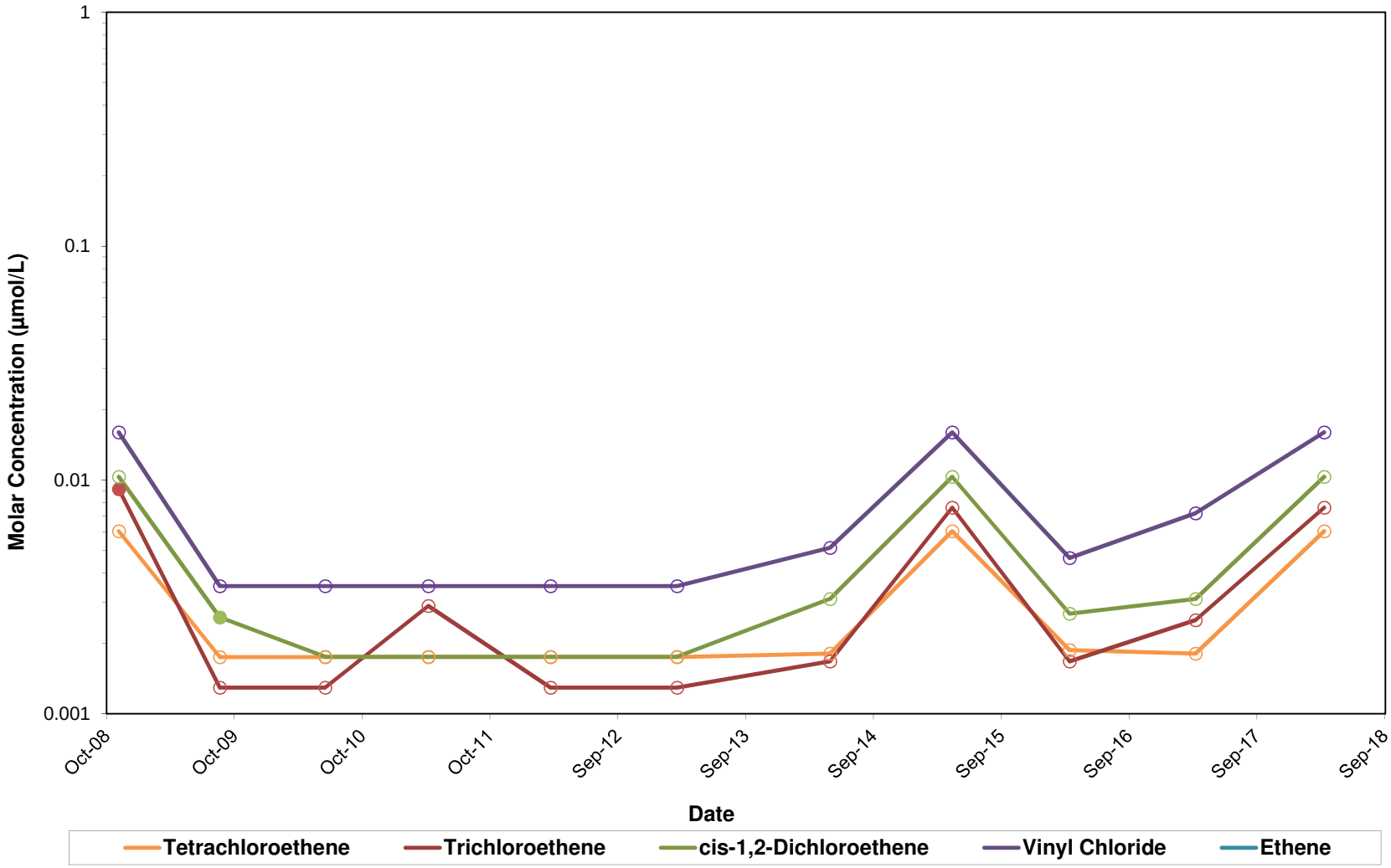
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW60A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

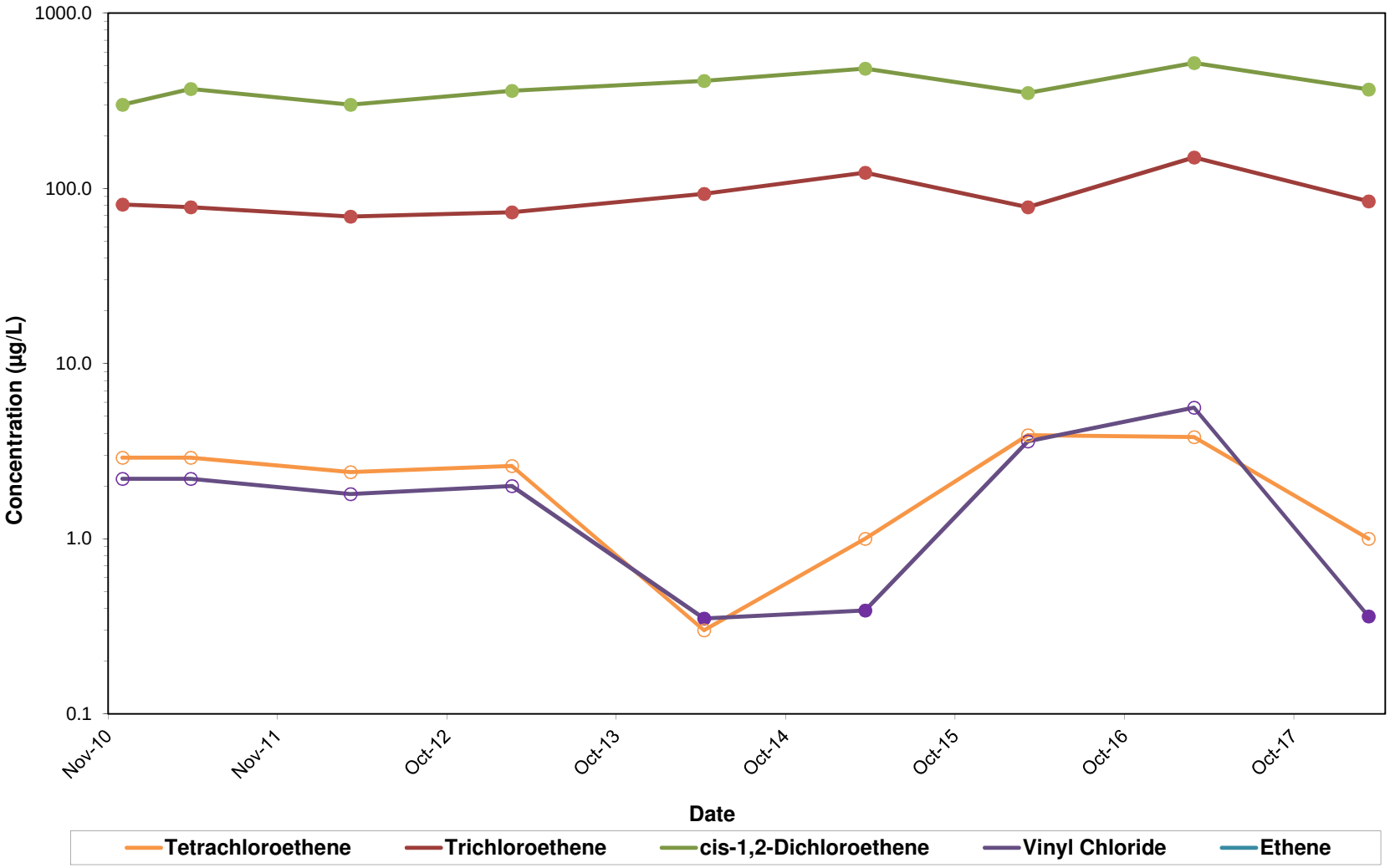
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW87A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

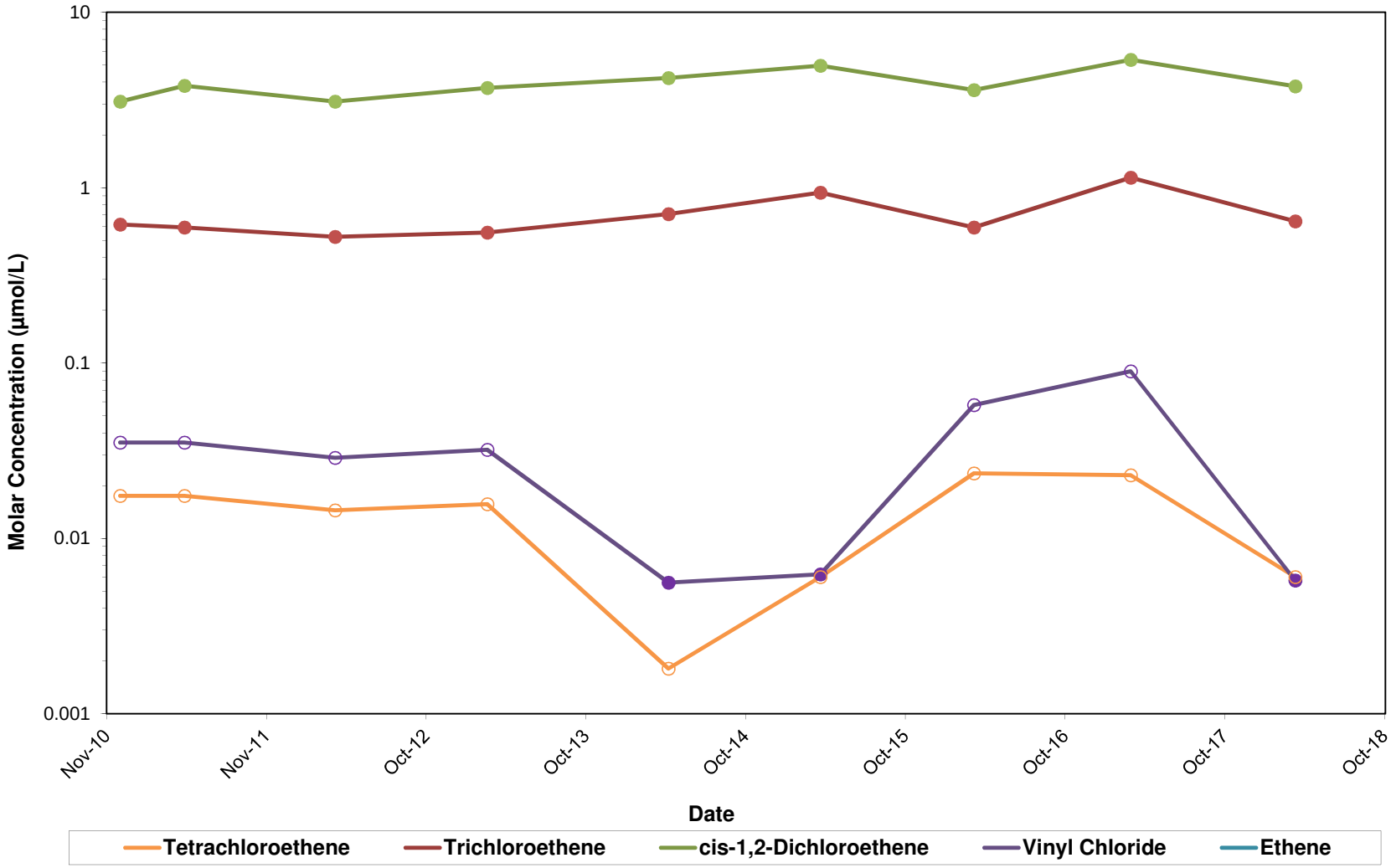
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW87A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

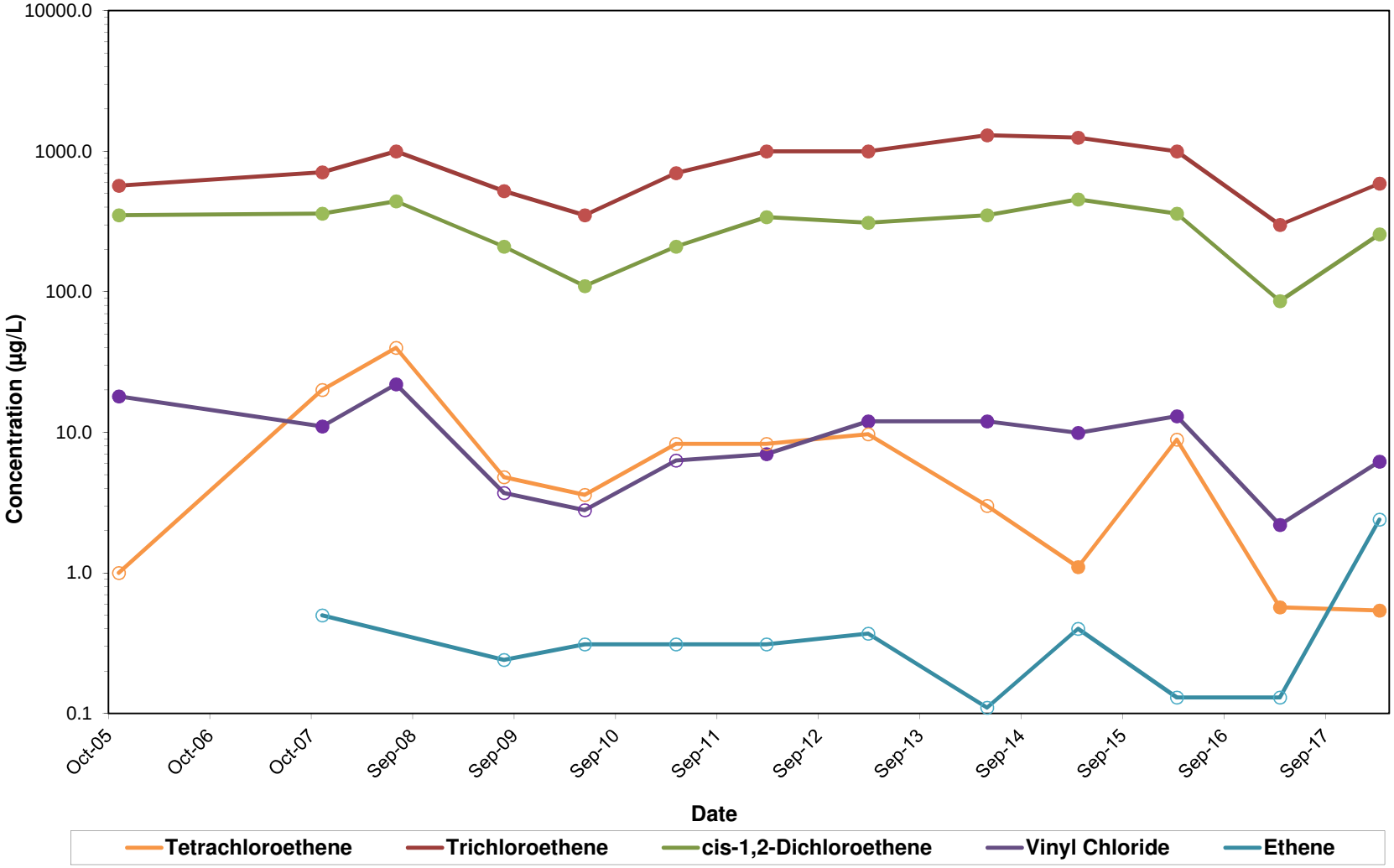
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW102B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

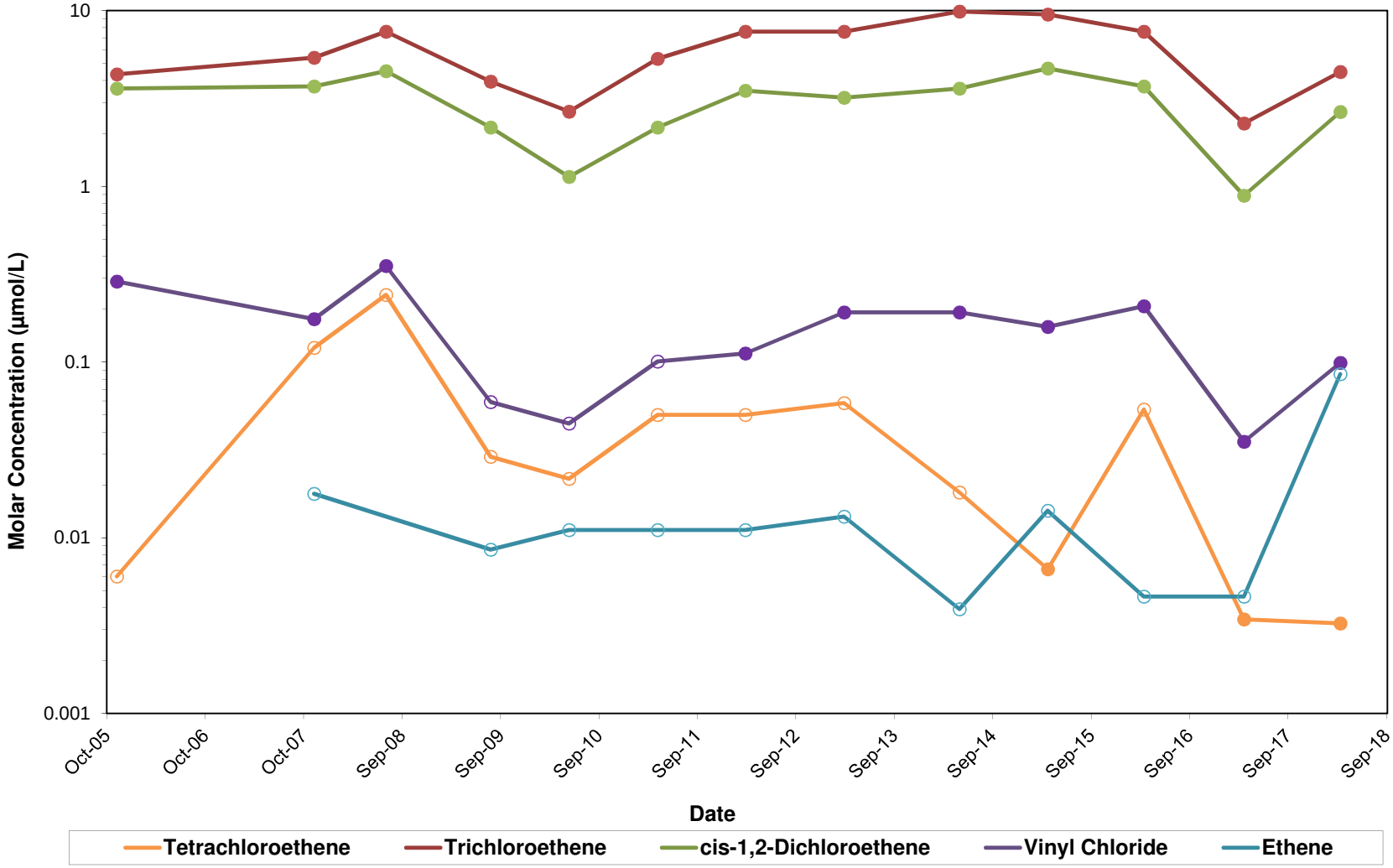
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW102B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

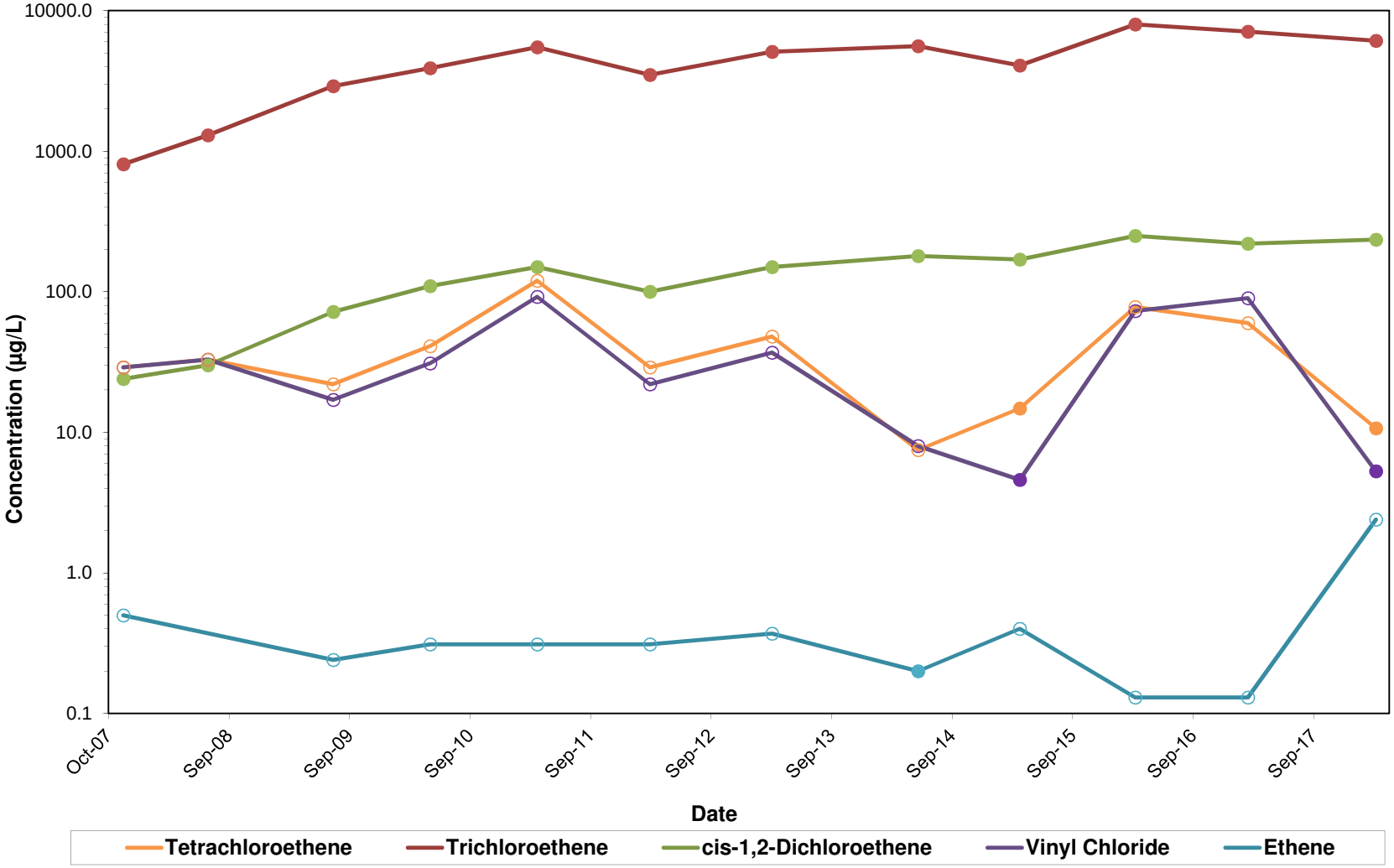
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW27B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

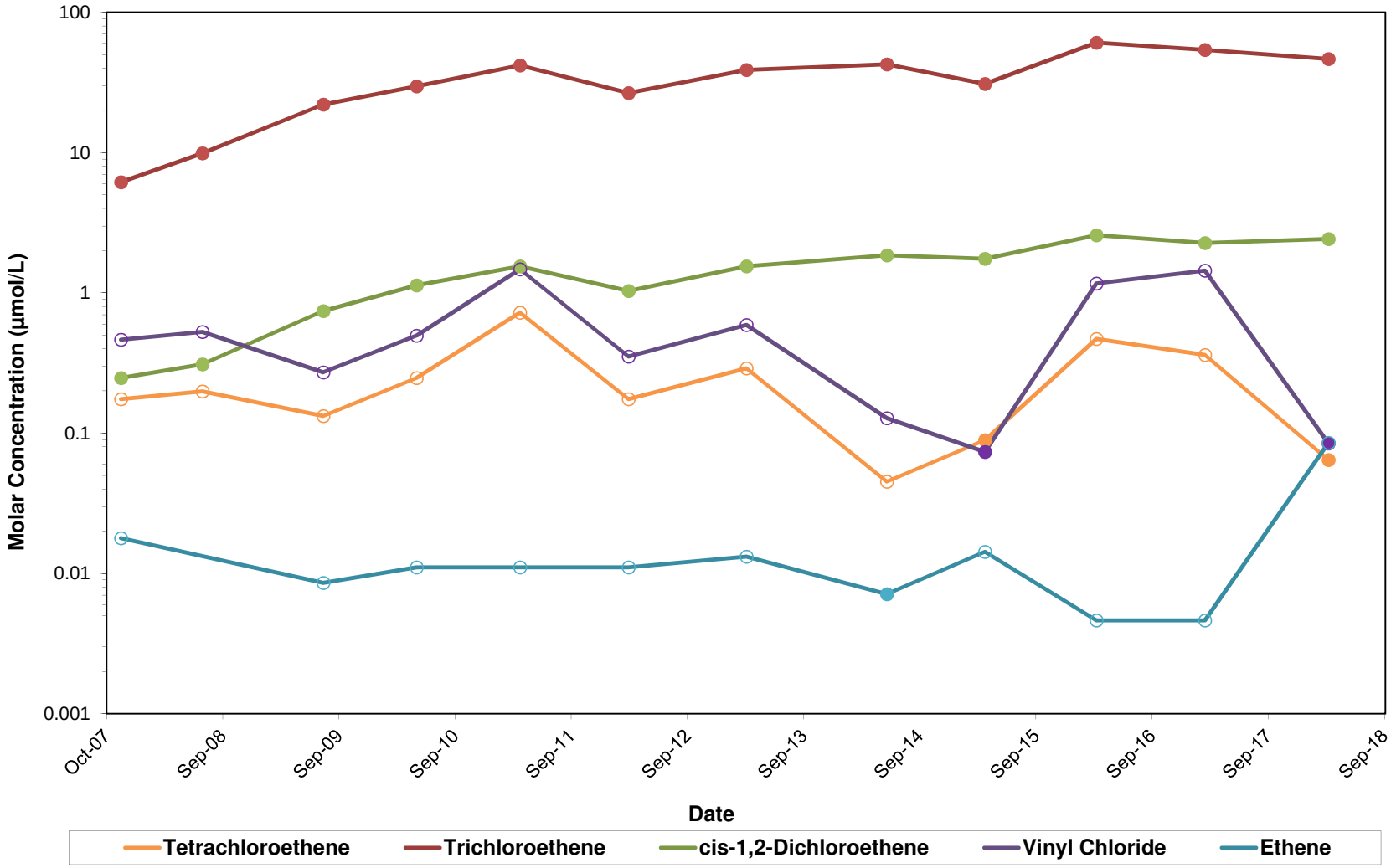
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW27B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

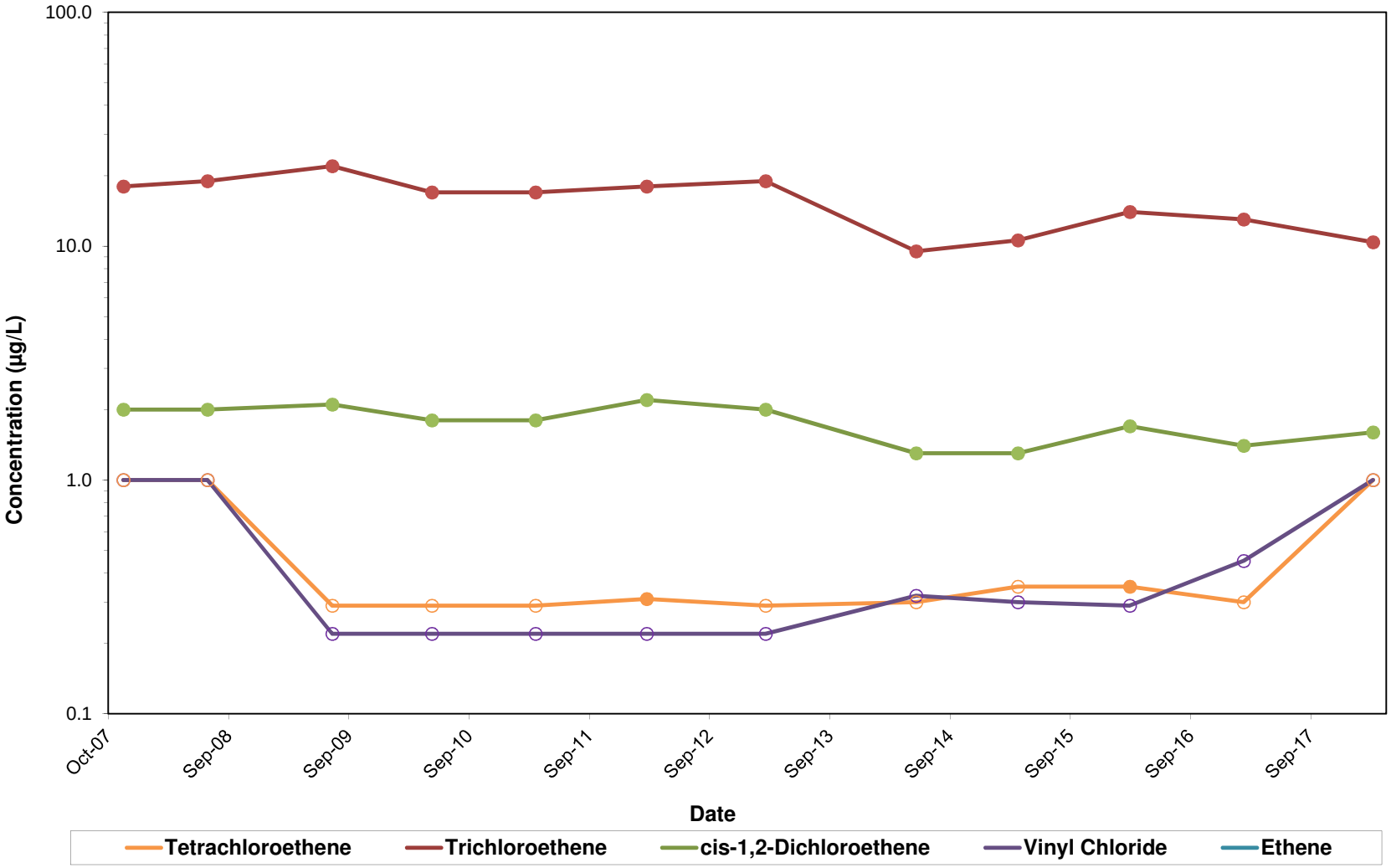
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW60B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

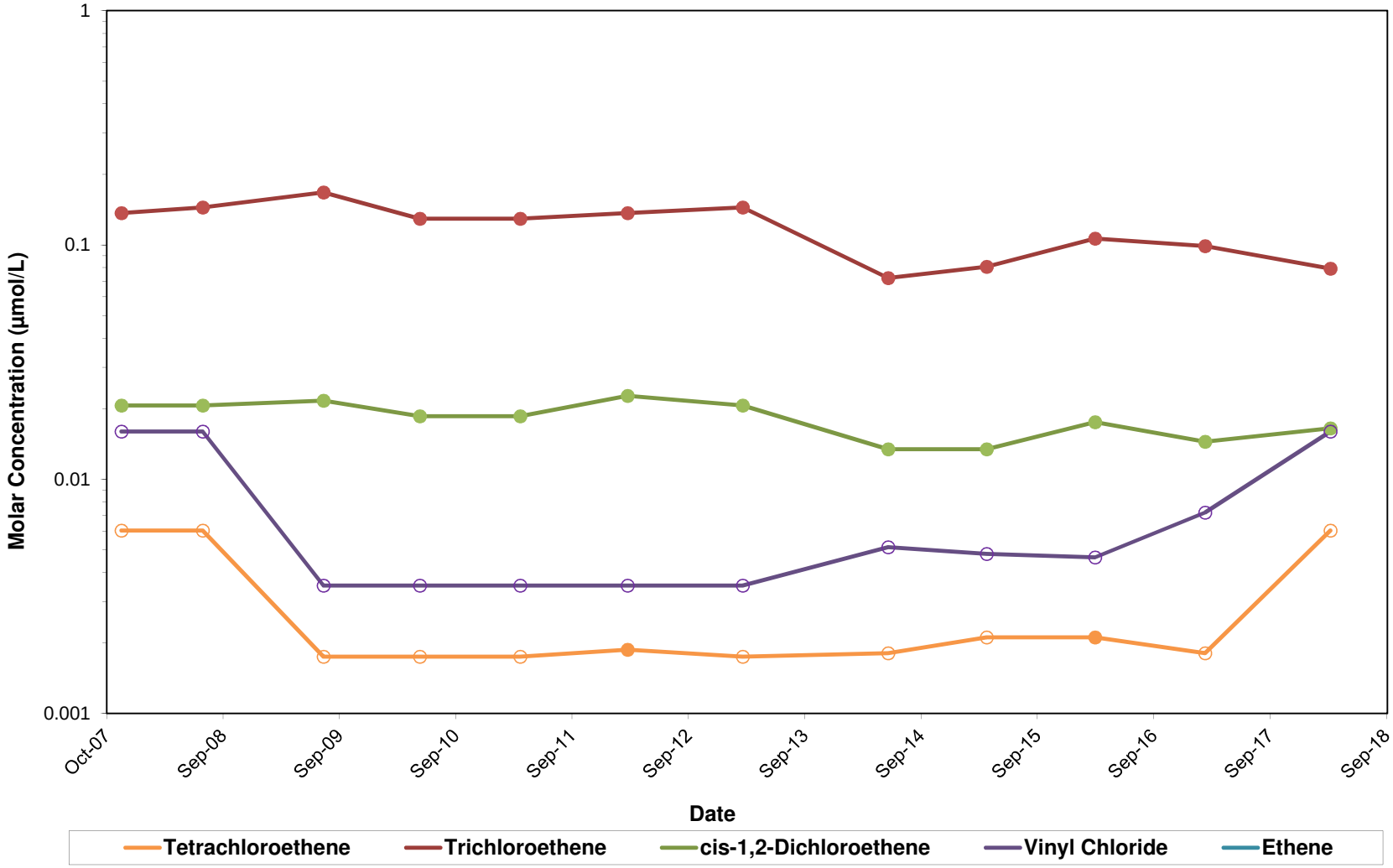
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW60B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

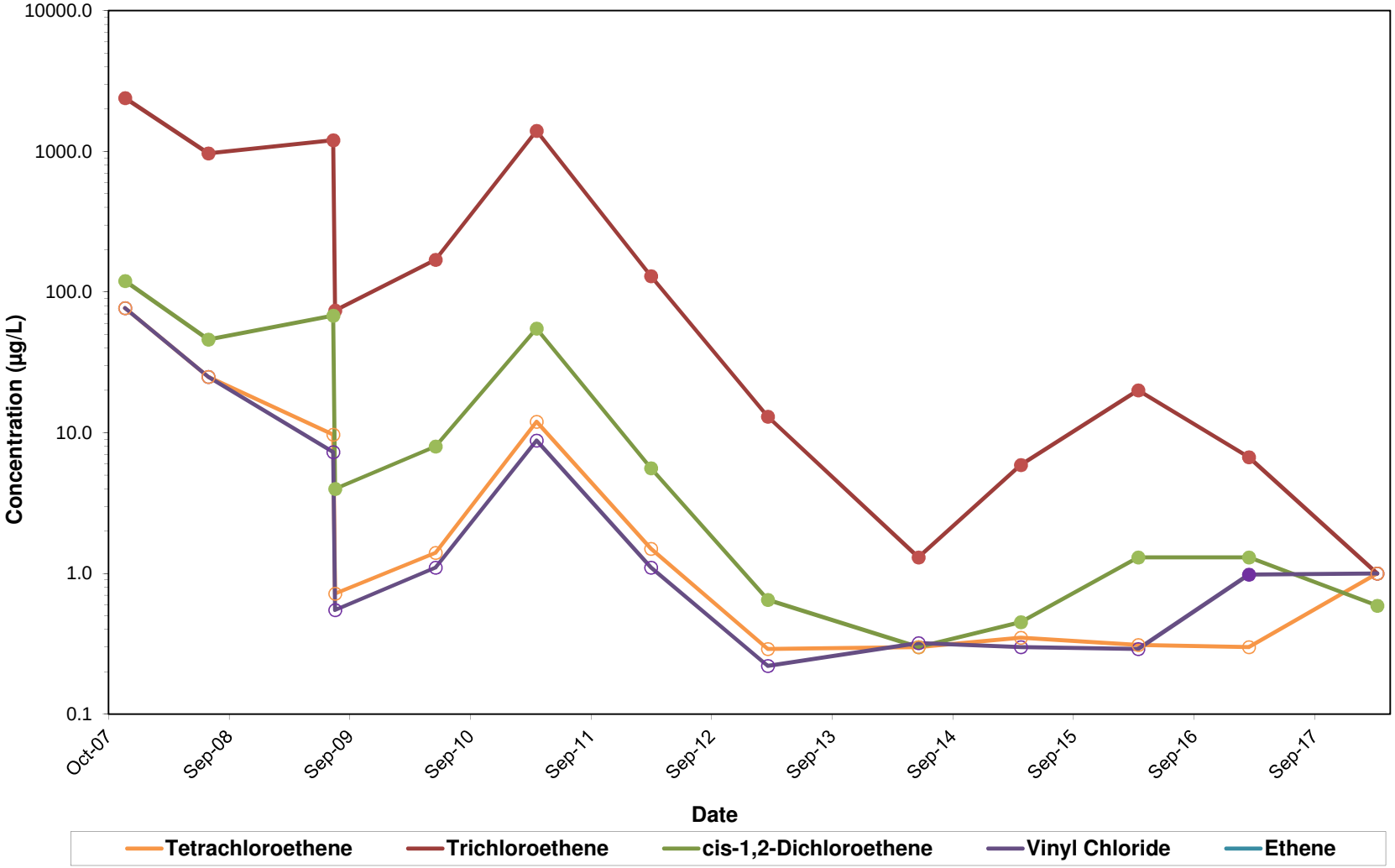
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW76B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

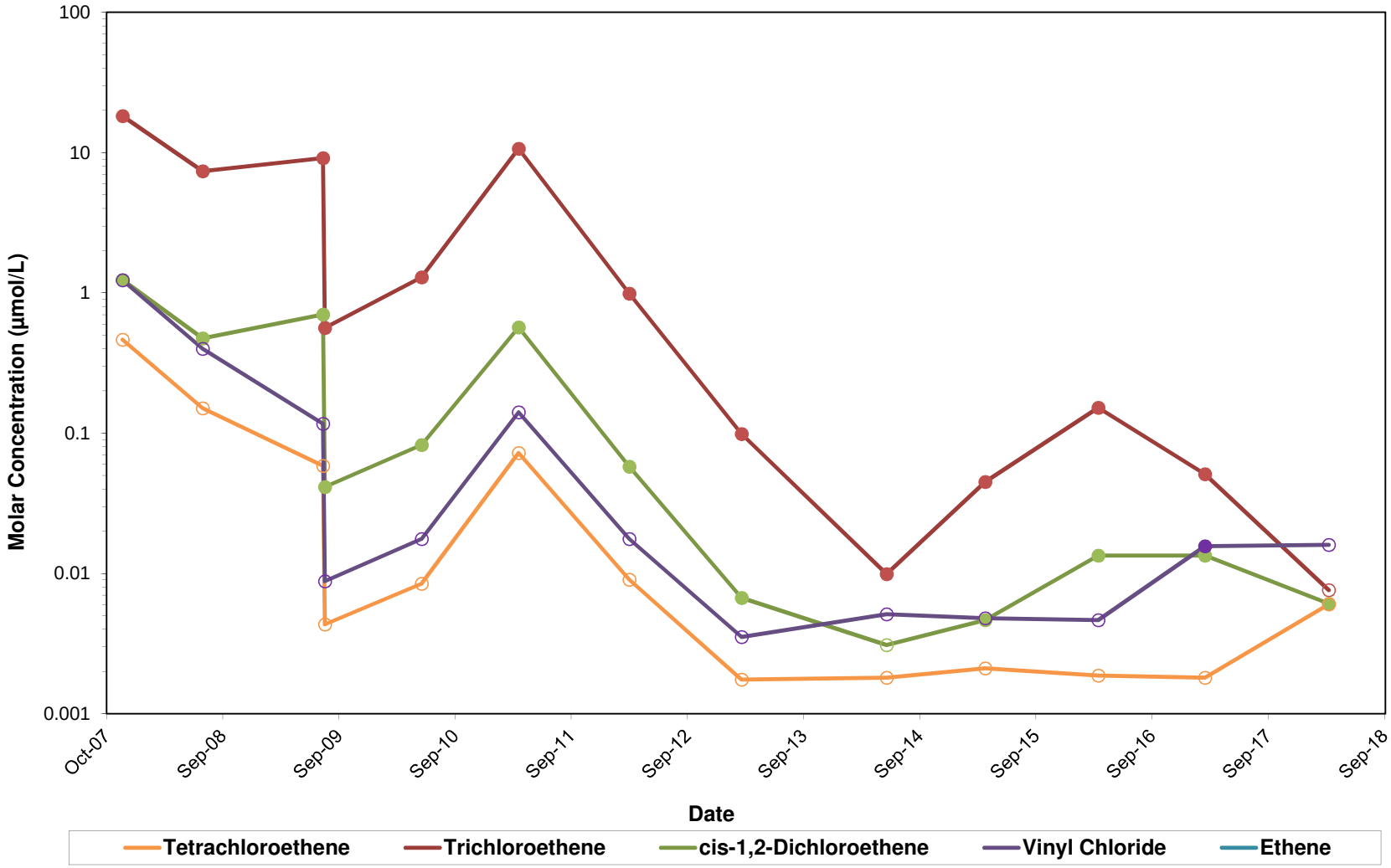
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW76B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

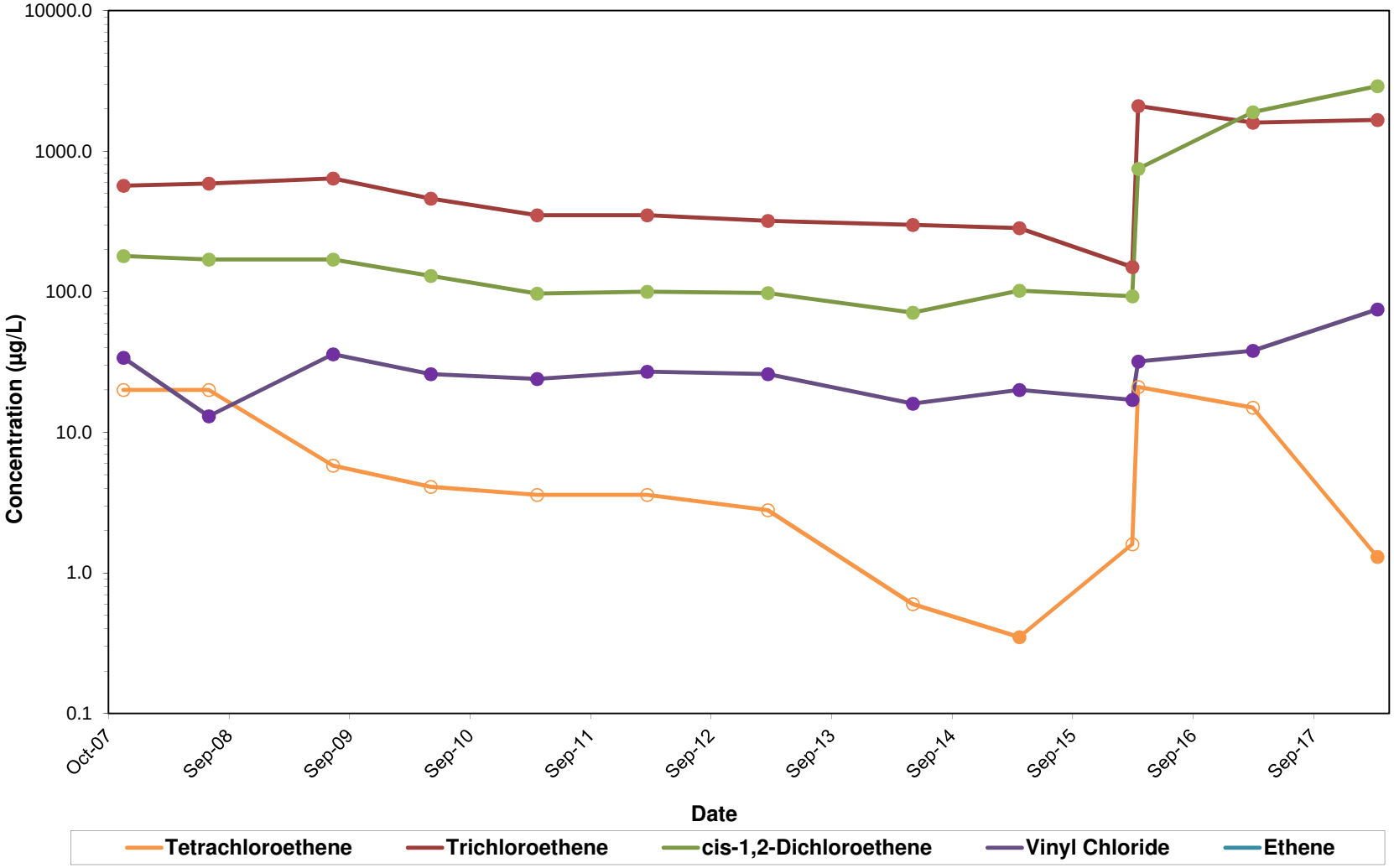
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW78B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

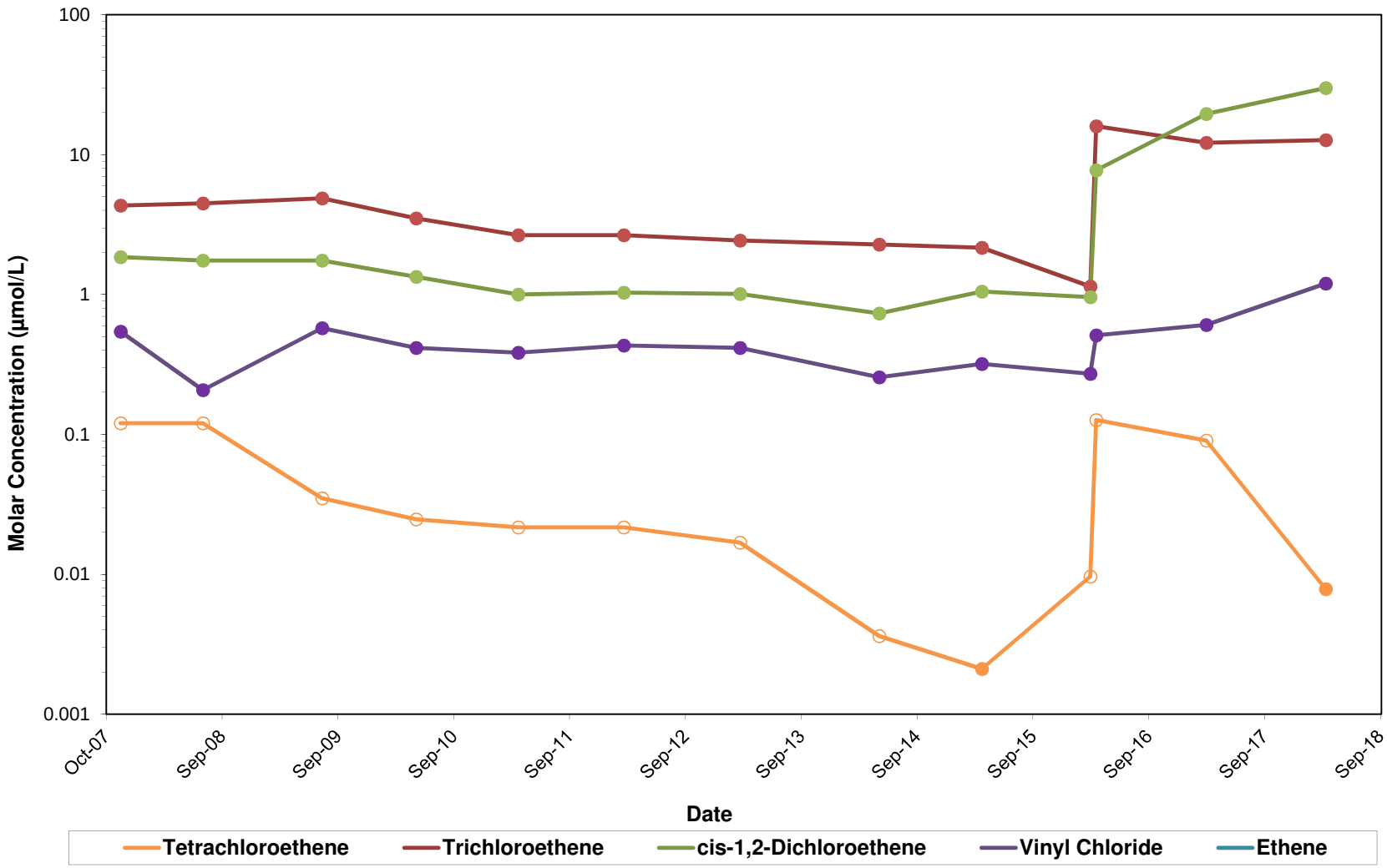
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW78B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

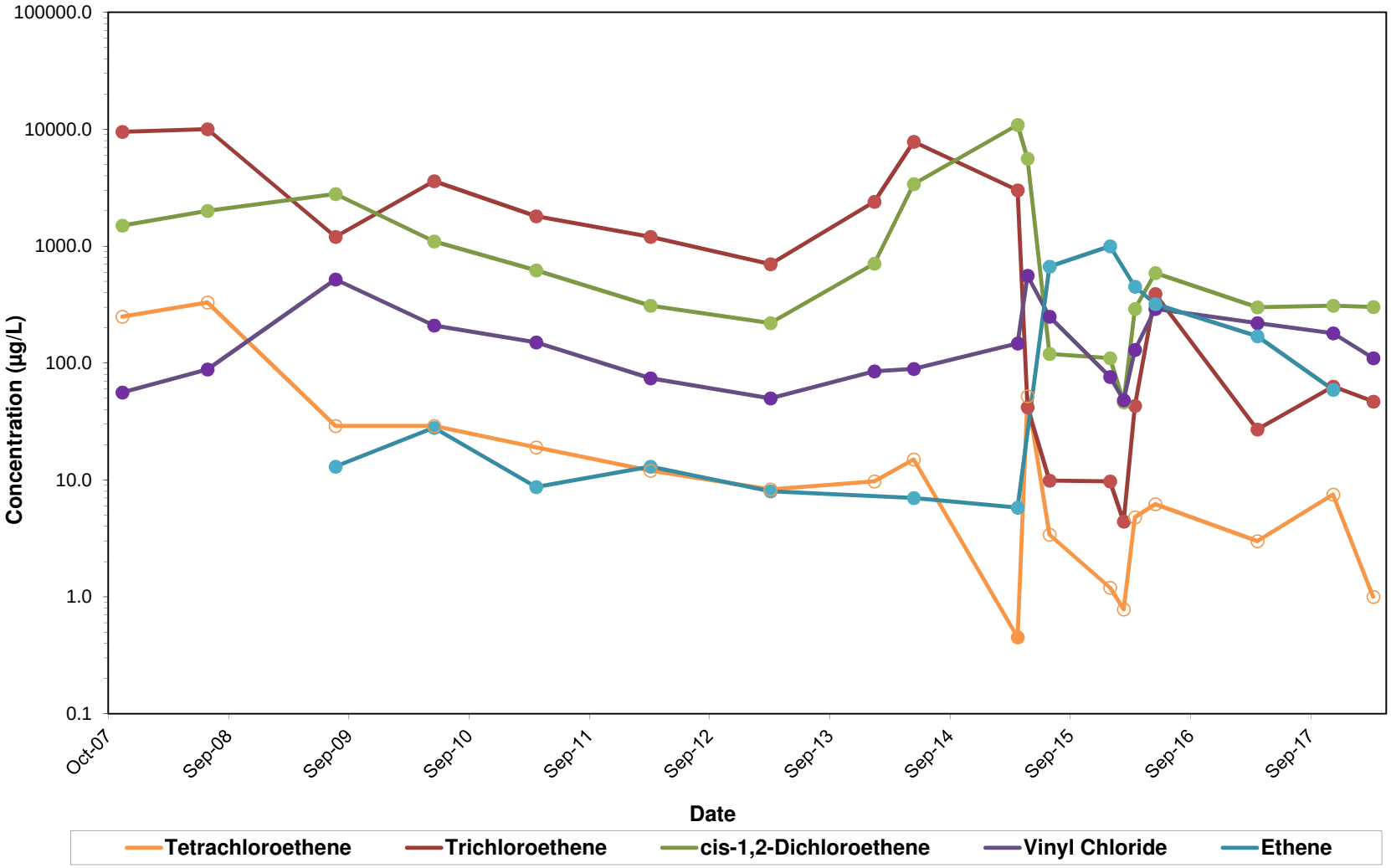
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW79B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

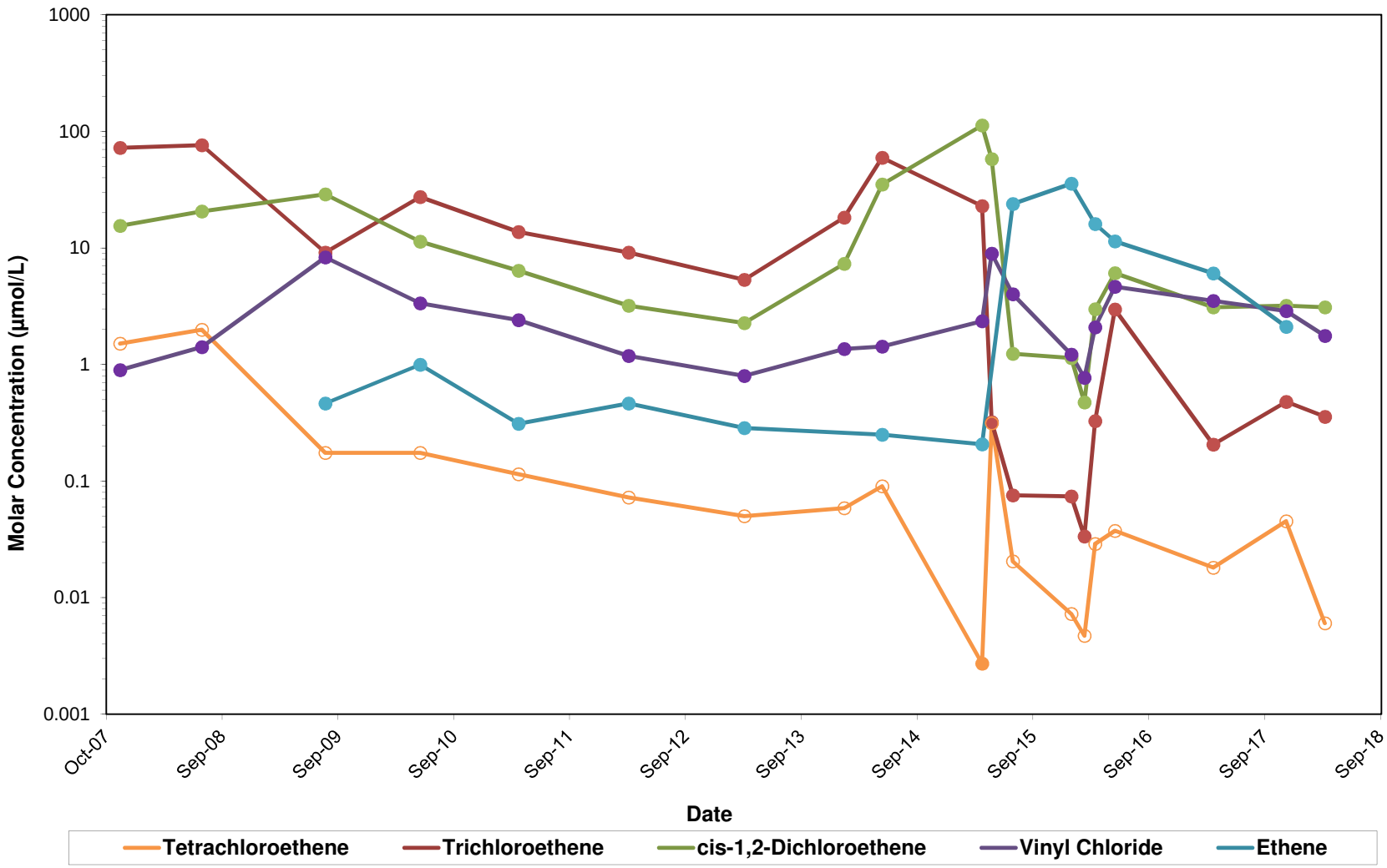
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW79B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

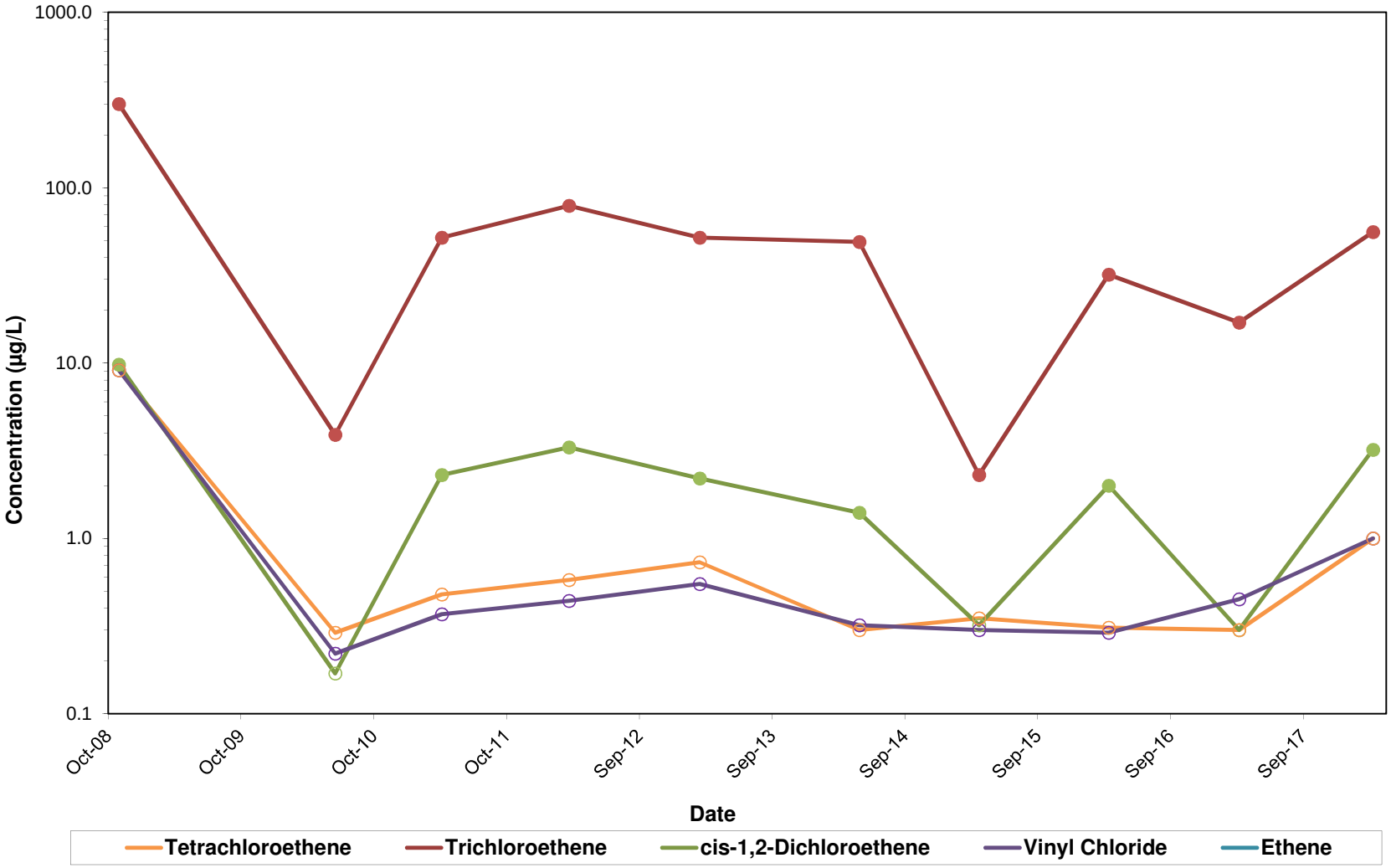
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW81B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

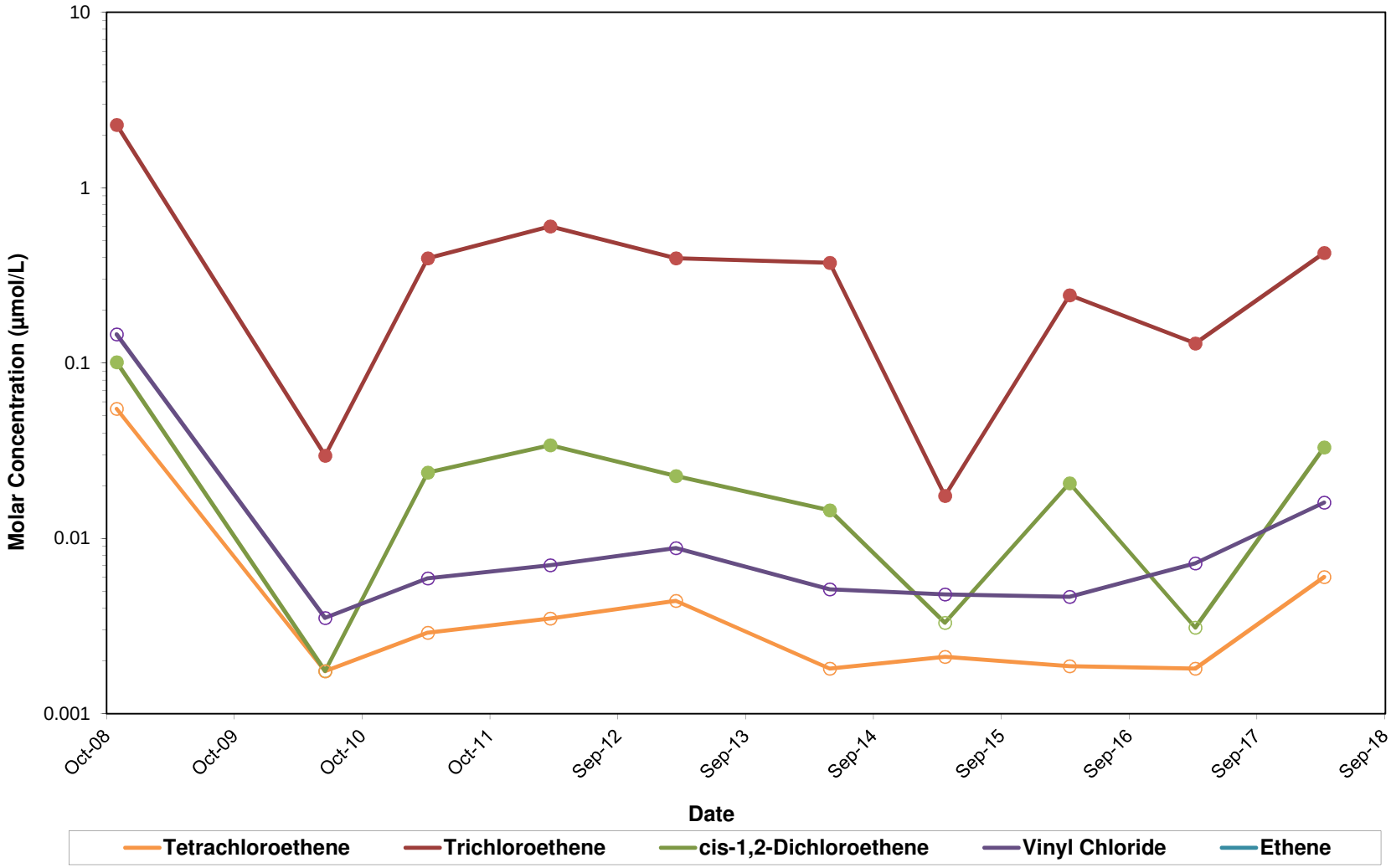
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW81B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW87B
Lockheed Martin Middle River Complex

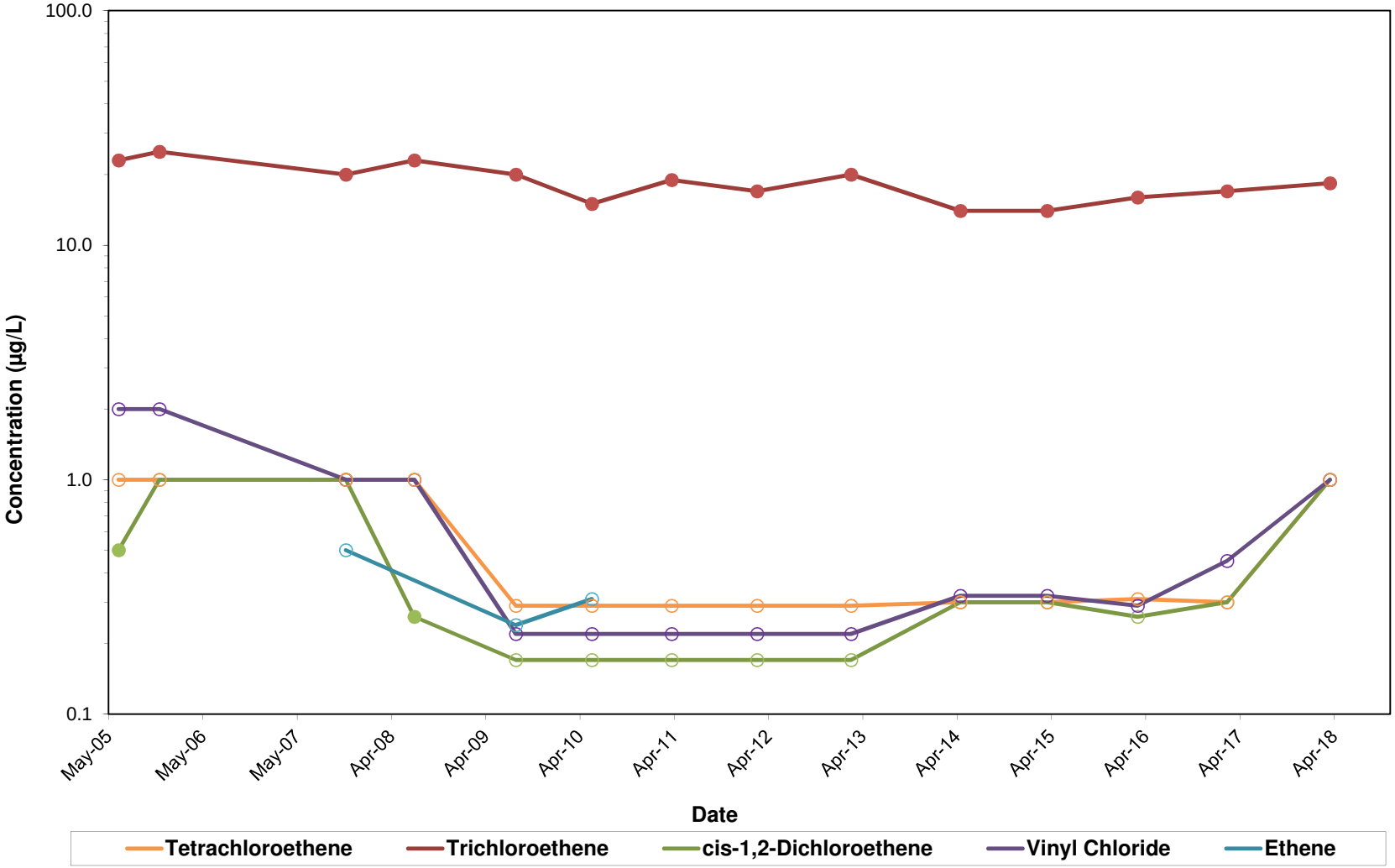


Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW87B
Lockheed Martin Middle River Complex

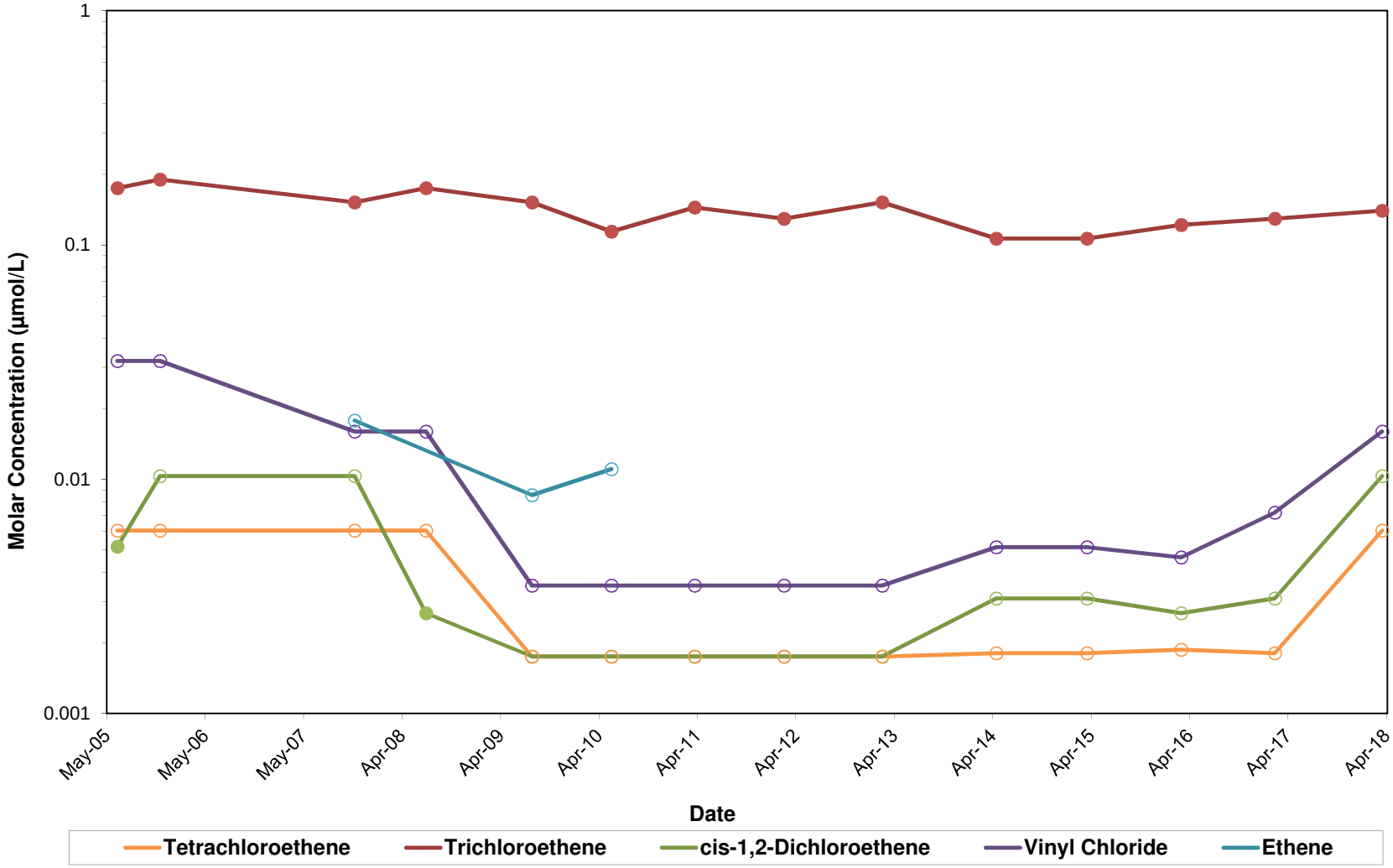
Blocks E and F, Southeastern TCE Plume



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

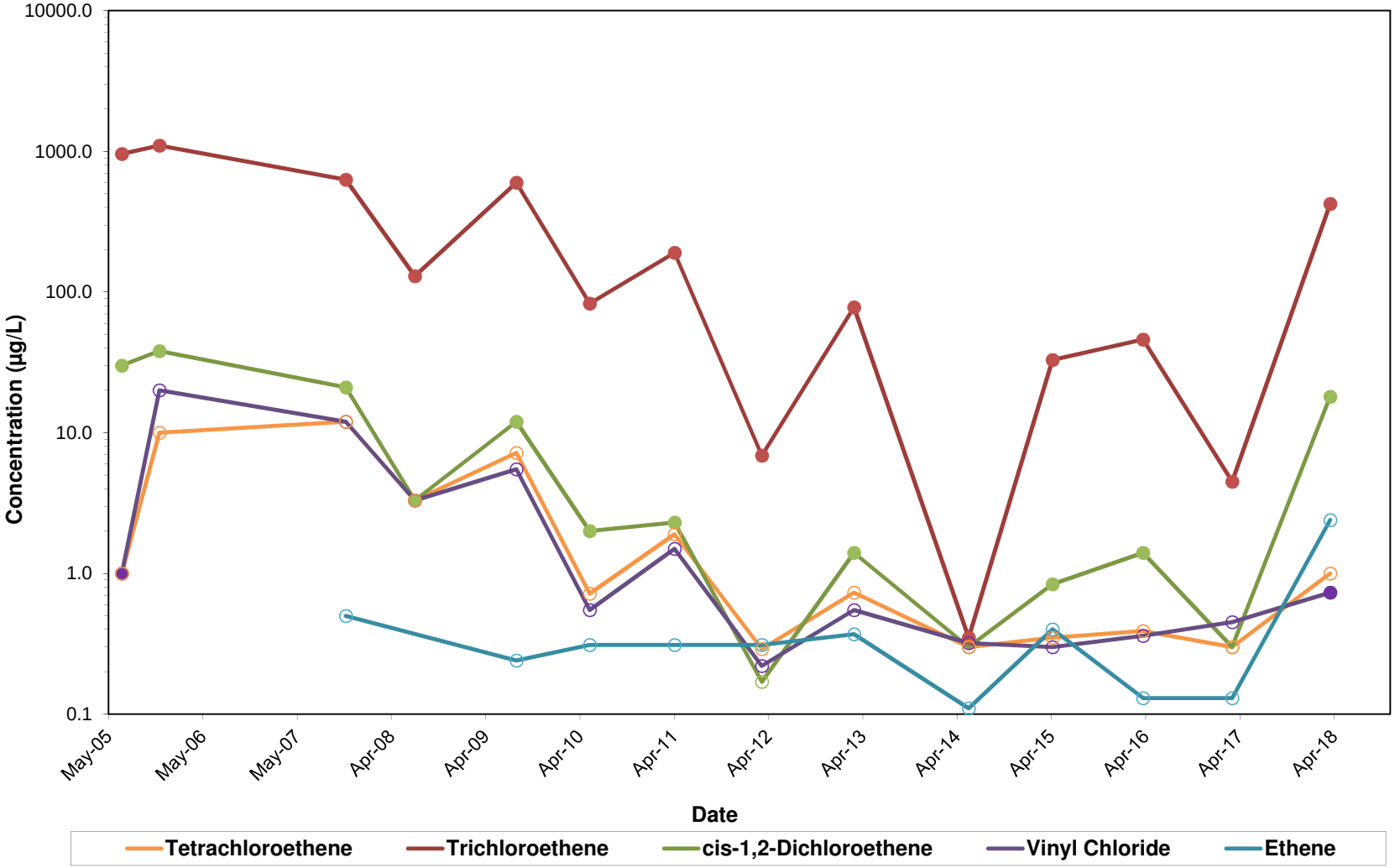
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW34A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

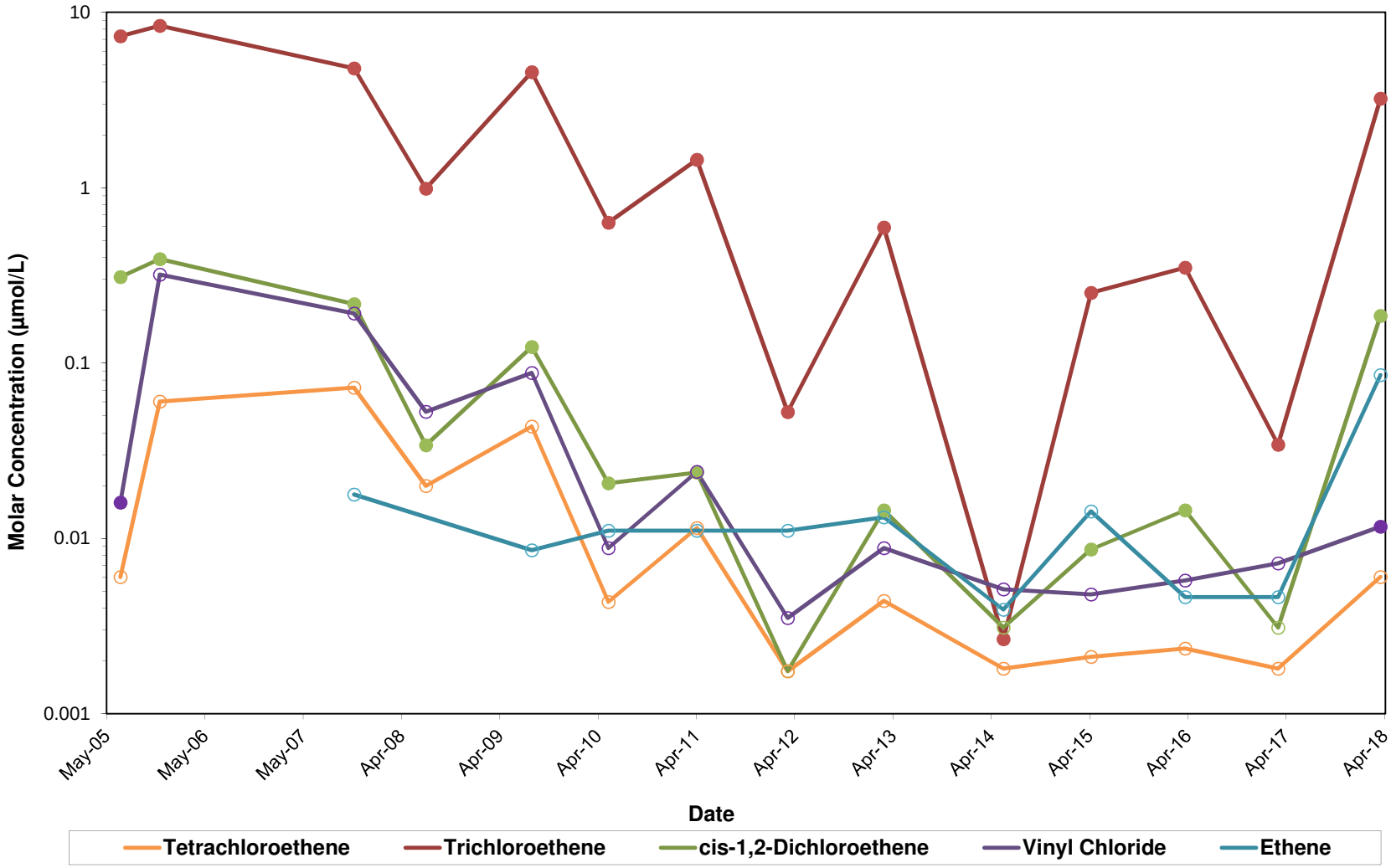
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW34A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

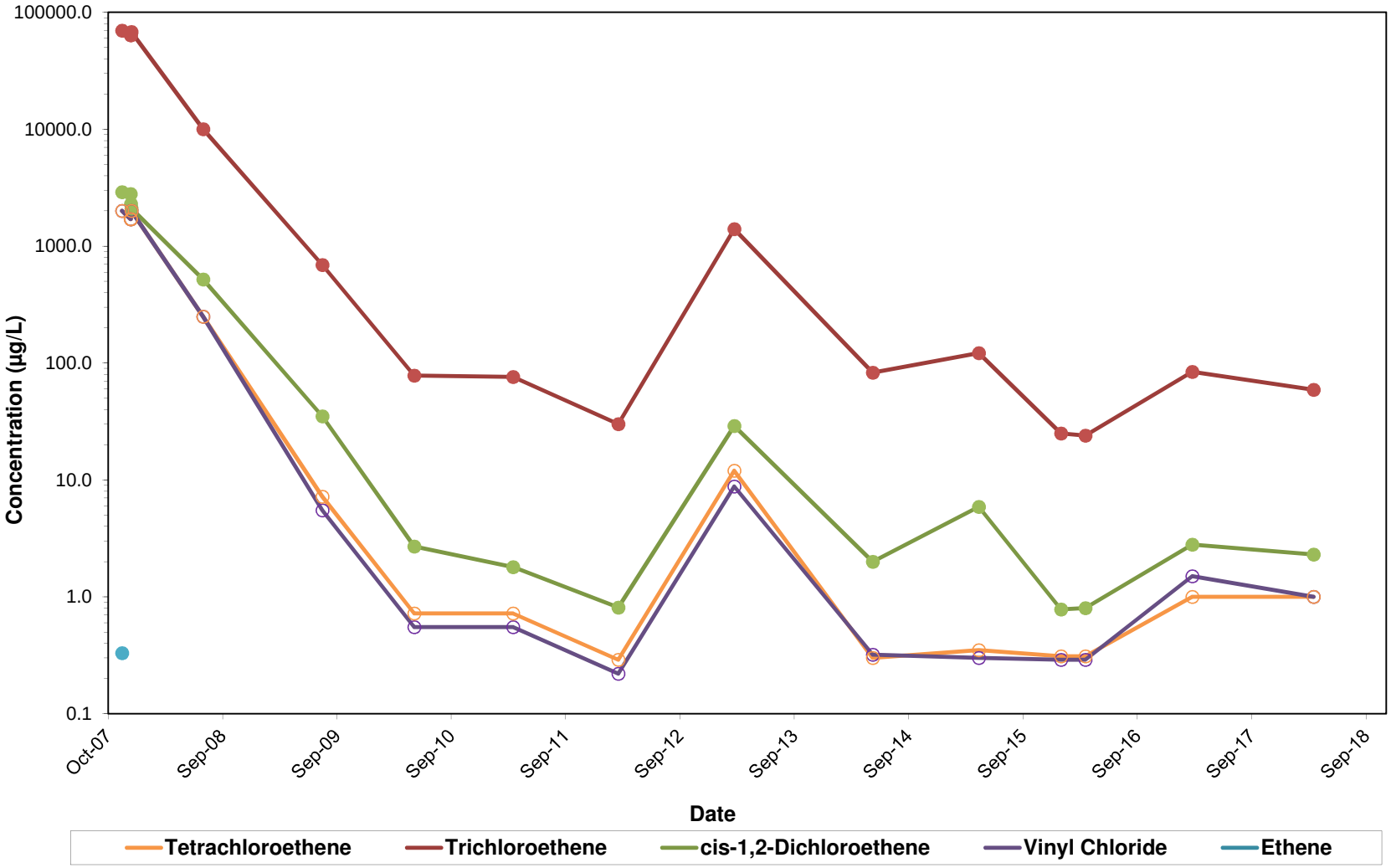
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW37A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

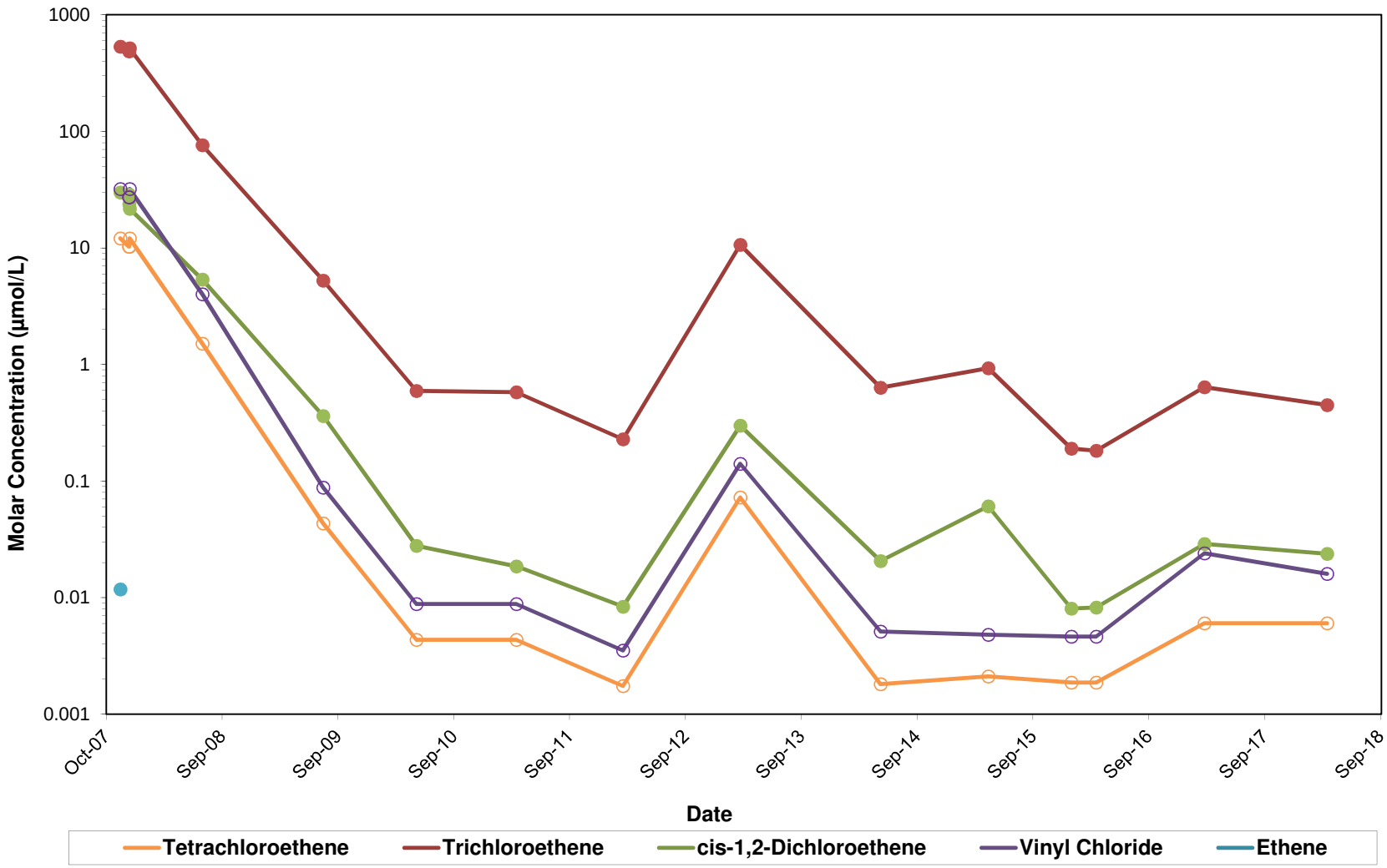
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW37A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

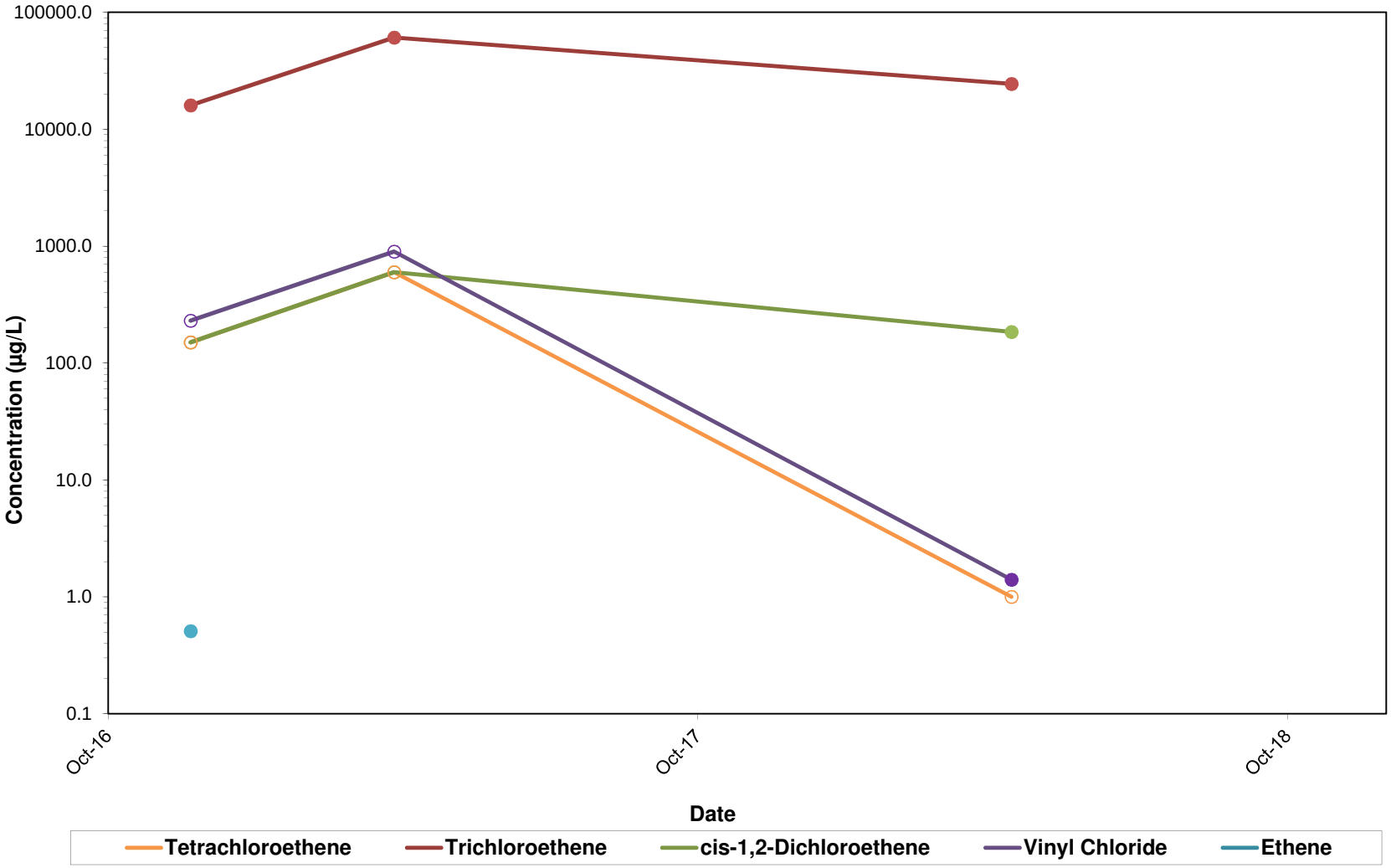
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW74A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

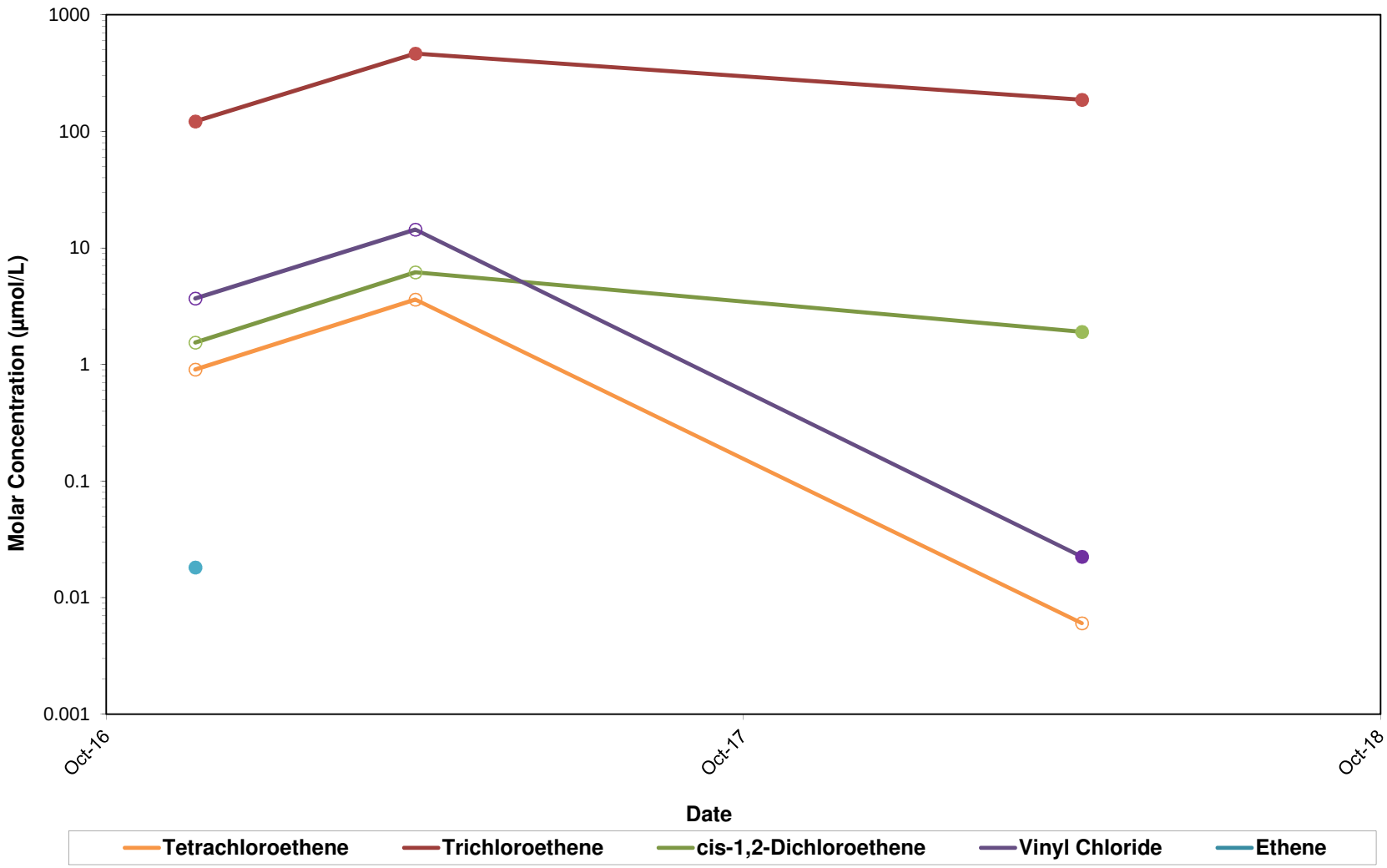
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW74A
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

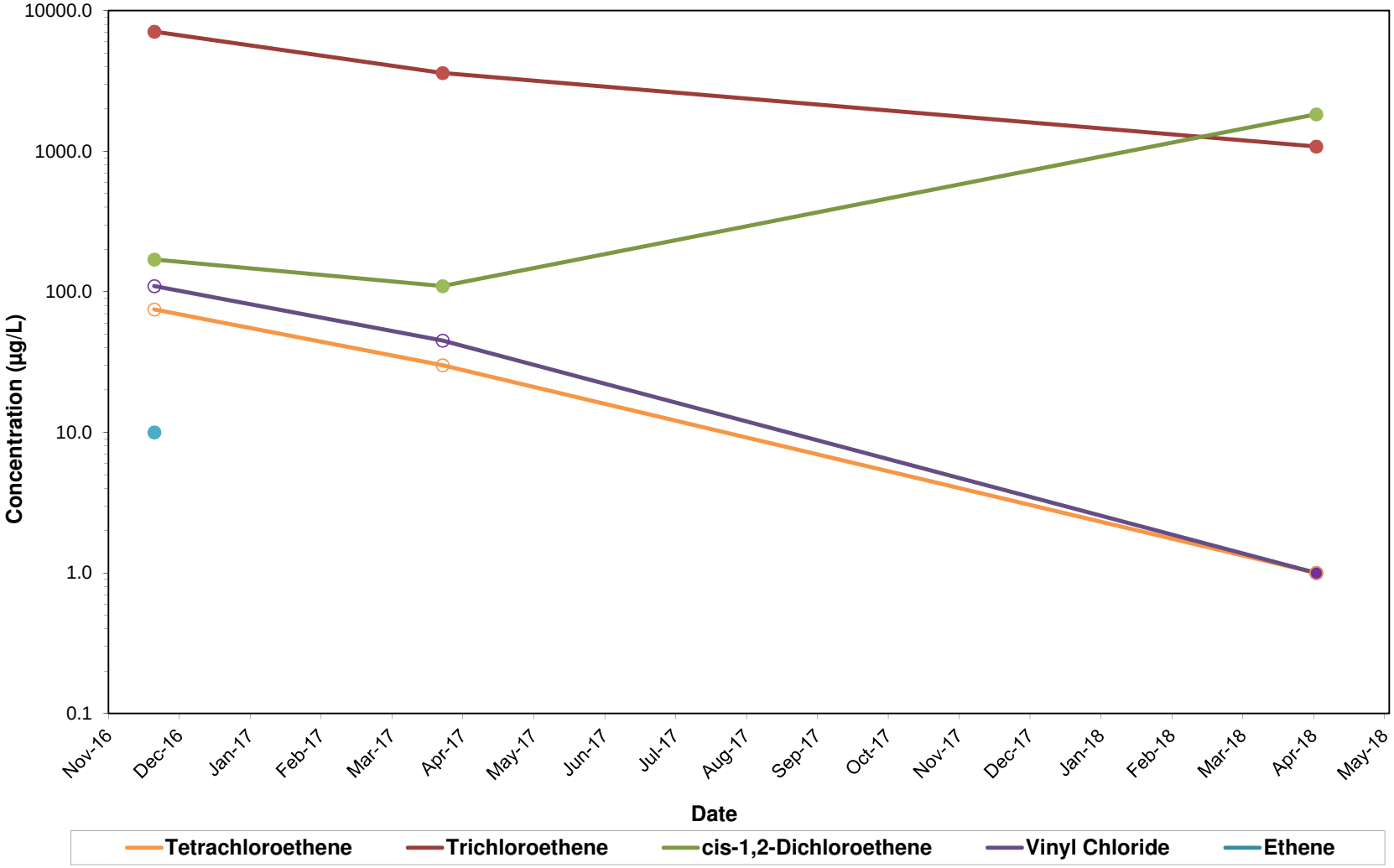
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SEMW-8S
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

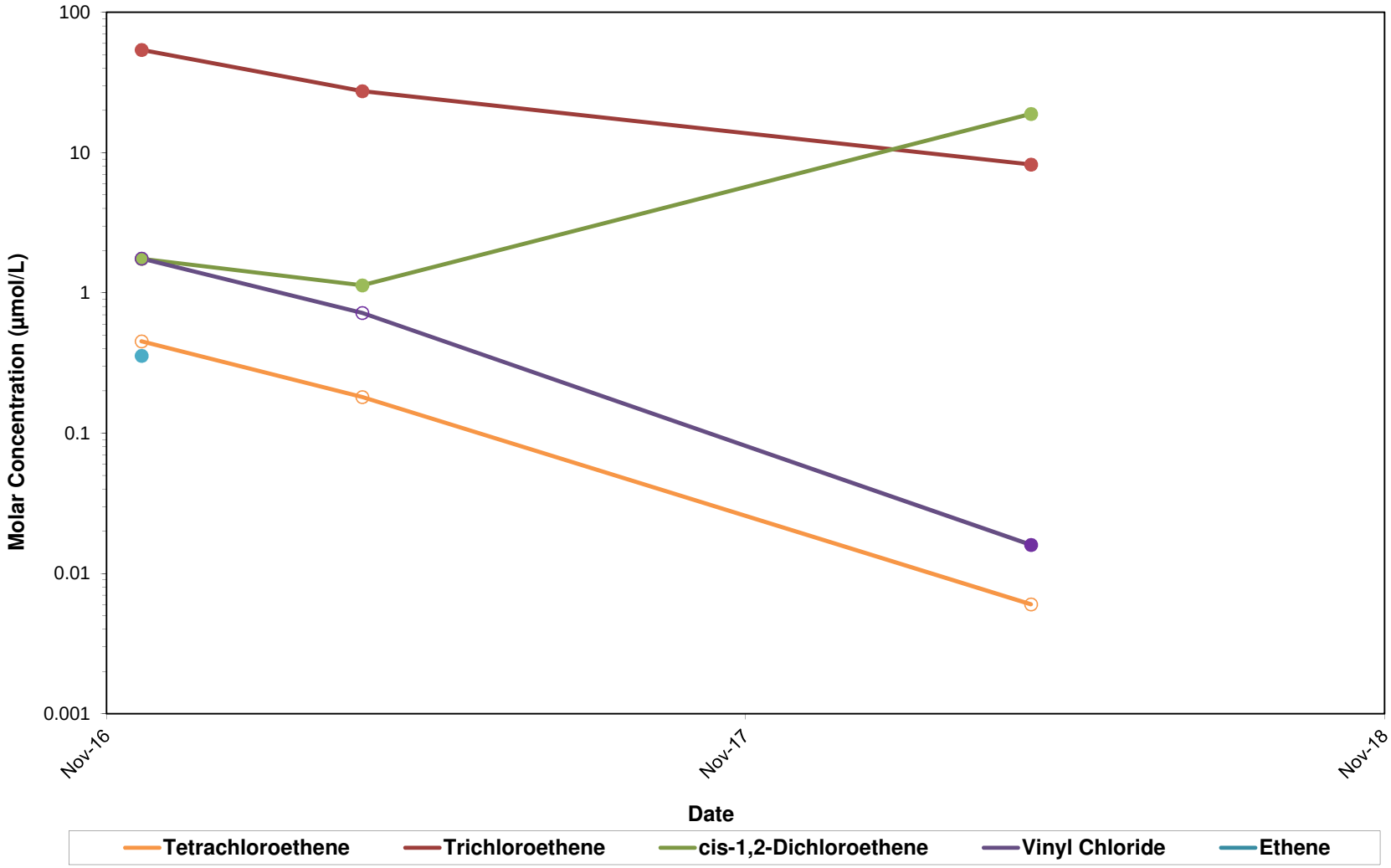
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SEMW-8S
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

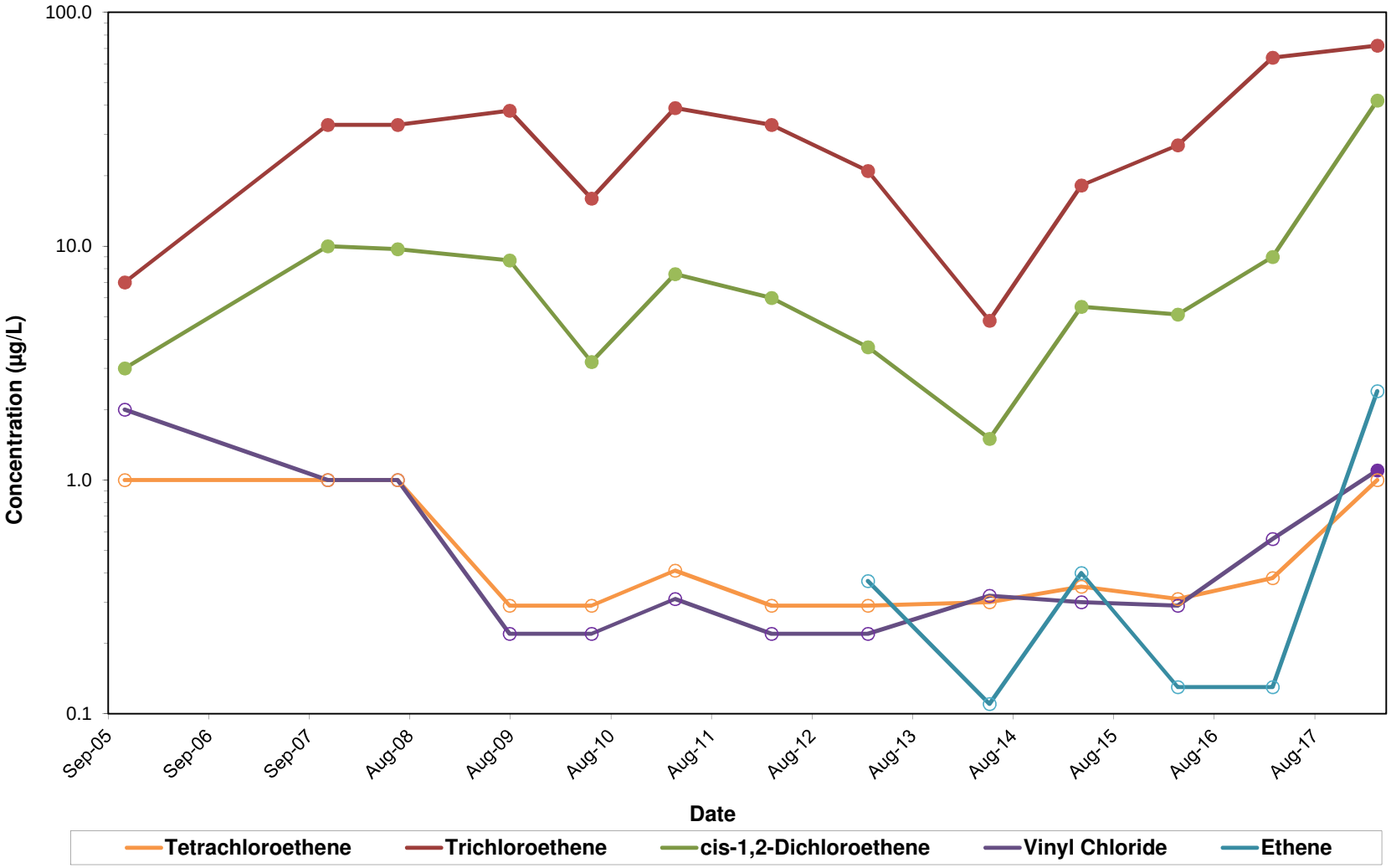
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SEMW-8I
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

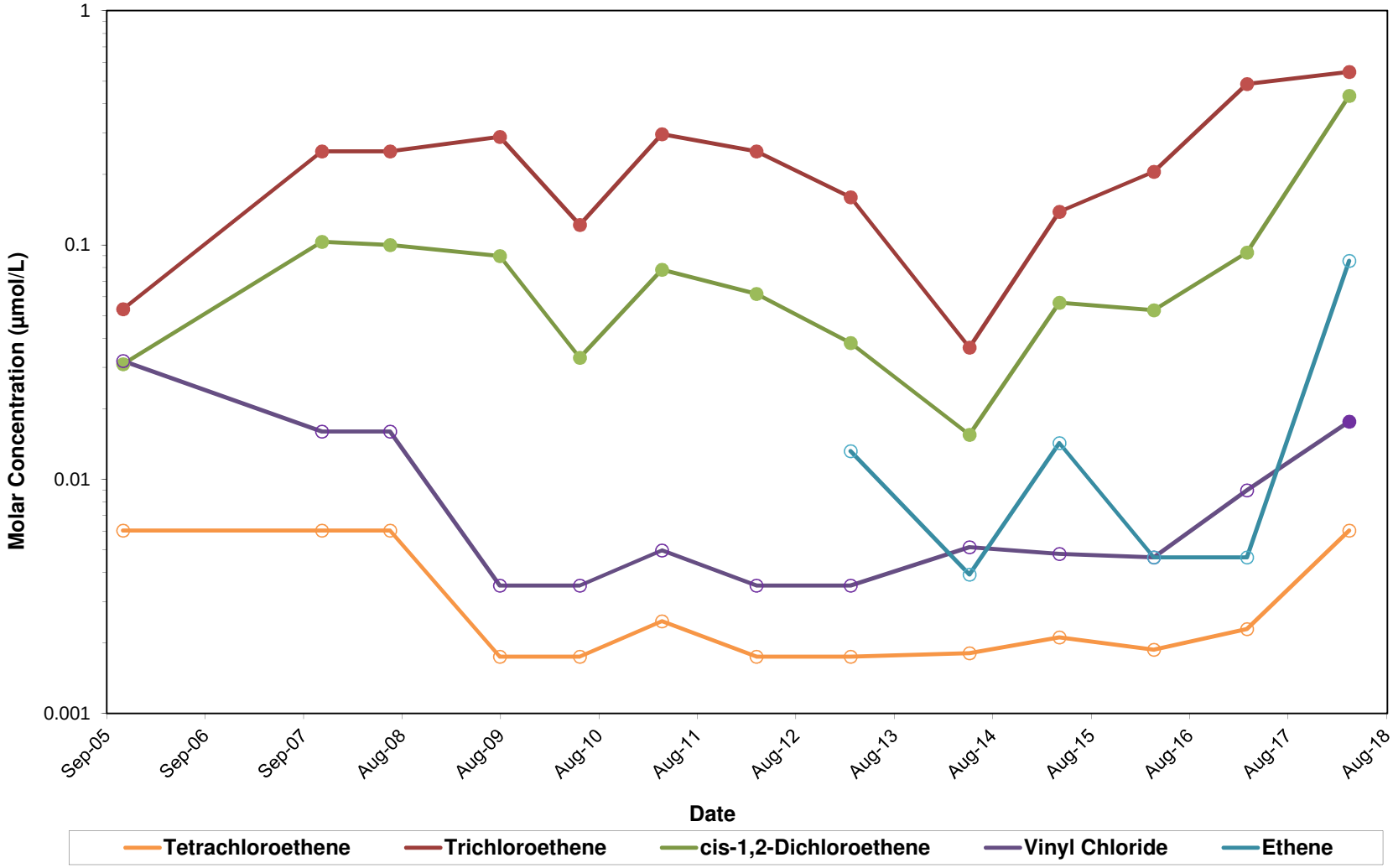
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SEMW-8I
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

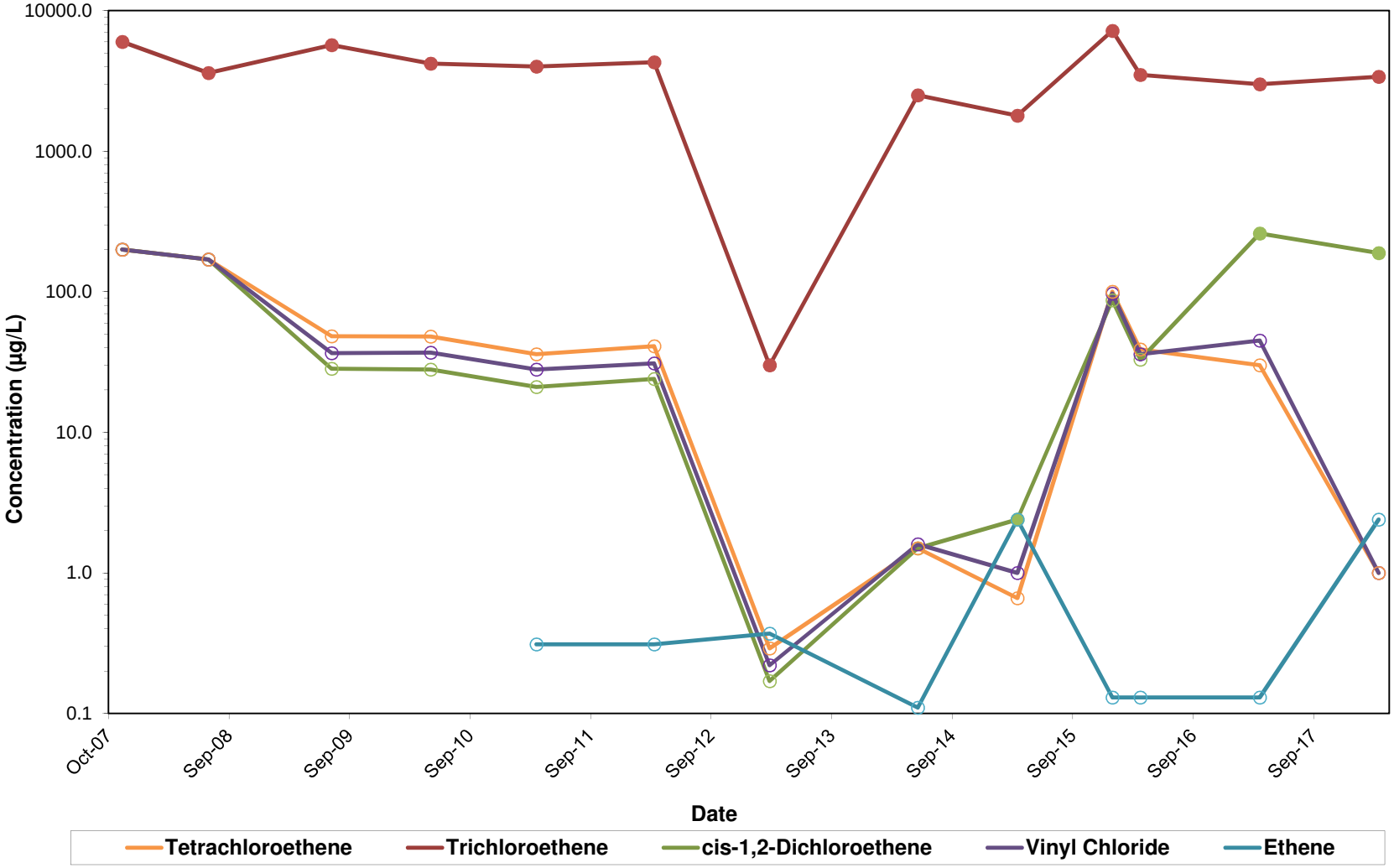
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW37B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

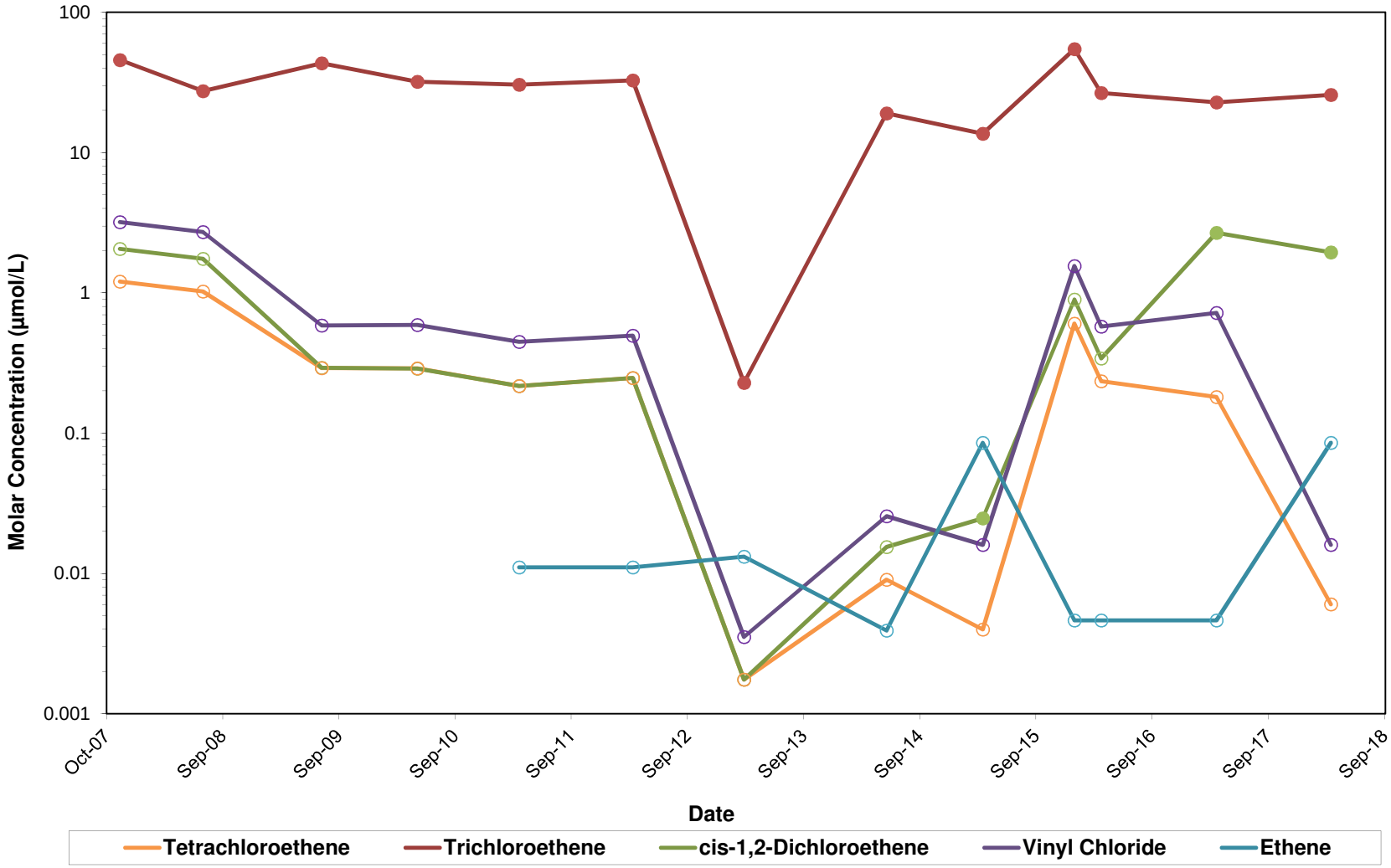
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW37B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

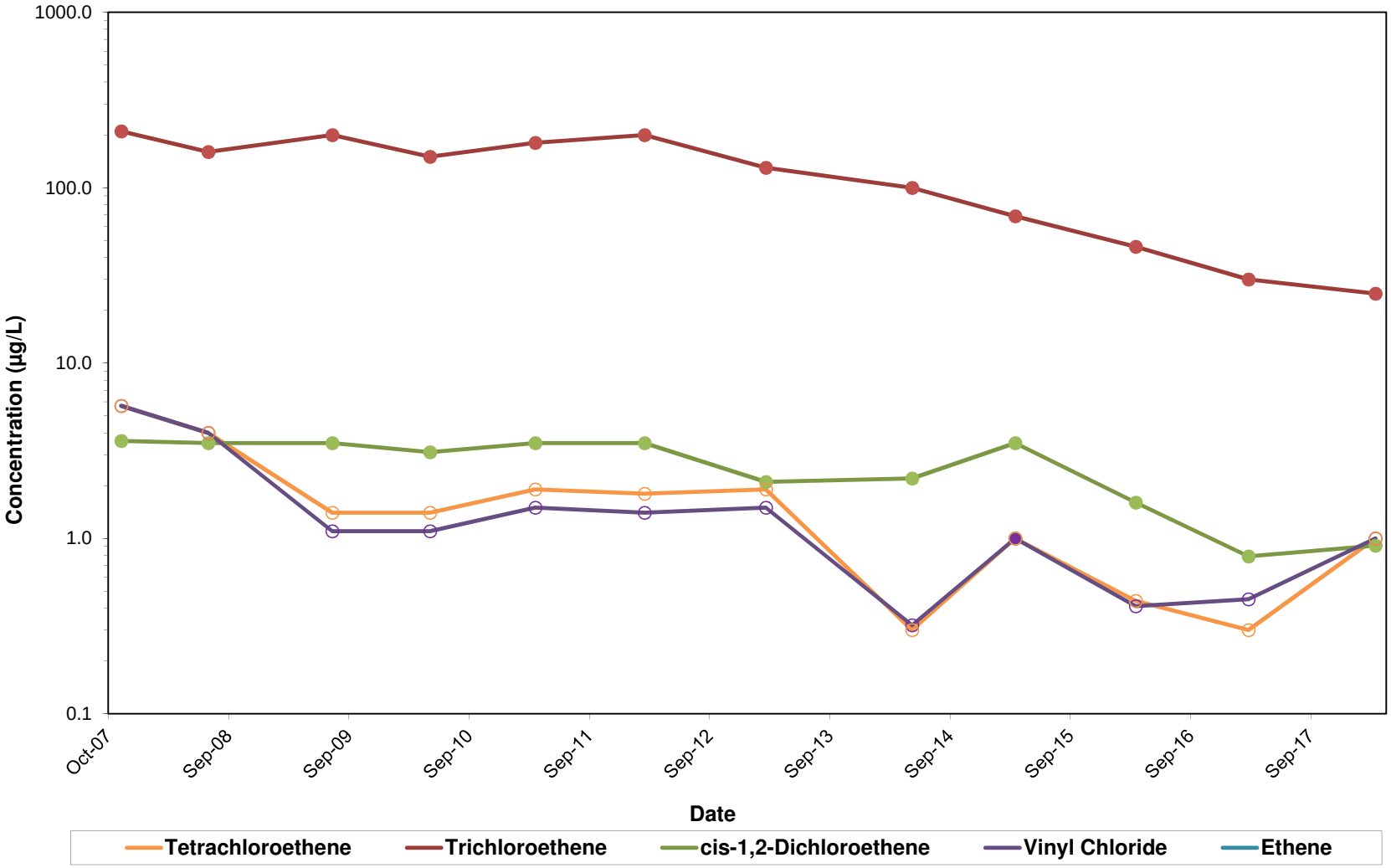
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW72B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

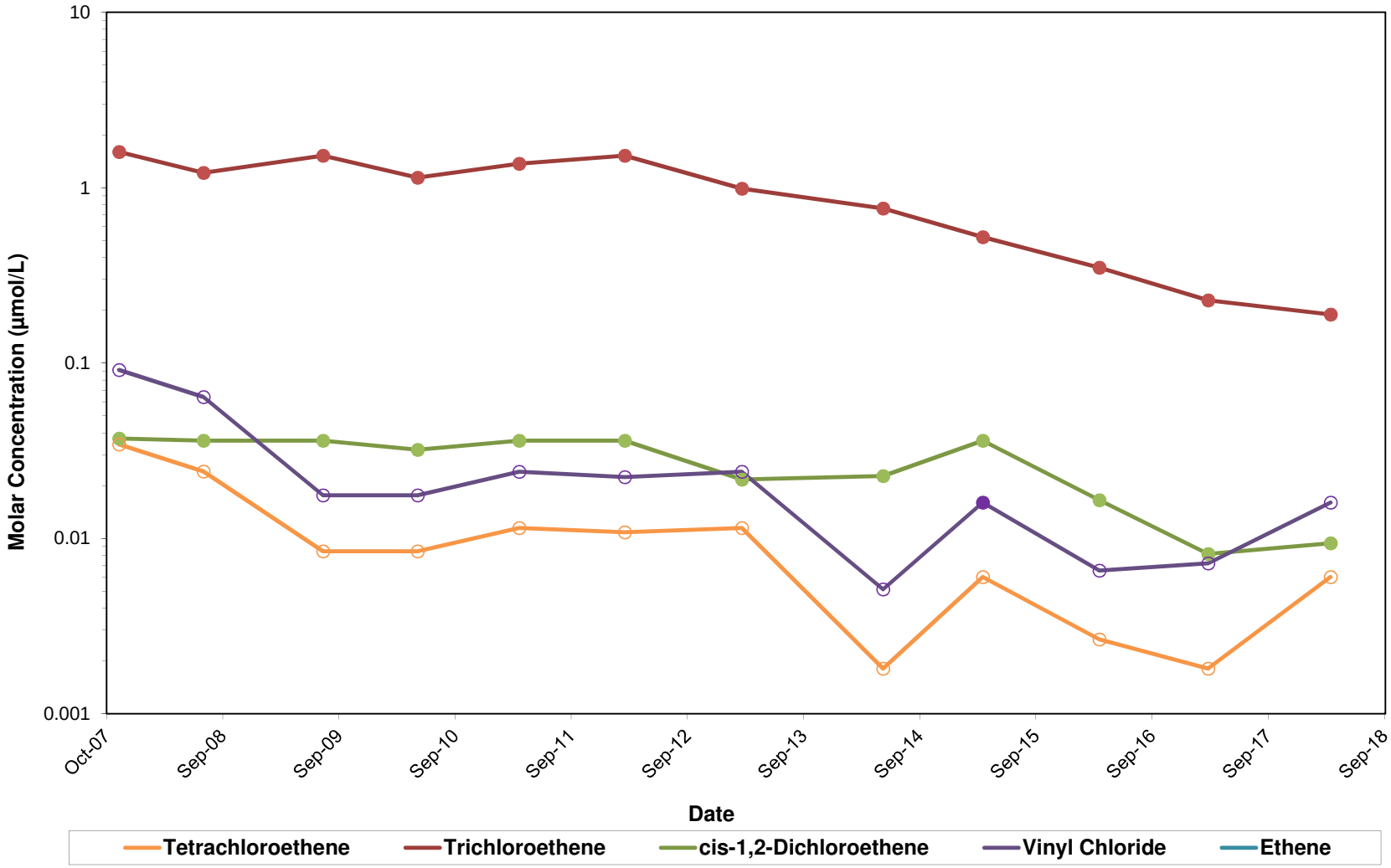
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW72B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

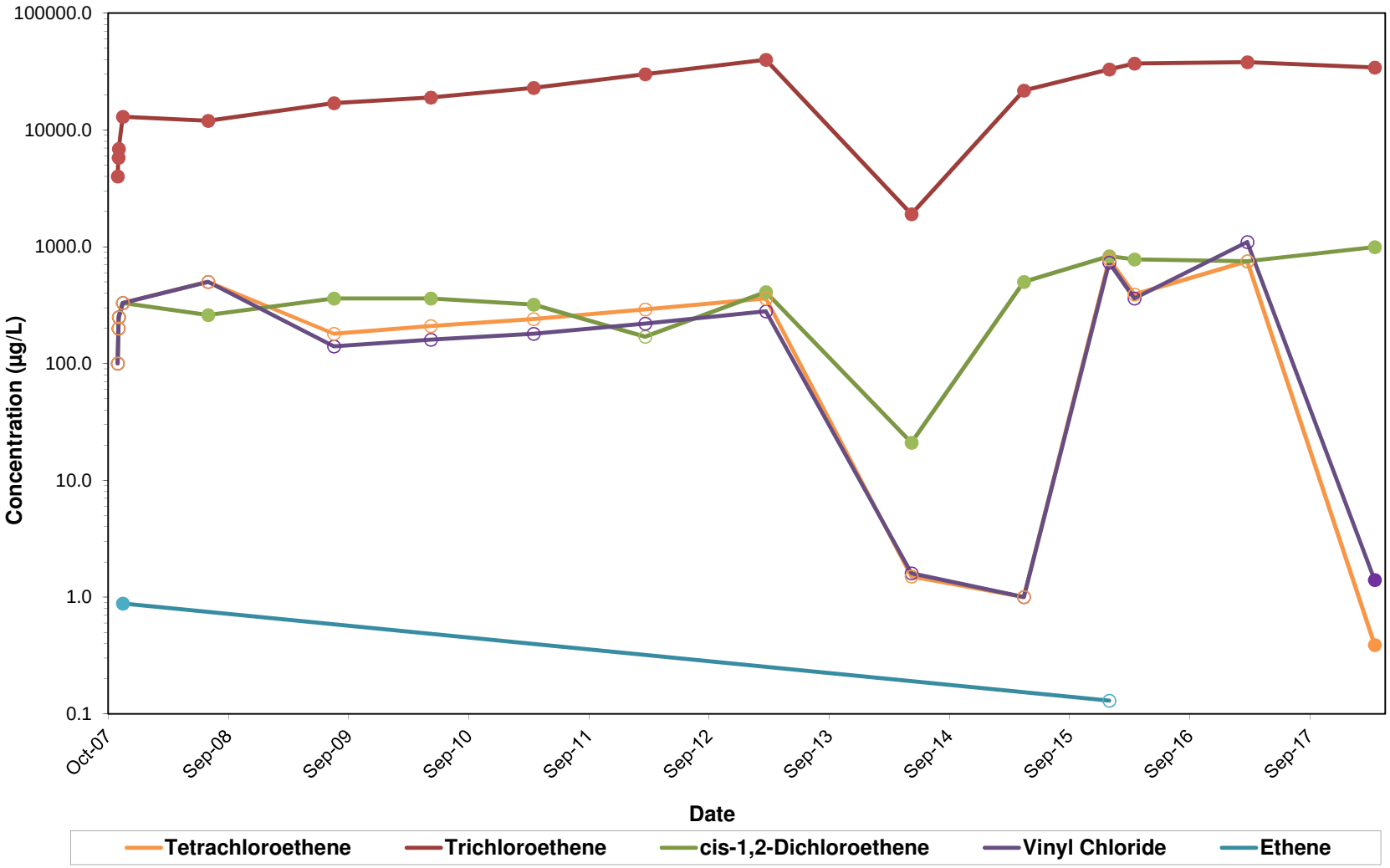
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW73B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

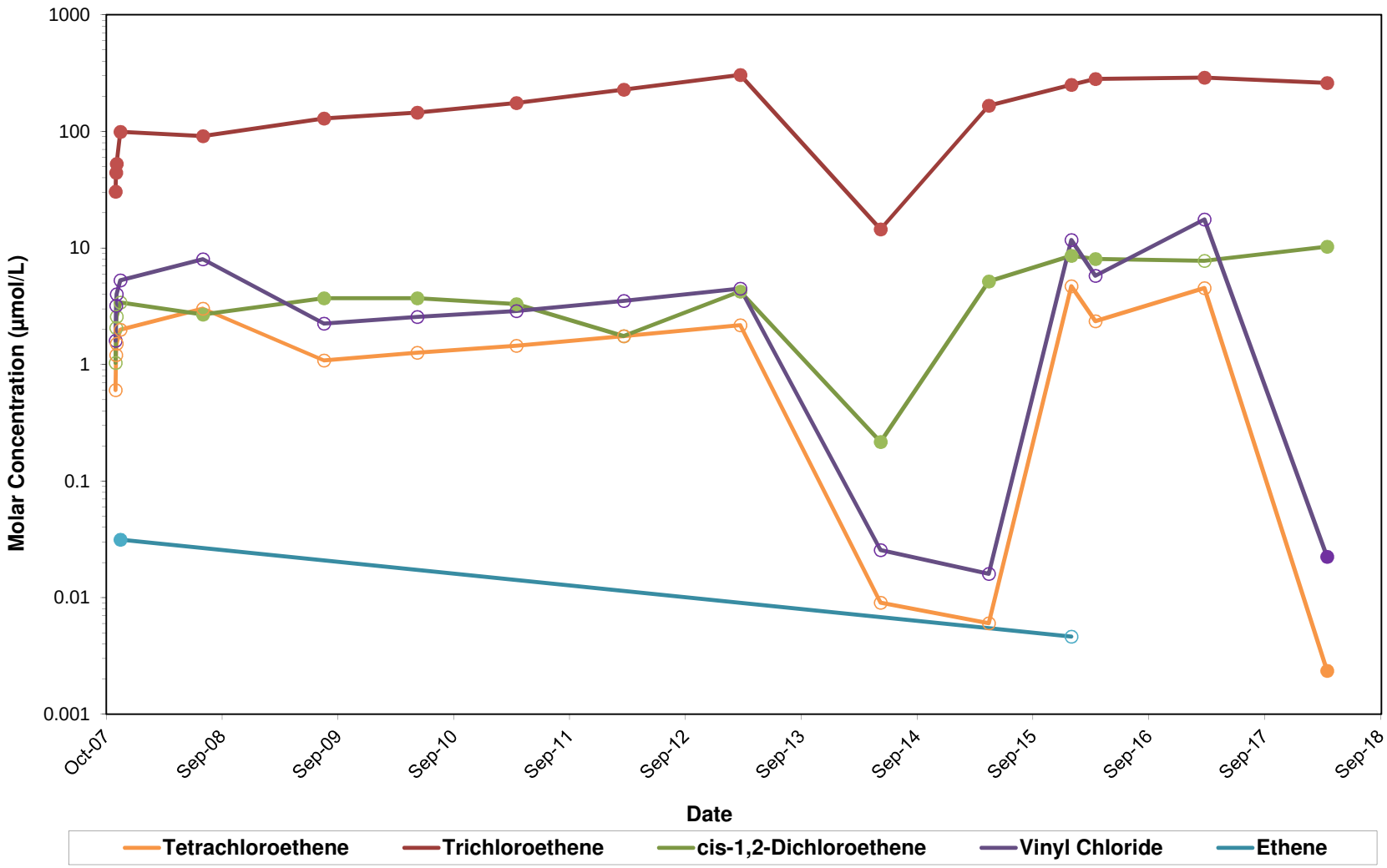
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW73B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

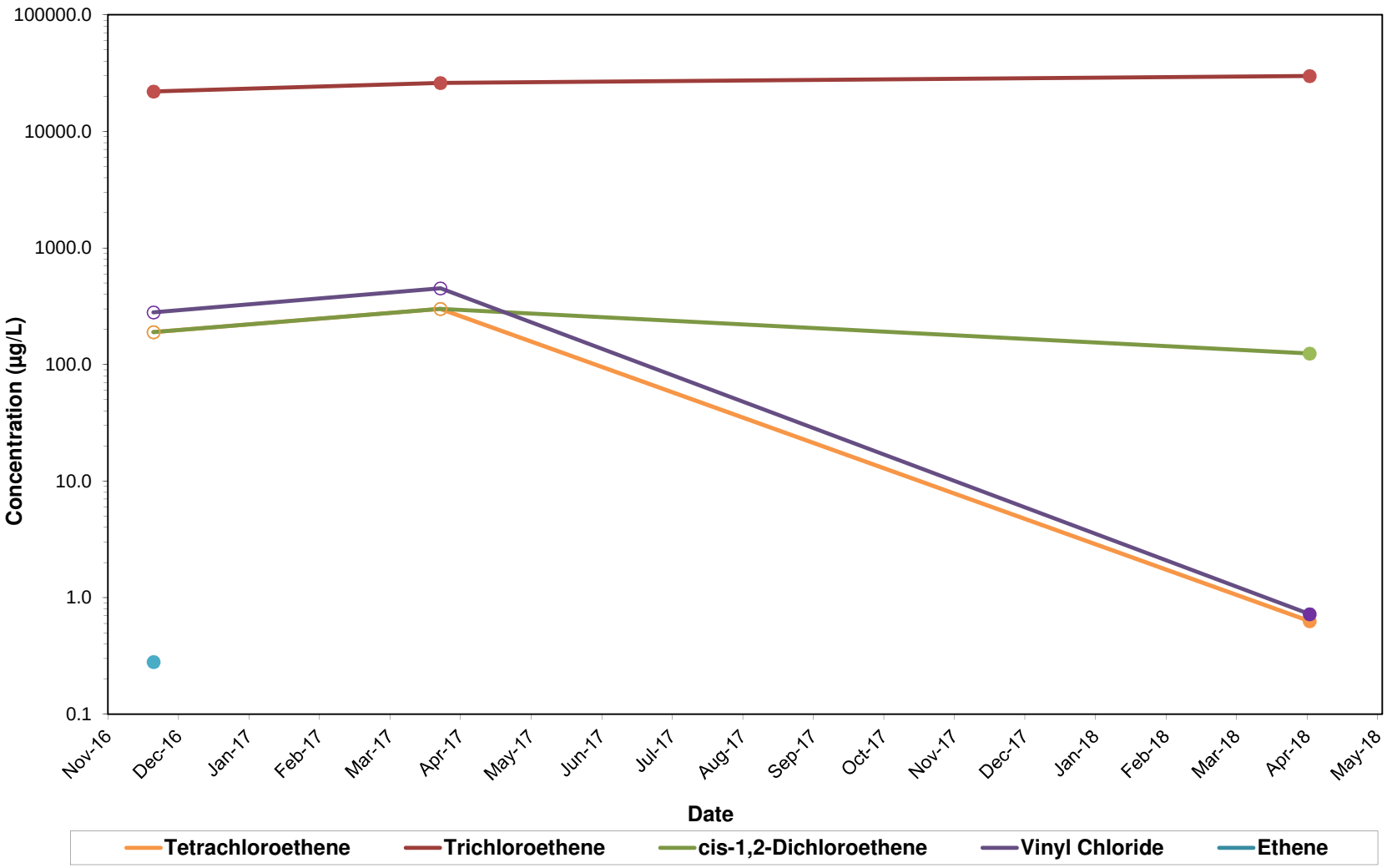
Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW74B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

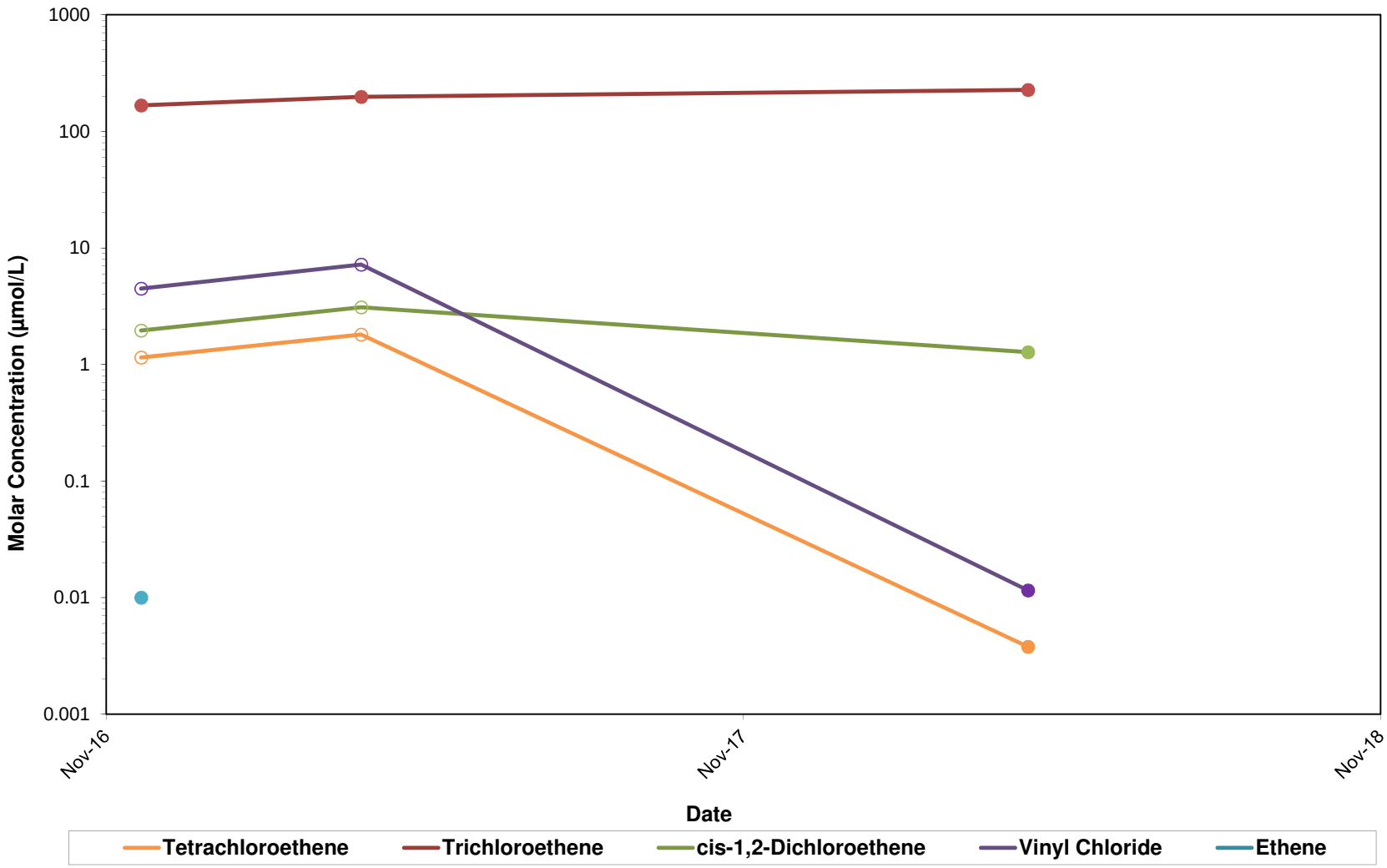
Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-MW74B
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SEMW-7I
Lockheed Martin Middle River Complex



Note: Closed circles represent detected data and open circles represent non-detect data censored at the reporting limit.

AECOM

Molar Concentration versus Time Graph (Total Chlorinated Ethenes)
MRC-SEMW-7I
Lockheed Martin Middle River Complex