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October 8, 2015

Kirstin Pointin-Hahn  
Bureau of Case Management  
Site Remediation Program  
New Jersey Department of Environmental Protection  
401 E. State Street  
401-05H  
P.O. Box 420  
Trenton, New Jersey 08625-0420

Subject: Remedial Investigation Report  
Former Lockheed Martin Facility  
50 Millstone Road  
East Windsor, New Jersey  
PI#158269/ISRA #86488

Dear Ms. Pointin-Hahn:

On behalf of Lockheed Martin Corporation, please find enclosed one (1) hard copy and one (1) compact disc of the Remedial Investigation Report (RIR) for the former Lockheed Martin Facility located in East Windsor, New Jersey. A Site Remediation Reform Act Cover/Certification Form, RIR form, Updated Receptor Evaluation Form, Case Inventory Document and Classification Exception Area (CEA) Application are also enclosed with this cover letter and included as Appendix P of the Report. Electronic data deliverables and the CEA shape file were submitted separately via e-mail.

If you have any questions concerning this submittal or this project, feel free to contact Dave Russell (LSRP for the Site) at (609) 720-2066 or Shail Pandya at (212) 377-8708.

Very truly yours,  
**AECOM**

David J. Russell, P.E., BCEE, LSRP  
Senior Program Director  
[david.russell@aecom.com](mailto:david.russell@aecom.com)

Shail Pandya  
Sr. Project Manager  
[shail.pandya@aecom.com](mailto:shail.pandya@aecom.com)

Enclosures

cc: R. Phillips, LMC (Electronic Copy only)  
M. Watts, CDM (Electronic Copy Only)





New Jersey Department of Environmental Protection  
Site Remediation Program

**COVER/CERTIFICATION FORM**

(Submit with Remedial Phase Report, Receptor Evaluation, and CEA Forms)

Date Stamp  
(For Department use only)

**SECTION A. SITE INFORMATION**

Site Name: Former Lockheed Martin Facility

AKAs: RCA Astro Electronics

Street Address: 50 Millstone Road

Municipality: East Windsor

(Township, Borough or City)

County: Mercer

Zip Code: 08520

Program Interest (PI) Number(s): 158269

Case Tracking Number(s) for this submission: ISRA No. #86488

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 01/01/1987

State Plane Coordinates for a central location at the site: Easting: 475746 Northing: 530552

List current Municipal Block and Lot Numbers of the Site:

Block # 2 Lot #(s) 1.02

Block # \_\_\_\_\_ Lot #(s) \_\_\_\_\_

Block # 2 Lot #(s) 2.02

Block # \_\_\_\_\_ Lot #(s) \_\_\_\_\_

Block # 5 Lot #(s) 3

Block # \_\_\_\_\_ Lot #(s) \_\_\_\_\_

Block # \_\_\_\_\_ Lot #(s) \_\_\_\_\_

Block # \_\_\_\_\_ Lot #(s) \_\_\_\_\_

**SECTION B. SUBMISSION STATUS**

1. Indicate how the Electronic Data Deliverable (EDD) for this submission is being provided to the NJDEP:

☒ Via Email at [srpedd@dep.state.nj.us](mailto:srpedd@dep.state.nj.us) (attach NJDEP confirmation email); or

☐ CD (attach to this submission)

☐ Not Applicable – No EDD

2. Complete the following Submission and Permit Status Table:

Remedial Phase Documents	N/A	Included in this Submission	Previously Submitted	Date of Submission	Date of Revised Submission	Date of Previous NJDEP Approval	Date of Document Withdrawal
Preliminary Assessment Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	06/26/1992			
Site Investigation Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Remedial Investigation Report	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	02/09/1999	10/08/2015		
Remedial Action Work Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/01/1994	06/28/2004		
Remedial Action Report	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	07/01/1996			
Response Action Outcome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Other Submissions</b>							
Alternative Soil Remediation Standard and/or Screening level Application Form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Case Inventory Document		<input checked="" type="checkbox"/>		10/08/2015			
Classification Exception Area / Well Restriction Area (CEA/WRA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10/08/2015			
Discharge to Ground Water Permit by Rule Authorization Request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				



IEC Engineered System Response Action Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Immediate Environmental Concern Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
LNAPL Interim Remedial Measure Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Public Notification	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11/01/2013			
Receptor Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10/01/2011			
Technical Impracticability Determination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Vapor Concern Mitigation Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Permit Application – list:	<input type="checkbox"/>						
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				
Radionuclide Remedial Action Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Radionuclide Remedial Action Workplan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Radionuclide Remedial Investigation Report	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Radionuclide Remedial Investigation Workplan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

### SECTION C. SITE USE

**Current Site Use:** (check all that apply)

- ☐ Industrial  
☐ Residential  
☒ Commercial  
☐ School or child care  
☐ Other: \_\_\_\_\_
- ☐ Agricultural  
☐ Park or recreational use  
☒ Vacant  
☐ Government

**Intended Future Site Use, if known:** (check all that apply)

- ☐ Industrial  
☐ Residential  
☒ Commercial  
☐ School or child care  
☐ Other: \_\_\_\_\_
- ☐ Park or recreational use  
☒ Vacant  
☐ Government  
☐ Future site use unknown

### SECTION D. CASE TYPE: (check all that apply)

- ☒ Administrative Consent Order (ACO)  
☐ Brownfield Development Area (BDA)  
☐ Child Care Facility  
☐ Chrome Site (Chromate chemical production waste)  
☐ Coal Gas  
☐ Due Diligence with RAO  
☐ Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan  
☒ ISRA

- ☐ Landfill (SRP subject only)  
☐ Regulated Underground Storage Tank (UST)  
☐ Remediation Agreement (RA)/Remediation Certification  
☐ School Development Authority (SDA)  
☐ School facility  
☐ Spill Act Defense – Government Entity  
☒ Spill Act Discharge  
☐ UST Grant/Loan  
☐ Other: \_\_\_\_\_

**Federal Case** (check all that apply)

- ☐ RCRA GPRA 2020    ☐ CERCLA/NPL    ☐ USDOD    ☐ USDOE

1. Is the party conducting remediation a government entity? ..... ☐ Yes ☒ No
- If "Yes," check one:    ☐ Federal    ☐ State    ☐ Municipal    ☐ County

### SECTION E. PUBLIC FUNDS

Did the remediation utilize public funds? ..... ☐ Yes ☒ No

If "Yes," check applicable:

- ☐ UST Grant    ☐ UST Loan    ☐ Brownfield Reimbursement Program  
☐ HDSRF Grant    ☐ HDSRF Loan    ☐ Landfill Reimbursement Program  
☐ Spill Fund    ☐ Schools Development Authority    ☐ Environmental Infrastructure Trust



**SECTION F. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION**Full Legal Name of the Person Responsible for Conducting the Remediation: Lockheed Martin CorporationRepresentative First Name: KevinRepresentative Last Name: PearsonTitle: Director - Environment RemediationPhone Number: (972) 603-9729

Ext: \_\_\_\_\_

Fax: (817) 762-4884Mailing Address: 530 SW 14th StreetCity/Town: Grand PrairieState: TXZip Code: 75051Email Address: kevin.pearson@lmco.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

*I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.*

Signature: \_\_\_\_\_

Date: 10/9/15Name/Title: Kevin Pearson, Director - Env Remediation**For CEA Submissions:**

☐ Check this box if the person above is also the property owner of the site or their representative. If this person is not the site property owner, please ensure the site property owner's name and address is in the first line of the table in Section E.2 of the Classification Exception Area / Well Restriction Area (CEA/WRA) Fact Sheet Form.



**SECTION G. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT**LSRP ID Number: 574867First Name: DavidLast Name: RussellPhone Number: (609) 720-2066

Ext: \_\_\_\_\_

Fax: (609) 720-3198Mailing Address: 510 Carnegie CenterCity/Town: PrincetonState: NJZip Code: 08540Email Address: david.russell@aecom.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with section 14 of P.L.2009 c.60 (N.J.S.A. 58:10C-14), and paragraphs (1) and (2) of subsection b. of section 30 of P.L.2009 c.60 (N.J.S.A. 58:10B=1.3b(1) and (2)).

*I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:*

**[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:**☐ *directly oversaw and supervised all of the referenced remediation, and/or*☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

*I believe that the information contained herein, and including all attached documents, is true, accurate and complete.*

*It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.*

*My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.*

*I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.*

LSRP Signature: \_\_\_\_\_

Date: 10-6-15LSRP Name/Title: David J. Russell, PE, BCEE, LSRPCompany Name: AECOM

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice  
Site Remediation Program  
NJ Department of Environmental Protection  
401-05H  
PO Box 420  
Trenton, NJ 08625-0420





New Jersey Department of Environmental Protection  
Site Remediation Program

REMEDIAL INVESTIGATION REPORT FORM

Date Stamp  
(For Department use only)

SECTION A. SITE

Site Name: \_\_\_\_\_

Program Interest (PI) Number(s): \_\_\_\_\_

Case Tracking Number(s) for this submission: \_\_\_\_\_

**This form must be attached to the Cover/Certification Form**

SECTION B. SCOPE OF THE REMEDIAL INVESTIGATION REPORT

1. Does the Remedial Investigation address:

☐ Area(s) of Concern (AOCs) Only

☐ Entire Site (based on a completed and submitted Preliminary Assessment/Site Investigation)

2. Total number of contaminated AOCs associated with the case: \_\_\_\_\_

3. Total number of contaminated AOCs addressed in this submittal: \_\_\_\_\_

4. Is the Remedial Investigation complete for the contaminated AOCs addressed in this submittal?..... ☐ Yes ☐ No

5. Is the Remedial Investigation complete for all AOCs associated with this case?..... ☐ Yes ☐ No

If "Yes," provide date: \_\_\_\_\_

**When answering the remaining questions on this form consider only the AOCs addressed in this submission.**

SECTION C. GENERAL

1. Are you proposing an alternative remediation standard pursuant to N.J.A.C. 7:26D-7.4, alternate vapor intrusion screening level, or ecological site specific goal?..... ☐ Yes ☐ No

*If "Yes," attach the Alternative Remediation Standard and/or Screening Level Application Form as an addendum.*

2. Was a site-specific screening level developed for the evaluation of the VI pathway?..... ☐ Yes ☐ No

3. Has/will the remediation vary from the Technical Rules? ..... ☐ Yes ☐ No

If "Yes," provide the citation(s) from which the remediation has/will vary and the page(s) in the attached document where the rationale for the variance is provided.

N.J.A.C. 7:26E- \_\_\_\_\_ Page \_\_\_\_\_

N.J.A.C. 7:26E- \_\_\_\_\_ Page \_\_\_\_\_

N.J.A.C. 7:26E- \_\_\_\_\_ Page \_\_\_\_\_

4. Were the laboratory reporting minimum detection limits below applicable remediation standards/ screening levels required for the site? ..... ☐ Yes ☐ No

5. Have past deficiencies/notice of deficiencies been addressed in this submittal? ..... ☐ Yes ☐ No

SECTION D. SITE CONDITIONS

1. Is any radiological contamination currently present at the AOCs addressed in this submission? ..... ☐ Yes ☐ No

2. At any time, did any of the AOCs addressed in this submission contain Ordnance and Explosives/ Unexploded Ordnance (OE/UXO)? ..... ☐ Yes ☐ No

3. Is free product present?..... ☐ Yes ☐ No



4. Has dioxin been detected at levels above NJDEP's interim direct contact soil screening level of 50 ppt dioxin TEQ (TCDD Toxicity Equivalence Quotient) in any AOCs addressed in this submission? ..... ☐ Yes ☐ No
5. Have any of the following contaminants *ever* been detected in sediment above the ecological screening levels at the AOCs addressed in this submission? ..... ☐ Yes ☐ No
- If "Yes," check all that apply:
- ☐ Arsenic ☐ Dioxin ☐ Mercury ☐ PCBs ☐ Pesticides
6. Did contaminants from the AOCs addressed in this submission discharge to surface water? ..... ☐ Yes ☐ No
7. Did contaminants from the AOCs addressed in this submission discharge to an Environmentally Sensitive Natural Resource (ESNR)? ..... ☐ Yes ☐ No
8. Are any of the following conditions currently present? (*check all that apply*)

**Ground water:**

- ☐ Contaminated ground water in the overburden aquifer
- ☐ Contaminated ground water in a confined aquifer
- ☐ Contaminated ground water in the bedrock aquifer
- ☐ Contaminated ground water in multiple aquifer units
- ☐ Multiple distinct ground water plumes
- ☐ Contaminated ground water migrating off-site
- ☐ Natural background ground water contamination
- ☐ Contaminated ground water discharging to surface water or Environmentally Sensitive Natural Resource (ESNR)
- ☐ Residual or free product
- ☐ Radionuclides

**Soil:**

- ☐ On-site discharge(s) impacting soil off-site
- ☐ Chromate Chemical Production Waste/COPR
- ☐ Munitions and explosives of concern
- ☐ Contaminated soil in the saturated zone
- ☐ Historic pesticide impacts to soil
- ☐ Residual or free product
- ☐ Radionuclides
- ☐ Historic Fill
- ☐ Natural background only above Impact to Ground Water Cleanup Criteria
- ☐ Natural background above Direct Contact Remediation Standards
- ☐ Soil contamination in an ESNR

**SECTION E. APPLICABLE REMEDIATION STANDARDS**

1. Were Default Remediation Standards used for all contaminants? ..... ☐ Yes ☐ No  
(If "Yes," check all that apply)
- ☐ Direct Contact
- ☐ Impact to Ground Water Soil Screening Levels
- ☐ Ecological Screening Levels
2. Has compliance averaging been utilized to determine compliance with the Soil Remediation Standards? ..... ☐ Yes ☐ No  
If "Yes," check all that apply:

**Compliance Averaging Method Utilized**

Pathway	Arithmetic Mean	95 Percent UCL	Spatially Weighted Average	75 Percent/10X Procedure
<input type="checkbox"/> Ingestion-Dermal Pathway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Inhalation Pathway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Impact to Ground Water Pathway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Has a compliance option been utilized to determine compliance with the Impact to Ground Water Pathway? (If "Yes," check all that apply) ..... ☐ Yes ☐ No
- ☐ Immobile Compounds
- ☐ Data evaluation for metals and semi-volatiles
- ☐ Data evaluation for volatile organics derived from discharges of petroleum mixtures
4. Was an interim standard used for a contaminant where a standard does not exist? ..... ☐ Yes ☐ No
5. Were Alternate Remediation Standards used for the Ingestion/Dermal Pathway? ..... ☐ Yes ☐ No
6. Were Alternate Remediation Standards used for the Inhalation Pathway? ..... ☐ Yes ☐ No



7. Were Site Specific Standards used for the Impact to Ground Water Pathway? ..... ☐ Yes ☐ No  
 If "Yes," check all that apply:  
☐ Soil-Water Partitioning Equation ☐ SPLP ☐ Sesoil ☐ Sesoil/AT123D  
☐ DAF Modification
8. Were Site Specific Ecological Remediation Goals used? ..... ☐ Yes ☐ No
9. What is the ground water classification for this site as per N.J.A.C. 7:9C? (check all that apply)  
☐ Class I-A ☐ Class II-A  
☐ Class I-PL Pinelands Protection Area ☐ Class III-A  
☐ Class I-PL Pinelands Preservation Area ☐ Class III-B

## SECTION F. BACKGROUND CONDITIONS

Did the RI demonstrate via a background investigation, outside the influence of on-site AOCs **and** operational areas, that:

1. All or any part of the ground water contamination is migrating onto this site per N.J.A.C. 7:26E-3.9? ..... ☐ Yes ☐ No ☐ NA
2. Soil contamination is naturally occurring per N.J.A.C. 7:26E-3.8 ..... ☐ Yes ☐ No ☐ NA

## SECTION G. HISTORIC FILL

1. Is Historic Fill present at the site? ..... ☐ Yes ☐ No  
 If "Yes":  
 a). What is the evidence that Historic Fill is present?  
  
  
  
  
 b). Are any other AOCs co-located within the Historic Fill? ..... ☐ Yes ☐ No  
 If "Yes," have the same contaminant types (e.g. lead arsenic, etc.) characterized as being present in the Historic Fill been sampled for as contaminants of concern at these co-located AOCs? ..... ☐ Yes ☐ No
2. Was the historic fill characterized pursuant to N.J.A.C. 7:26E-4.7 and the NJDEP Historic Fill Material Technical Guidance Document? ..... ☐ Yes ☐ No

## SECTION H. GROUND WATER TRIGGER

1. Was a ground water investigation conducted at all AOCs where a ground water investigation was triggered pursuant to N.J.A.C. 7:26E-3.5 and 4.3? ..... ☐ Yes ☐ No ☐ NA
2. Is contamination in soils fully delineated? ..... ☐ Yes ☐ No

## SECTION I. GROUND WATER REMEDIAL INVESTIGATION INFORMATION

1. Are contaminants present with a specific gravity less than that of water? ..... ☐ Yes ☐ No  
 a. If "Yes," were any monitor wells installed in unconfined aquifers in which the water table is higher than the top of the well screen? ..... ☐ Yes ☐ No  
 If "Yes" to 1a, identify the affected wells. \_\_\_\_\_
2. Are contaminants present with a specific gravity greater than that of water? ..... ☐ Yes ☐ No  
 a. If "Yes," were multiple depth discrete ground water samples collected in a vertical profile at each ground water sampling location where dense contaminants were suspected? ..... ☐ Yes ☐ No
3. Is ground water in the bedrock aquifer contaminated? ..... ☐ Yes ☐ No  
 If "Yes," answer questions 3a and 3b.  
 a. Were bedrock cores collected? ..... ☐ Yes ☐ No  
 b. Were geophysical logging methods conducted to characterize the bedrock aquifer in accordance with the NJDEP Ground Water Technical Guidance (3.4.2.2)? ..... ☐ Yes ☐ No
4. Is contamination in ground water fully delineated? ..... ☐ Yes ☐ No



## SECTION J. ECOLOGICAL RECEPTORS

1. Have soil, sediment, and/or surface water data been collected from Environmentally Sensitive Natural Resources (ESNR)? ..... ☐ Yes ☐ No ☐ NA
  - a. If "Yes," do contaminant concentrations at the ESNR exceed ecological screening criteria or the aquatic chronic NJSWQS [N.J.A.C.7:9B]? ..... ☐ Yes ☐ No
  - b. If "Yes," have soil and sediment data been collected from both surface and subsurface intervals in the ESNR? ..... ☐ Yes ☐ No
  - c. If "No" for 1b, provide explanation \_\_\_\_\_
2. Have contaminant migration pathways from the site/AOC to the ESNR been identified? ..... ☐ Yes ☐ No
3. Do the results of the Ecological Evaluation require a remedial investigation of ecological receptors? ..... ☐ Yes ☐ No  
If "No," provide explanation \_\_\_\_\_
4. Has an Ecological Risk Assessment been conducted [N.J.A.C.7:26E-4.8]? ..... ☐ Yes ☐ No
5. Is remediation required in an ESNR? ..... ☐ Yes ☐ No

## SECTION K. MISCELLANEOUS

1. Were any regulated USTs identified during the course of the RI that were not previously known? ..... ☐ Yes ☐ No  
If "Yes," list tank size, contents and registration number(s): \_\_\_\_\_
  - a. If "Yes," and if these USTs were Federally Regulated, was the source/cause of release identified on a Confirmed Discharge Notification form? ..... ☐ Yes ☐ No  
If "No," to 1.a., complete and submit a revised Confirmed Discharge Notification form.
2. Were additional Areas of Concern identified during the RI? ..... ☐ Yes ☐ No  
If "Yes," identify AOC(s): \_\_\_\_\_
3. Identify Remedial Measures (RMs) conducted during the RI (check all that apply):

<input type="checkbox"/> Soil excavation	<input type="checkbox"/> UST closure
<input type="checkbox"/> Potable water supply treatment or replacement	<input type="checkbox"/> Free product recovery
<input type="checkbox"/> Hydraulic containment of source area	<input type="checkbox"/> Vapor intrusion mitigation
<input type="checkbox"/> Soil vapor extraction	<input type="checkbox"/> No RMs were conducted during the RI
<input type="checkbox"/> Enhanced fluid recovery (EFR)	
<input type="checkbox"/> Other(s), specify: _____	
4. Has new information (material facts, data or other information) been generated during the RI that corrects or contradicts information, or changes conclusions from, previously submitted reports or information? ..... ☐ Yes ☐ No  
If "Yes," explain: \_\_\_\_\_



## SECTION L. LABORATORY DATA

1. Were all data submitted in the appropriate full and/or reduced formats according to the deliverables defined in N.J.A.C. 7:26E-2? ..... ☐ Yes ☐ No
2. Do all data submitted meet the quality assurance/quality control (QA/QC) requirements incorporated by reference in N.J.A.C. 7:26E-2 for:
  - sampling ..... ☐ Yes ☐ No
  - analysis ..... ☐ Yes ☐ No
3. How was it determined that the data complied with the QA/QC requirements?
  - ☐ Laboratory non-conformance summary/narrative
  - ☐ Laboratory correspondence
  - ☐ LSRP review
  - ☐ Independent contractor review
  - ☐ Other: \_\_\_\_\_
4. Has any data been qualified and used? ..... ☐ Yes ☐ No
5. Has any data been rejected and used? ..... ☐ Yes ☐ No
6. Provide the page number for the "Reliability of Data" section of the report: \_\_\_\_\_





New Jersey Department of Environmental Protection  
Site Remediation Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp  
(For Department use only)

SECTION A. SITE

Site Name: \_\_\_\_\_

Program Interest (PI) Number(s): \_\_\_\_\_

Case Tracking Number(s) for this submission: \_\_\_\_\_

**This form must be attached to the Cover/Certification Form  
if not submitted through the RIR Online Service**

Indicate the type of submission:

☐ Initial RE Submission

☐ Updated RE Submission

Indicate the reason for submission of an updated RE form

☐ Submission of an Immediate Environmental Concern (IEC) source control report;

☐ Submission of a Remedial Investigation Report;

☐ Submission of a Remedial Action Report;

Check if included in updated RE

☐ The known concentration or extent of contamination in any medium has increased;

☐ A new AOC has been identified;

☐ A new receptor is identified;

☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site boundary (check all that apply):

	On-site	Off-site
None of the following .....	<input type="checkbox"/>	<input type="checkbox"/>
Residences or residential property .....	<input type="checkbox"/>	<input type="checkbox"/>
Public or Private Schools grades K-12 .....	<input type="checkbox"/>	<input type="checkbox"/>
Child care centers .....	<input type="checkbox"/>	<input type="checkbox"/>
Public parks, playgrounds or other recreation areas .....	<input type="checkbox"/>	<input type="checkbox"/>
Other sensitive population use(s) Explain .....	<input type="checkbox"/>	<input type="checkbox"/>

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site.

2. Current site uses (check all that apply):

<input type="checkbox"/> Industrial	<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Agricultural
<input type="checkbox"/> School or child care	<input type="checkbox"/> Government	<input type="checkbox"/> Park or recreational use	
<input type="checkbox"/> Vacant	<input type="checkbox"/> Other: _____		

3. Planned future site uses and off-site use within 200 ft of site boundary (check all that apply):

<input type="checkbox"/> Industrial	<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Agricultural
<input type="checkbox"/> School or child care	<input type="checkbox"/> Government	<input type="checkbox"/> Park or recreational use	
<input type="checkbox"/> Vacant	<input type="checkbox"/> Other: _____		

Provide a map depicting the location of the proposed changes in land use.



## SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site (check all that apply):

- ☐ Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL\* or ☐ DNAPL\*\*. Date identified: \_\_\_\_\_
- ☐ Residual product [N.J.A.C. 7:26E-1.8]
- ☐ Other high concentration source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos)

Explain: \_\_\_\_\_

\* LNAPL – measured thickness of .01 feet or more

\*\*DNAPL – See [US EPA DNAPL Overview](#)

2. Soil Migration Pathway

Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard? ..... ☐ Yes ☐ No

Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ..... ☐ Yes ☐ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

## SECTION D. GROUND WATER USE

1. Has the requirement for ground water sampling been triggered? ..... ☐ Yes ☐ No ☐ Unknown  
If "No," proceed to Section F. If "Unknown," explain: \_\_\_\_\_

2. Is Ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ..... ☐ Yes ☐ No ☐ Unknown

Or ☐ Awaiting laboratory data with the expected due date: \_\_\_\_\_

If "Yes," provide the date that the laboratory data was available and confirmed contamination above the Ground Water Remediation Standards. Date: \_\_\_\_\_

If "Unknown," explain: \_\_\_\_\_

If "No," or awaiting laboratory data proceed to Section F.

3. Has ground water contamination been delineated to the applicable Remediation Standard? ..... ☐ Yes ☐ No

4. Has a well search been completed? ..... ☐ Yes ☐ No

Date of most recent or updated well search: \_\_\_\_\_

Identify if any of the following conditions exist based on the well search [N.J.A.C.7:26E-1.14(a)] (check all that apply):

- ☐ Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
- ☐ Potable well located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
- ☐ Ground water contamination is located within a Tier 1 wellhead protection area (WHPA).

5. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to [srpgis\\_wrs@dep.state.nj.us](mailto:srpgis_wrs@dep.state.nj.us). ..... ☐ Yes ☐ No

If "No," explain: \_\_\_\_\_

6. Are any private potable or irrigation wells located within ½ mile of the currently known extent of contamination? ..... ☐ Yes ☐ No

If "Yes," was a door to door survey completed? ..... ☐ Yes ☐ No

If survey was not completed explain: \_\_\_\_\_

7. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)? ..... ☐ Yes ☐ No

If "No," provide justification then proceed to Section E.



- 8 Has contamination been identified in potable well(s) above Ground Water Remediation Standards that is not suspected to be from the site? (If "Yes," provide justification) ..... ☐ Yes ☐ No
- 
- 9 Has contamination been identified in potable well(s) that is above the Ground Water Remediation Standards or Federal Drinking Water Standards? ..... ☐ Yes ☐ No
- Provide date laboratory data was received: \_\_\_\_\_
- Or ☐ awaiting laboratory data with the expected due date: \_\_\_\_\_
- If "Yes" for potable well contamination **not attributable to background**, follow the IEC Guidance Document at <http://www.nj.gov/dep/srp/guidance/index.html#iec> for required actions and answer the following:
- Has an engineered system response action been completed on all receptors? ..... ☐ Yes ☐ No
- Provide a brief narrative description:
- Date completed: \_\_\_\_\_ NJDEP Case Manager: \_\_\_\_\_
10. Were Non-potable use well(s) sampled and results were above Class II Ground Water Remediation Standards? ..... ☐ Yes ☐ No
- Provide date laboratory data was received: \_\_\_\_\_
- Or ☐ awaiting laboratory data with the expected due date: \_\_\_\_\_
11. Has the ground water use evaluation been completed? ..... ☐ Yes ☐ No

#### SECTION E. VAPOR INTRUSION (VI)

1. Contaminants present in ground water exceed the Vapor Intrusion Ground Water Screening Levels that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance). ... ☐ Yes ☐ No ☐ Unknown
- Or ☐ Awaiting laboratory data and the expected due date: \_\_\_\_\_
- Provide the date that the laboratory data was available and confirmed contamination above the Vapor Intrusion Trigger Levels. Date: \_\_\_\_\_
2. Other existing conditions that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance)
- ☐ Wet basement or sump containing free product or ground water containing volatile organics
  - ☐ Methane generating conditions causing oxygen deficient or explosion concern
  - ☐ Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated contamination, elevated soil gas or indoor vapor (explain):
- If you answered "No," or awaiting laboratory data to Question 1., and did not check any boxes in Question 2, proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.
3. Has ground water contamination been delineated to the applicable Ground Water Vapor Screening Level? ..... ☐ Yes ☐ No
4. Was a site specific screening level, modeling or other alternative approach employed for the VI pathway? ..... ☐ Yes ☐ No
5. Identify and locate on a scaled map any buildings/sensitive populations that exist within the following distances from ground water contamination with concentrations above the Vapor Intrusion Ground Water Screening Levels or specific threats (check all that apply):
- ☐ 30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
  - ☐ 100 feet of any non-petroleum free product or any non-petroleum dissolved volatile organic ground water contamination
  - ☐ No buildings exist within the specified distances
6. The vapor intrusion pathway is a concern at or adjacent to the site (if "No," attach justification) ..... ☐ Yes ☐ No



7. Has soil gas sampling of the building(s) been conducted? ..... ☐ Yes ☐ No ☐ N/A  
If "No," or "N/A," proceed to #10
8. Has indoor air sampling been conducted at the identified building(s)? ..... ☐ Yes ☐ No  
If "No," proceed to #10
9. Has indoor air contamination been identified but not suspected to be from the site?  
(if "Yes," attach justification) ..... ☐ Yes ☐ No
10. Indoor air results were above the NJDEP's Rapid Action Levels. .... ☐ Yes ☐ No  
Provide the date that the laboratory data was available and confirmed contamination above the  
Rapid Action Levels. Date: \_\_\_\_\_  
Or ☐ Awaiting laboratory data with the expected due date: \_\_\_\_\_  
**If "Yes" to #10 above, follow the IEC Guidance Document at**  
<http://www.nj.gov/dep/srp/guidance/index.html#iec> **for required actions.**  
The IEC engineering system response for control was implemented for all  
identified structures ..... ☐ Yes ☐ No  
Date: \_\_\_\_\_ NJDEP Case Manager: \_\_\_\_\_
11. Indoor air sampling was conducted and results were above the NJDEP's Indoor Air Screening  
Levels but at or below the Rapid Action Levels ..... ☐ Yes ☐ No  
Provide the date that the laboratory data was available. Date: \_\_\_\_\_  
Or ☐ Awaiting laboratory data with the expected due date: \_\_\_\_\_  
**If "Yes" to #11 above, answer the following:**  
Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances  
been submitted? ..... ☐ Yes ☐ No  
Date: \_\_\_\_\_  
Has a plan to mitigate and monitor the exposure been submitted? ..... ☐ Yes ☐ No  
Date: \_\_\_\_\_  
Has the Mitigation Response Action Report been submitted? ..... ☐ Yes ☐ No  
Date: \_\_\_\_\_
12. Has the vapor intrusion investigation been completed? ..... ☐ Yes ☐ No  
If "No," is the vapor intrusion investigation stepping out as part of the site  
investigation or remedial investigation. (If "No," attach justification) ..... ☐ Yes ☐ No

#### SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) has been conducted? [N.J.A.C. 7:26E-1.16] ..... ☐ Yes ☐ No  
Date conducted: \_\_\_\_\_
2. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ..... ☐ Yes ☐ No
3. Has a remedial investigation of ecological receptors been conducted? ..... ☐ Yes ☐ No  
Date conducted: \_\_\_\_\_
4. Provide the following information for any surface water body on or within 200 feet of the site:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>



5. Does the site contain any features regulated by the Land Use Regulation Program (LURP)?  
(e.g. wetlands, flood hazard area, tidelands, etc.). ..... ☐ Yes ☐ No  
If "Yes," identify the type(s) of features: \_\_\_\_\_

6. Have any formal LURP jurisdiction letters or approvals been issued for the site? ..... ☐ Yes ☐ No  
If "Yes," what is the LURP Program Interest (PI) number(s) for the site? \_\_\_\_\_

7. Have any applications for formal LURP jurisdiction letters or approvals been submitted the NJDEP? ..... ☐ Yes ☐ No  
If "Yes," what is the LURP Program Interest (PI) number(s) for the site? \_\_\_\_\_

8. Is free product or residual product located within 100 feet from an ecological receptor? ..... ☐ Yes ☐ No

9. Available data indicate an impact on: ☐ Ecological receptor(s) ☐ Surface water ☐ Sediment

If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section G. Otherwise attach a description of the type of contamination and provide a schedule and a description of all actions to be taken to mitigate exposure.

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice  
Site Remediation Program  
NJ Department of Environmental Protection  
401-05H  
PO Box 420  
Trenton, NJ 08625-0420

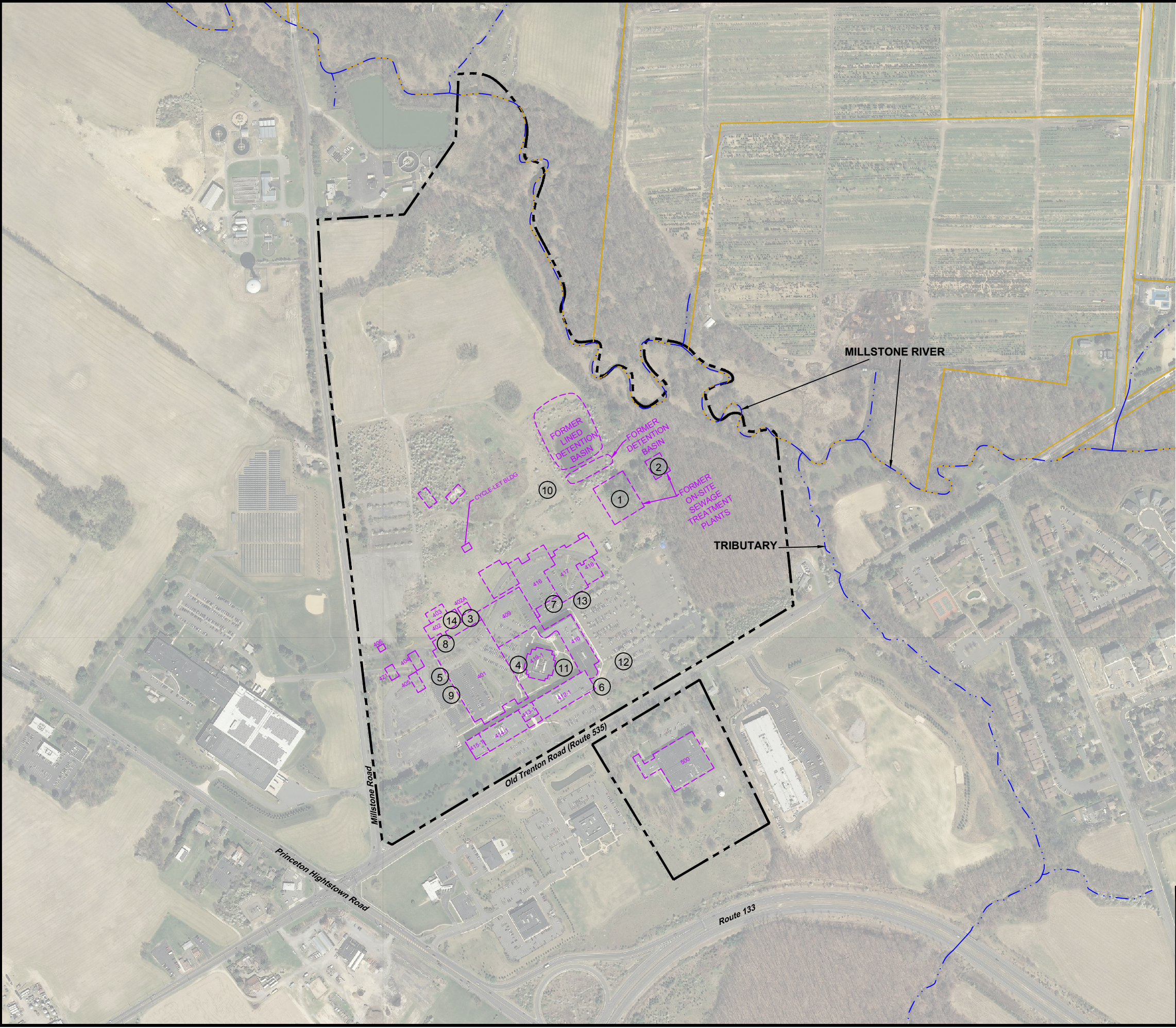


	A	B	D	E	F	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Case Name:		Former Lockheed Martin Facility																	
2	PI #:		158269																	
3	IMPORTANT: Do not copy and paste into more than 1 cell at a time because it can disrupt hidden equations																			
4	Case Inventory Document Version 1.3 06/25/14																			
	AOC ID	AOC Type	AOC Details	Confirmed Contamination	AOC Status	Status Date	Incident #	DEP AOC Number	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
5																				
6	1	Discharge and disposal area - Waste water treatment systems/septic/seepage pit/dry well	AOC 1 was a former on-site sewage treatment plant which received all facility sewage from 1957 to 1962. When the treatment plant was closed in 1962 the filter beds were cleaned and Imhoff tank was pumped out and filled with soil.	No	NFA-A DEP Issued (Unrestricted Use)	11/24/1992		1	None	BN + Metals	VO	Other	Remediation Standards	Ground Water		No Remedial Action			No	Soil samples were collected from borings in the vicinity of the former treatment plant in 1987 and analyzed for PP metals, cyanide, VOCs and BNs. Concentrations of all parameters were below soil cleanup criteria in effect at that time. In a letter from dated 11/24/1992 the NJDEP stated no remediation was required. An ISRA tracking sheet dated 2/3/1995 indicated that previous soil results were compared to the revised soil standards and cadmium was the only parameter detected above the new remediation standards. The tracking sheet states cadmium is not necessary to remediate. Based on the work completed, no further investigation of AOC 1 is warranted.
7	2	Discharge and disposal area - Waste water treatment systems/septic/seepage pit/dry well	Former activated sludge aeration system which replaced the former filter bed system. The system was active at the facility from 1962 through 1965.	No	NFA-A DEP Issued (Unrestricted Use)	11/24/1992		2	None	Metals	Other		Remediation Standards	Ground Water		No Remedial Action			No	Soil samples were collected from borings in the vicinity of the system in 1987 for PP metals and cyanide and results were below applicable soil remediation standards. NFA was granted on 11/24/1992. Soil results were compared to revised soil standards in 1995 and it was determined that the NFA was still acceptable. Based on the work completed, no further investigation of AOC 2 is warranted.
8	3	Other areas of concern - Hazardous substance storage or handling area	Former chemical storage area used to store solvents and chemicals used on-site and hazardous wastes generated on-site.	Yes	NFA-A DEP Issued (Unrestricted Use)	11/24/1992		3	Soil	TPHC	BN + Metals	VO	Remediation Standards	Ground Water		No Remedial Action			No	One soil sample was collected from AOC 3 in 1987 for PP metals, cyanide, TPH and VOCs were below applicable soil remediation standards except for TPH. Due to elevated TPH concentrations, additional soil samples were collected in 1988 and analyzed for BNs. Concentrations of BNs were below applicable soil standards. NFA was granted on 11/24/1992. Soil results were compared to revised soil standards in 1995 and it was determined that the NFA was still acceptable. Based on the work completed, no further investigation of AOC 3 is warranted.
9	4	Storage tank and appurtenance - Piping, above/below ground pump station, sump/pit	Underground neutralization pit formerly located on-site. The concrete pit was excavated in July 1993.	No	NFA-A DEP Issued (Unrestricted Use)	11/24/1992		4	None	VO+ Metals			Remediation Standards	Ground Water		No Remedial Action			No	Prior to excavation of the pit, soil samples were collected for VOCs and metals and results were below applicable soil standards. A bottom sample was collected post-excavation and was analyzed for metals. The bottom sample was below applicable soil standards. Based on the work completed, no further investigation of AOC 4 is warranted.
10	5	Storage tank and appurtenance - Federal Regulated Under ground storage tank	Former 2,000-gallon gasoline UST	yes	NFA-A DEP Issued (Limited Restricted Use)	11/24/1992		5	Soil	VO			Remediation Standards	Ground Water		Excavation			No	The former 2,000-gallon UST was removed from the Site in 1988 and post-excavation soil samples were analyzed for TPH and VOCs. Concentrations of VOCs were detected above soil remediation standards and a second excavation was conducted to 17-feet bgs. All but one post-excavation sample were below soil remediation standards and compliance averaging was used to meet criteria. Monitoring well MW-1 was installed and groundwater samples collected demonstrated that groundwater was not impacted by gasoline constituents but due to elevated concentrations of TCE, a Site-wide groundwater investigation was initiated. NFA was granted in a letter dated 11/24/1992 when NJDEP indicated this AOC was closed with respect to soil. Based on the work completed, no further investigation of AOC 5 is warranted.
11	6	Other areas of concern - Discolored area or spill area	Temporary generator used during building construction formerly located adjacent to Building 410. Prior to the generator's removal, an oil leak occurred stressing vegation. Stained soils were excavated.	Yes	NFA-A DEP Issued (Unrestricted Use)	11/24/1992		6	Soil	TPHC			Remediation Standards	Ground Water		Excavation			No	Visually stained soils were excavated in 1990 and seven post-excavation soil samples were collected for TPH and BNs. Based on elevated concentrations of TPH the NJDEP required further excavation of the area, which was conducted. NFA was granted in a letter from NJDEP dated 11/24/1992. Soil results were compared to revised soil standards in 1995 and it was determined that the NFA was still acceptable. Based on the work completed, no further investigation of AOC 6 is warranted.
12	7	Other areas of concern - Discolored area or spill area	Diesel fuel spill adjacent to Building 412. Visually stained soils were excavated.	Yes	NFA-A DEP Issued (Unrestricted Use)	2/3/1995		7	Soil	TPHC			Remediation Standards	Ground Water		Excavation			No	A diesel fuel spill occurred in a fenced-in area adjacent to Building 412 in 1990. Excavation of the visually stained soils was conducted and six post-excavation soil samples were collected for TPH and BNs. Based on elevated concentrations of TPH in the soil samples, the NJDEP required further excavation which was conducted. NFA was granted and in 1995 soil results were compared to revised soil remediation standards. TICs were above the revised standards but NJDEP required no further investigatoin due to minimal impacts. Based on the work completed, no further investigation of AOC 7 is warranted.
13	8	Other areas of concern - Compressor vent discharge	Oil-contaminated soil resulting from compressor blowdown adjacent to Building 402.	Yes	NFA-A DEP Issued (Unrestricted Use)	1/28/1993		8	Soil	TPHC			Remediation Standards	Ground Water		Excavation			No	Stained soils were excavated in 1991 and post-excavation soil samples were analyzed for TPH and PCBs. Based on elevated concentrations of TPH in the soil samples, the NJDEP required further excavation of the area which was conducted. Two more soil samples were collected for TPH following the second excavation and results were below applicable soil standards. NJDEP granted NFA for AOC 8 in a letter dated 1/28/1993. Based on the work completed, no further investigation of AOC 8 is warranted.
14	9	Storage tank and appurtenance - Federal Regulated Under ground storage tank	Stained soils observed around vent pipes and fill ports of two 10,000-gallon #4 fuel oil USTs formerly located adjacent to Building 401.	Yes	NFA-A DEP Issued (Unrestricted Use)	1/28/1993		9	Soil	TPHC			Remediation Standards	Ground Water		Excavation			no	Stained soils were excavated in 1991 and six post-excavation soil samples were collected. The USTs were retrofitted with new overspill protection. Based on elevated concentrations of TPH in the soil samples, the NJDEP required further excavation which was done. Four more soil samples were collected after teh second excavation for TPH and results were below soil standards. NFA was granted in a letter from the NJDEP dated 1/28/1993. Based on the work completed, no further investigation of AOC 9 is warranted.
15	10	Discharge and disposal area - Waste pile as defined by N.J.A.C. 7:26	A waste disposal area for construction debris, waste liquids from facility operations and cafeteria waste. This area received incinerator ash, light bulbs, metal scraps, waste circuit board cleaners and solvents during the 1960s and 1970s.	No	NFA-A DEP Issued (Unrestricted Use)	8/28/1994		10	None	VO+ Metals	BN	TPHC	Remediation Standards	Ground Water		No Remedial Action			No	Test pits and soil borings were advanced in the area and fill material was identified in six of the eight test pits. Soil samples were collected and analyzed for VOCs, BNs, PP metals and TPH. Antimony was the only parameter detected above soil remediation standards and was attributed to laboratory interference. NFA was granted in a letter from the NJDEP dated 8/28/1994. Based on the work completed, no further investigation of AOC 10 is warranted.
16	11	Other areas of concern - Discolored area or spill area	25-gallon spill of non-PCB transformer oil occurring in February 1995.	Yes	RI	1/1/1999	95-2-23-1551-15	11	Soil	PAHs	TPHC		Remediation Standards	Ground Water		Excavation			No	Material spilled was a hydro-treated light naphthenic petroleum distillate used in the transformer, which was situated on a concrete pad. At the time of the spill, contamination was not believed to have impacted the subsurface beneath the transformer pad. In June 1995, widening of the area around the transformer pad was conducted and 2-feet of stone and soil were removed to accommodate a new transformer. During the widening, contamination was detected in the soil along the south side of the pad. The soils were removed and post-excavation soil sampling was conducted. Samples were analyzed for TPH and PAHs. All results were below the direct contact soil cleanup criteria in effect at the time. Based on the work completed, no further investigation of AOC 11 is warranted.
17	12	Other areas of concern - Discolored area or spill area	Spill of 1 to 2-gallons of gasoline from a parked automobile in May 1995.	No	RI	11/1/1999	95-5-19-0844-50	12	None	VO+ Metals			Remediation Standards	Ground Water		Excavation			No	The leak occurred from a fuel line of a parked van located in the parking area along Edinburgh Road near the facility's main entrance. Following the spill, suspected-impacted was removed from adjacent to the parking area and post-excavation soil samples were collected. Samples were analyzed for VOCs and lead and results were below applicable soil remediation standards. Based on the work completed, no further investigation of AOC 12 is warranted.
18	13	Other areas of concern - Discolored area or spill area	Spill of approximately 0.5-gallons of hydraulic oil from a broken line in a forklift occurring in July 1996.	Yes	RI	11/1/1999	96-7-24-1417-55	13	Soil	PAHs	TPHC		Remediation Standards	Ground Water		Excavation			No	Hydraulic oil was released onto the Building 417 parking area and a sand and gravel area. The visually-impacted soils were removed and post-excavation soil samples were collected for TPH and PAHs. The results indicated an exceedance of the NJDEP unrestricted and restricted direct contact soil quality criteria for benzo(a)pyrene and benzo(b)fluoranthene. H2M concluded that based on the limited nature of the release and the concentration at which the two compounds exceeded soil standards, the spill was not a substantial risk and NFA was requested in the 1999 RIR. Based on the work completed, no further investigation of AOC 13 is warranted.
19	14	Other areas of concern - Discolored area or spill area	Vacuum pump released oil in June 1996.	Yes	NFA-A DEP Issued (Unrestricted Use)	11/1/1999	96-6-20-0207-33	14	Surface Water	PAHs	TPHC		Remediation Standards	Surface Water		Containment			No	The vacuum oil discharge occurred on June 19, 1996 when a faulty valve, which had been left in the open position, caused oil to flow from the vacuum pump to a floor drain leading to the storm sewer system and the on-site detention basin and ultimately the Millstone River. The total quantity of discharged oil was estimated to be 4-gallons. Absorbent pads were laid on the floor around the pump and floor drain preventing any additional oil from reaching the storm sewer system. LMO personnel inspected the detention basin and a slight sheen was observed on the water surface. Facility personnel placed a boom in the detention basin to collect oil and floor drains were plugged and capped in the environmental testing area to prevent future spills from reaching the Millstone River. Based on the work completed, no further investigation of AOC 14 is warranted.






	A	B	D	E	F	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Case Name: Former Lockheed Martin Facility																			
2	PI #: 158269																			
3	IMPORTANT: Do not copy and paste into more than 1 cell at a time because it can disrupt hidden equations																			
4	Case Inventory Document Version 1.3 06/25/14																			
5	AOC ID	AOC Type	AOC Details	Confirmed Contamination	AOC Status	Status Date	Incident #	DEP AOC Number	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
20	15	Environmental media - Media Soil, including soil vapor pore spaces	Soil beneath Buildings 402/402a and 403.	No	No Sampling Trigger	11/1/1999		15	None	VO			Remediation Standards	Ground Water		No Remedial Action			No	Based on the results of a soil gas survey, a soil sampling plan was developed to investigate soils in the vicinity of the highest soil gas concentrations (beneath Buildings 402 and 403). Sampling was performed in October 1998. Fourteen locations were sampled throughout Buildings 402 and 403 and the surrounding vicinity. Samples were analyzed for VOCs and Freon. TCE and Freon 11 were detected in the soil samples but at concentrations below applicable soil cleanup criteria. Based on the work completed, no further investigation is warranted for the soils beneath Buildings 402 and 403.
21	16	Environmental media - Media Ground water	VOC-impacted groundwater.	Yes	RI	8/4/2015		GW1	Ground Water	VO			Remediation Standards	Ground Water		Pump & Treat			No	In 1989, monitoring well MW-1 was installed and sampled to assess if groundwater was affected by a former 2,000-gallon UST containing gasoline (AOC 5). Compounds indicative of gasoline were present in the first three rounds of sampling conducted in 1989 but results were below GWQS. Concentrations of TCE and Freon were detected in the groundwater above GWQS and a Site-wide groundwater investigation ws initiated. Groundwater RI of the shallow and intermediate flow zones has been conducted since 1989 and a RI of the deep zone was initiated in 2014. Horizontal and vertical delineation of impacts in all three zones has been achieved and an appropriate Remedial Action will be selected.
22	17	Environmental media - Media Soil, including soil vapor pore spaces	1990 soil gas survey indicating elevated detections of TCE, Freon 11 and Freon 113 at approximately 5-feet bgs.	Yes	RI				Ground Water	VO			Remediation Standards	Ground Water		No Remedial Action			No	Soil gas sampling locations corresponded to areas where solvents or other chemicals that contained VOCs were stored, used or potentially released to the subsurface soil. These areas included Building 403, 402, the north and central areas of Building 401, Building 421, the former drum storage shed in the courtyard south of Building 402, Buildings 404 and 405, the drum storage shed located at the courtyard east of the buildings, the hazardous waste storage area, the former neutralization pit near MW-5, the cycle-let building, the former wastewater treatment systems/leach field, Building 500 and the former drum storage area east of Buildings 416 and 417. In addition to these specifically targeted areas, the soil gas survey also included a 500-foot grid across the Site. A total of 128 soil gas samples were collected and analyzed for VOCs, Freon 11 and Freon 113. Of the 128 samples, three primary VOCs (TCE, Freon 11 and Freon 113) were detected at elevated concentrations in Buildings 402, 402A and 403 and the immediately surrounding vicinity at the 5-foot depth. The maximum concentration of Freon 11 was 929,119 ug/l collected from the 5-foot sample at location SV-33 in the northeast portion of Building 402. The highest concentration of Freon 113 was 759.26 ug/l. The Freon 113 impacts appeared to be localized in the Building 402/403 area and the area east of these buildings. Freon 12 was detected in sample SV-33 at Building 402. TCE was detected above 100 ug/l in three samples within Buildings 402 and 403. The highest TCE concentration was 792.55 ug/l. The survey demonstrated that TCE and Freon were present at higher concentrations in soil gas collected in the vicinity of the former chemical storage area (AOC 3) and the area of Buildings 402/403 than at any other Site location. AOC 3 was presumed to be a potential source area for VOCs in groundwater. No further investigation of soil gas was conducted.







Legend

- 
- 

SITE BOUNDARY
- 

AREA OF CONCERN (AOC)
- 

FORMER BUILDING LOCATION (APPROX)
- 

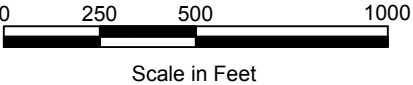
MILLSTONE RIVER AND TRIBUTARY


SOURCES: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET

FORMER BUILDING LOCATIONS TAKEN FROM TETRA TECH'S SOIL GAS SURVEY REPORT, FIGURE 2-2 SITE OVERFLOW, DATED 1999.

Areas of Concern

AOC 1	former on-site sewage treatment plant (1957-1962)
AOC 2	former activated sludge aeration system (1962-1965)
AOC 3	former chemical storage area
AOC 4	former underground neutralization pit
AOC 5	former 2,000-gallon UST
AOC 6	transformer oil spill
AOC 7	diesel fuel spill
AOC 8	stained soils behind compressor room
AOC 9	stained soils around vent pipes and fill ports
AOC 10	former waste disposal area
AOC 11	transformer oil spill
AOC 12	gasoline spill
AOC 13	hydraulic oil spill
AOC 14	vacuum oil spill
AOC 15	soil beneath Bldgs 402 and 403
AOC 16	VOC-impacted groundwater
AOC 17	soil gas





ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

HISTORICAL  
AREA OF CONCERN MAP

PROJECT NO.  
60328624.05.02

DRAWN BY:  
JK

DATE:  
09/29/2015

FIGURE 1





New Jersey Department of Environmental Protection  
Site Remediation Program

CLASSIFICATION EXCEPTION AREA / WELL RESTRICTION  
AREA (CEA/WRA) FACT SHEET FORM

Date Stamp  
(For Department use only)

SECTION A. SITE INFORMATION

Site Name: \_\_\_\_\_

Program Interest (PI) Number(s): \_\_\_\_\_

Case Tracking Number(s) for this submission: \_\_\_\_\_

**This form must be attached to the Cover / Certification Form  
if not submitted through the RIR Online Service**

1. Indicate the reason for submission of this form (*see instructions*):

- ☐ New CEA      ☐ Revise CEA      ☐ Reestablish CEA      ☐ Existing CEA with no changes  
☐ CEA for historic fill      ☐ CEA lift/removal

If you are submitting this form for an existing CEA provide the CEA Subject Item ID: \_\_\_\_\_

2. Indicate the type of ground water Remedial Action (RA):

- ☐ Natural      ☐ Active      ☐ Final RA not yet selected

3. Is this form being submitted with a Remedial Action Permit (RAP) Form (for Soil or Ground Water)? ... ☐ Yes    ☐ No

SECTION B. CEA COMPONENT INFORMATION

1. **Contaminant(s):** This CEA/WRA applies only to contaminants above applicable numeric values established by the [Ground Water Quality Standards](#) (GWQS), N.J.A.C. 7:9C, listed in the table below. Except for historic fill CEAs based on assumed ground water contamination, list the maximum contaminant value for all ground water data that could be representative of current conditions and is for any well or sampling point used to establish the CEA. The values listed below may or may not be appropriate for use in evaluating plume fate and transport. See form instructions.

Contaminant	Concentration <sup>(1)</sup>	GWQS <sup>(2)</sup>	SWQS <sup>(3)</sup>	GWSL <sup>(4)</sup>

Notes: <sup>(1)</sup> Maximum concentration in Micrograms Per Liter

<sup>(2)</sup> New Jersey Ground Water Quality Standards, N.J.A.C. 7:9C

<sup>(3)</sup> [Surface Water Quality Standards](#), N.J.A.C. 7:9B - Applicable only where contaminants in the CEA may discharge to a surface water body.

<sup>(4)</sup> Current NJDEP Vapor Intrusion Ground Water Screening Levels available at <http://www.nj.gov/dep/srp/guidance/vaporintrusion/>

☐ Check if attaching an Addendum to list additional contaminants and associated information.

2. **CEA Boundaries:** Year of tax map used: \_\_\_\_\_

For CEA revisions: ☐ check if CEA Boundary has changed (*See instructions*)

☐ check if Block and Lot numbers have changed (*See instructions*)



**List the Block(s) and Lot(s) included in the areal extent of the Classification Exception Area:**

Block(s)	Lot(s)	Check if off-site	Block(s)	Lot(s)	Check if off-site
		<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>

☐ Check if attaching an Addendum to list additional Blocks/Lots and associated information.

Narrative description of proposed CEA:

Name(s) of the affected Geologic Formation(s)/Unit(s): \_\_\_\_\_

Direction of ground water flow: \_\_\_\_\_ (If multiple water bearing zones exist within the CEA and/or there is no predominant flow direction, see instructions.)

Ground Water Classification: \_\_\_\_\_ (See instructions and GWQS for classification area information.)

Vertical Depth of CEA: \_\_\_\_\_ (ft bgs) and \_\_\_\_\_ (msl).

Horizontal Extent of CEA: \_\_\_\_\_ Indicate units: ☐ acres or ☐ square feet

**3. Projected Term of CEA:** (Based on modeling/calculations in the fate and transport description)

Proposed Duration in Years: \_\_\_\_\_ Anticipated Expiration Date: \_\_\_\_\_

or ☐ Indeterminate (Review instructions before selecting "Indeterminate.")

**4. ATTACH AND/OR SUBMIT THE FOLLOWING:** (see instructions for additional information)

**Exhibit A: Site Location Maps** – USGS Quadrangle Map;

**Exhibit B: CEA Map and Cross Section Figure** – See N.J.A.C 7:26C- 7.3(c)1 and 2 and instructions regarding what to include on the map and the cross-section figure.

**Exhibit C: GIS Deliverables** – CEA Boundary Extent Map. The CEA Boundary Extent Map shall be submitted via email to [srpgis\\_cea@dep.nj.gov](mailto:srpgis_cea@dep.nj.gov). See the instructions for detailed GIS deliverable requirements.

For revisions, does the attached map differ from the CEA map on [NJ-GeoWeb](http://NJ-GeoWeb)? ☐ Yes ☐ No ☐ N/A

If "Yes or N/A," identify the format of the CEA Boundary Extent Map: ..... ☐ Shape File ☐ CAD File

**SECTION C. CURRENT GROUND WATER USE DOCUMENTATION**

1. Indicate the year of the most recent well search completed per N.J.A.C. 7:26E-1.14: \_\_\_\_\_
2. If this Fact Sheet form is for a revised CEA or an existing CEA with no changes, have new wells been installed since the CEA was established? ..... ☐ Yes ☐ No ☐ N/A
3. Are there any pumping wells (e.g., potable, industrial, irrigation or recovery wells) within the foot print of the CEA? ..... ☐ Yes ☐ No



## SECTION D. WELL RESTRICTION INFORMATION

Certain well restrictions relevant to potable ground water use, such as "Double Case Wells", "Sample Potable Wells", and "Evaluate Production Wells", are consistently set within the boundaries of all CEAs established by the NJDEP in Class I and II-A areas (*see instructions*).

1. Are there any other site-specific well restrictions relevant to potable ground water use that should be set within or near the boundaries of the proposed CEA? ..... ☐ Yes ☐ No

If "Yes", describe below any such site-specific well restrictions proposed for this CEA:

## SECTION E. PUBLIC NOTIFICATION REQUIREMENTS

1. Indicate which of the following entities have been notified pursuant to N.J.A.C. 7:26C-7.3(d). (*check all that apply*)

- ☐ Municipal and county clerk(s)
- ☐ Local, county or regional health department(s)
- ☐ Designated County Environmental Health Act agency (if applicable)
- ☐ County Planning Board
- ☐ Pinelands Commission (if applicable)
- ☐ Owners of real property overlying CEA foot print

2. **List of Names and Addresses** – List below and/or in an attachment, the names/addresses of all persons notified pursuant to N.J.A.C. 7:26C-7.3(d) based on the proposed CEA boundaries. If the site property owner differs from the person responsible for conducting the remediation, enter the site owner's name and address first in below table. See instructions for more information regarding address list and indicating if vapor intrusion was evaluated for properties over the CEA.

☐ Check here if no volatile contaminants are in the CEA

Entity or Owner Name	Notification Address Used (include applicable block and lot overlying CEA if owner address differs from property address)	Date notification sent	Was property evaluated for vapor intrusion? Check if "Yes"
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
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			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>



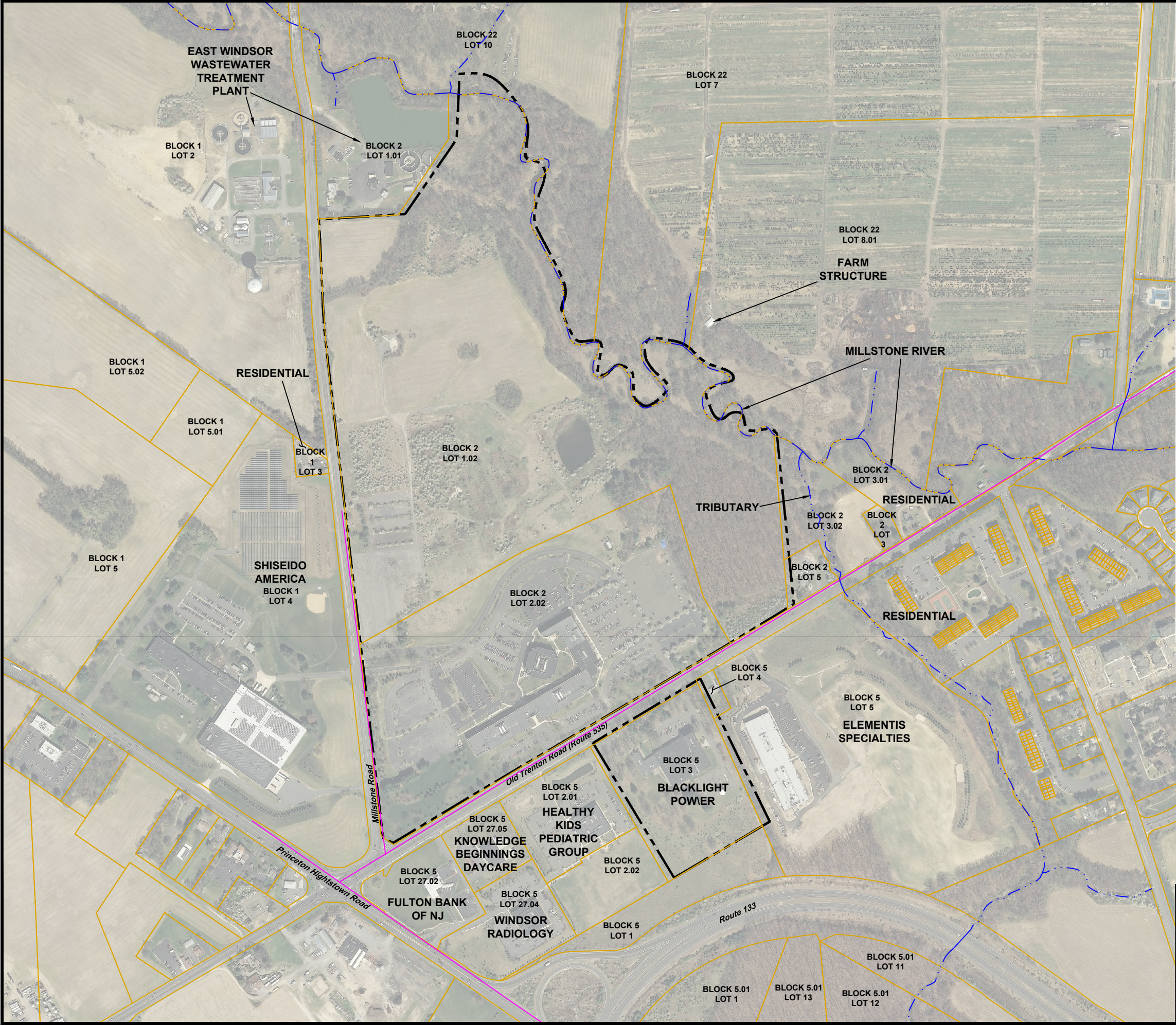




## **Exhibit A**



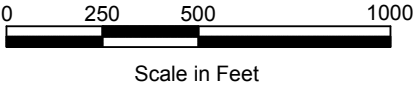
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Legend

- SITE BOUNDARY
- PROPERTY BOUNDARY (APPROX)
- MILLSTONE RIVER AND TRIBUTARY

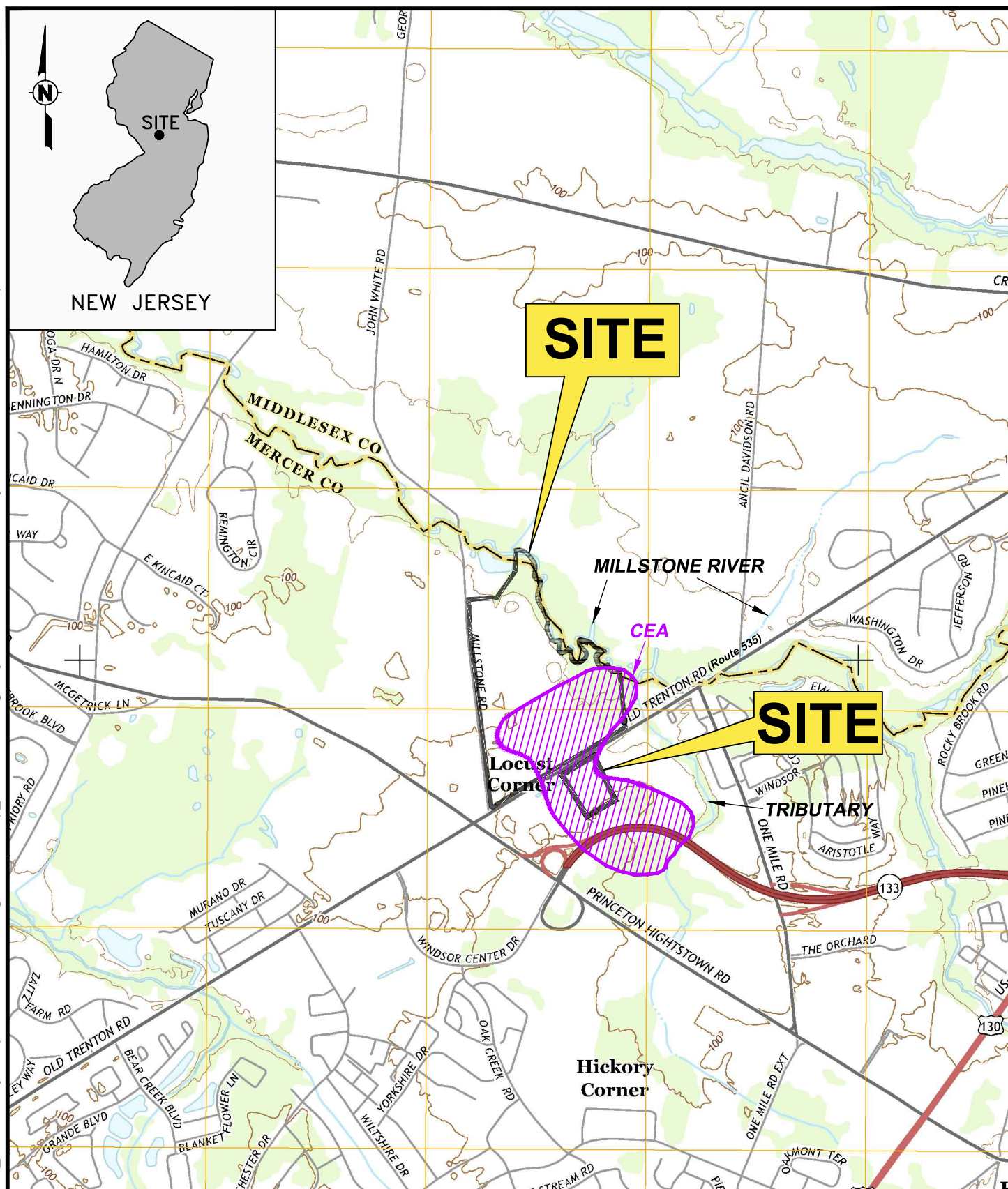
SOURCES: NJ 2012-2013 HIGH RESOLUTION  
ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET



<b>AECOM</b> ENVIRONMENT 30 Knightsbridge Road Suite 520 Piscataway, New Jersey PHONE: 732.564.3600			
Former Lockheed Martin Facility PI No. 158269 50 Millstone Road, East Windsor, New Jersey			
<b>SITE PLAN</b>			
PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>EXHIBIT A-1</b>



Piscataway on uspsw2vfp001\Data\_uspsw2vfp001\Environment(J)  
File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd\Drawings\Site\LocMap\_2015-09-29.dwg Layout: ExhibitA User: karchj1 Plotted: Oct 05, 2015 - 3:06pm



SOURCE:  
USGS 7.5' TOPOGRAPHIC QUADRANGLE FOR  
HIGHTSTOWN, NJ (2014)

CONTOUR INTERVAL: 100'

APPROXIMATE LATITUDE AND LONGITUDE  
IN NAD 83, FEET:  
475797.535E, 529864.264N  
(40.288102°, -74.558531°)



Scale in Feet

**AECOM**

**SITE LOCATION MAP**  
FORMER LOCKHEED MARTIN FACILITY  
PI No. 158269  
50 MILLSTONE ROAD  
EAST WINDSOR, NJ

PROJECT NO.  
60328624.5.02

DRAWN BY:  
JK

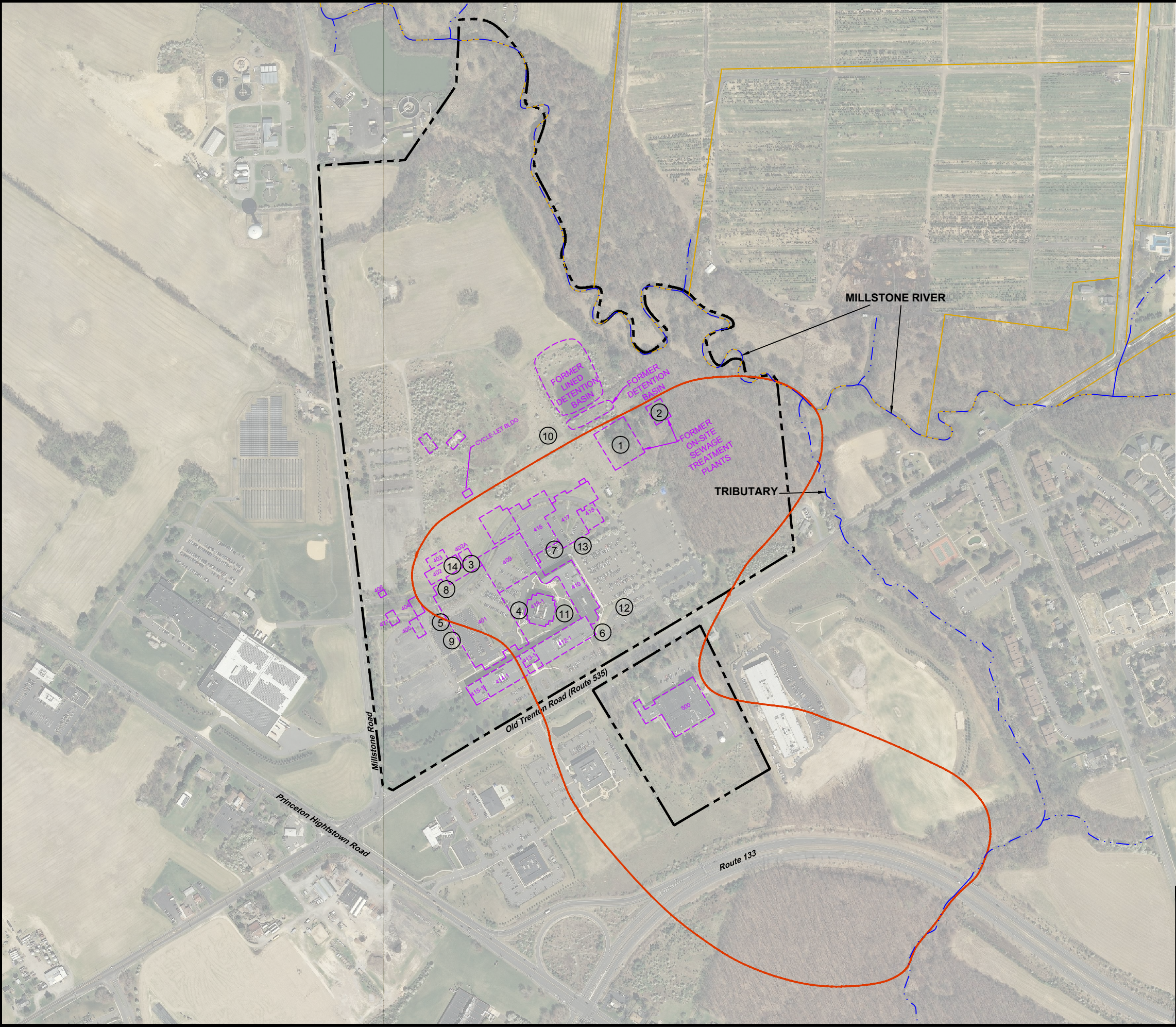
DATE:  
9/29/2015

**EXHIBIT A-2**



## **Exhibit B**





Legend

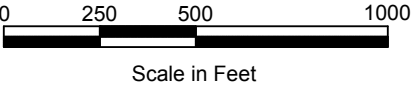
- SITE BOUNDARY
- ① AREA OF CONCERN (AOC)
- FORMER BUILDING LOCATION (APPROX)
- MILLSTONE RIVER AND TRIBUTARY
- CLASSIFICATION EXCEPTION AREA (CEA) BOUNDARY


SOURCES: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET

FORMER BUILDING LOCATIONS TAKEN FROM TETRA TECH'S SOIL GAS SURVEY REPORT, FIGURE 2-2 SITE OVERFLOW, DATED 1999.

Areas of Concern

AOC 1	former on-site sewage treatment plant (1957-1962)
AOC 2	former activated sludge aeration system (1962-1965)
AOC 3	former chemical storage area
AOC 4	former underground neutralization pit
AOC 5	former 2,000-gallon UST
AOC 6	transformer oil spill
AOC 7	diesel fuel spill
AOC 8	stained soils behind compressor room
AOC 9	stained soils around vent pipes and fill ports
AOC 10	former waste disposal area
AOC 11	transformer oil spill
AOC 12	gasoline spill
AOC 13	hydraulic oil spill
AOC 14	vacuum oil spill
AOC 15	soil beneath Bldgs 402 and 403
AOC 16	VOC-impacted groundwater
AOC 17	soil gas





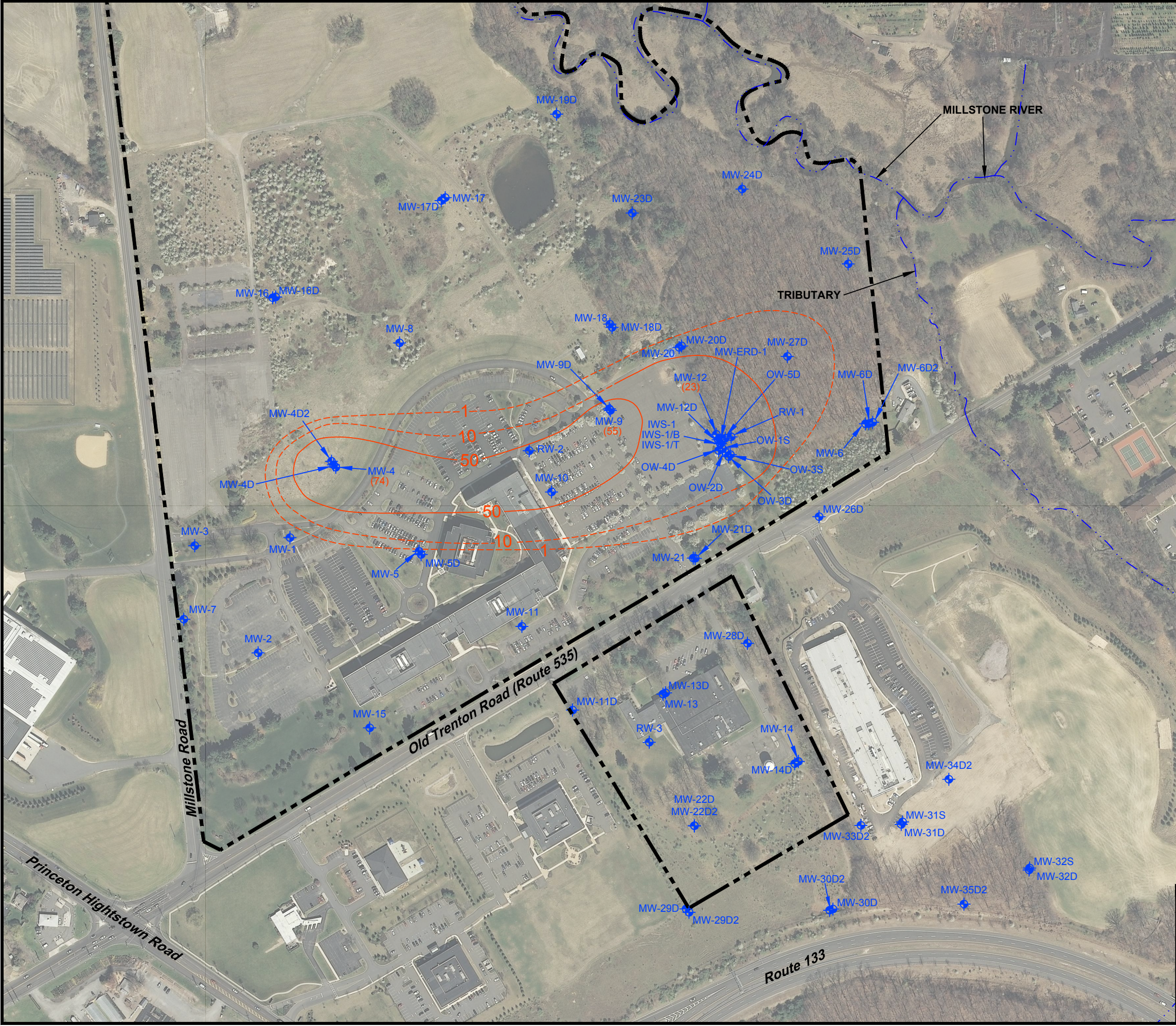
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**CEA AND HISTORICAL  
AREA OF CONCERN MAP**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>EXHIBIT B-1</b>
-------------------------------	-----------------	---------------------	--------------------

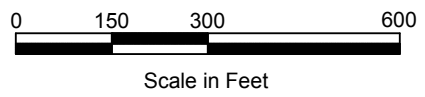




**Legend**

- MW-12  
(23) EXISTING MONITORING WELL WITH RESULTS IN PARENTHESIS.
- MILLSTONE RIVER AND TRIBUTARY
- SITE BOUNDARY
- 50 ISOPLETH CONTOUR WITH CONCENTRATION
- TCE = TRICHLOROETHENE  
NJDEP GWQS=1ug/L

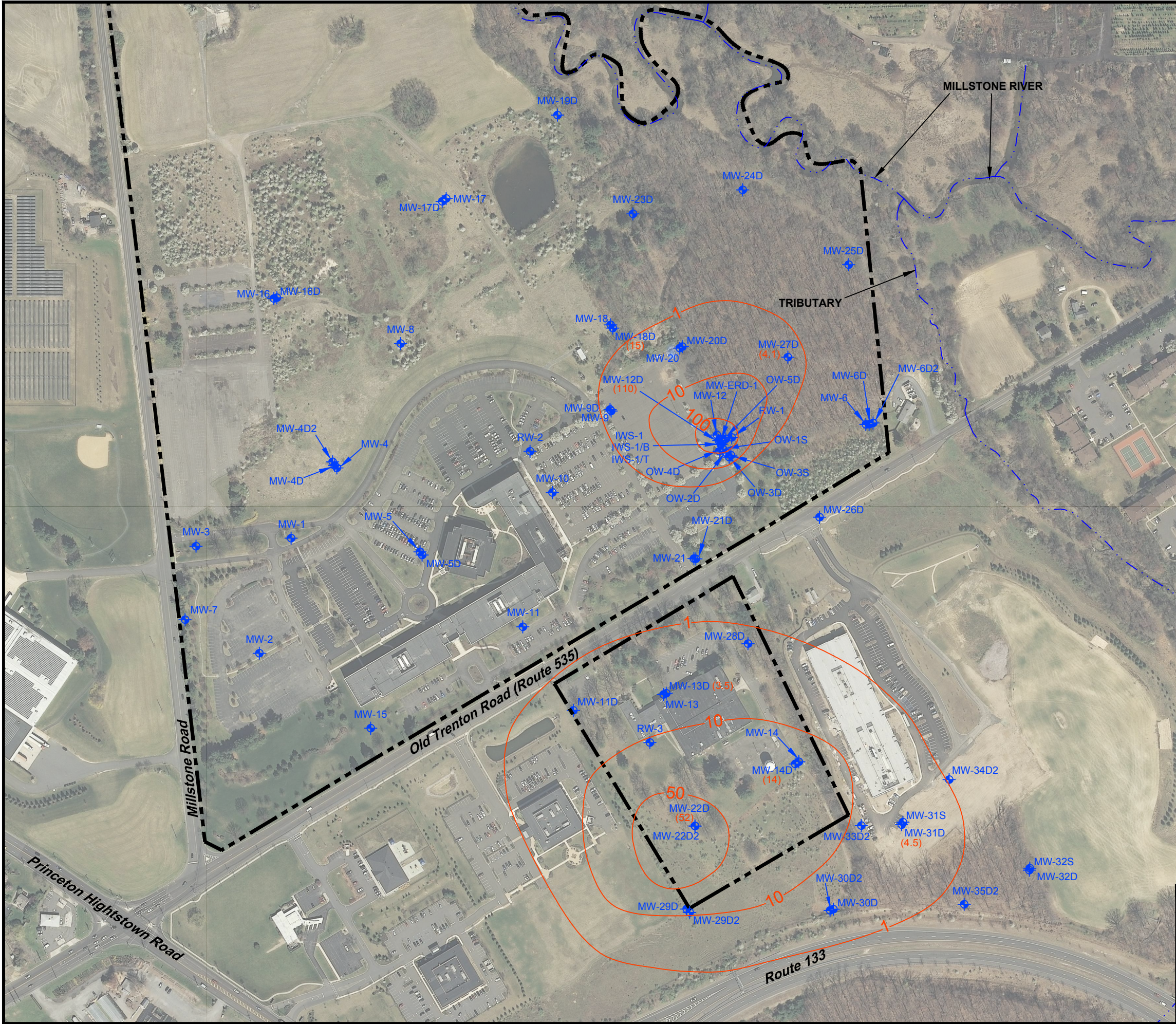
SOURCE: NJ 2012-2013 HIGH RESOLUTION  
ORTHOGRAPHY, NAD83 NJ ST PL, FEET



<b>AECOM</b> <small>ENVIRONMENT 30 Knightsbridge Road Suite 520 Piscataway, New Jersey PHONE: 732.564.3600</small>	Former Lockheed Martin Facility PI No. 158269 50 Millstone Road, East Windsor, New Jersey			
	<b>JUNE 2015 GROUNDWATER CONCENTRATION CONTOURS SHALLOW WELLS</b>			
	PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 10/5/2015	<b>EXHIBIT B-2A</b>



File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd\Drawings\GWC-June2015\_Intermed\_2015-09-03.dwg Layout: Exhibit B-2B User: karchj1 Plotted: Oct 05, 2015 - 4:40pm



**Legend**

- MW-31D (4.5) EXISTING MONITORING WELL WITH RESULTS IN PARENTHESIS.
  - MILLSTONE RIVER AND TRIBUTARY
  - SITE BOUNDARY
  - ISOPLETH CONTOUR WITH CONCENTRATION
- TCE = TRICHLOROETHENE  
NJDEP GWQS=1ug/L

SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, FEET



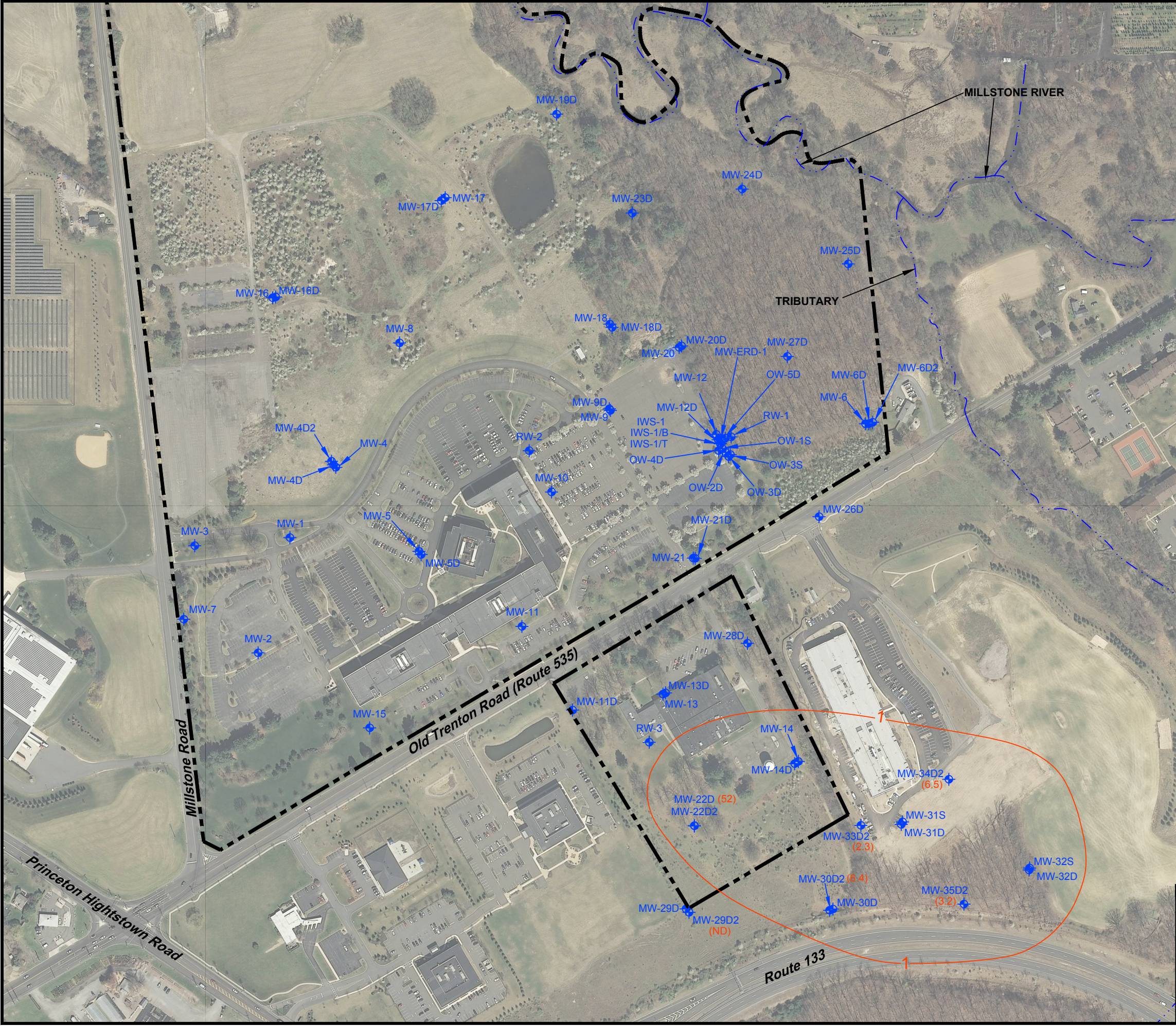
**AECOM**  
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**JUNE 2015 GROUNDWATER CONCENTRATION CONTOURS INTERMEDIATE WELLS**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 10/5/2015	EXHIBIT B-2B
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**Legend**

MW-35D2  
(3.2) EXISTING MONITORING WELL WITH RESULTS IN PARENTHESIS.

MILLSTONE RIVER AND TRIBUTARY

SITE BOUNDARY

ISOPLETH CONTOUR WITH CONCENTRATION

TCE = TRICHLOROETHENE  
NJDEP GWQS=1ug/L

SOURCE: NJ 2012-2013 HIGH RESOLUTION  
ORTHOGRAPHY, NAD83 NJ ST PL, FEET

0 150 300 600  
Scale in Feet

**AECOM**

ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**JUNE 2015 GROUNDWATER  
CONCENTRATION CONTOURS  
DEEP WELLS**

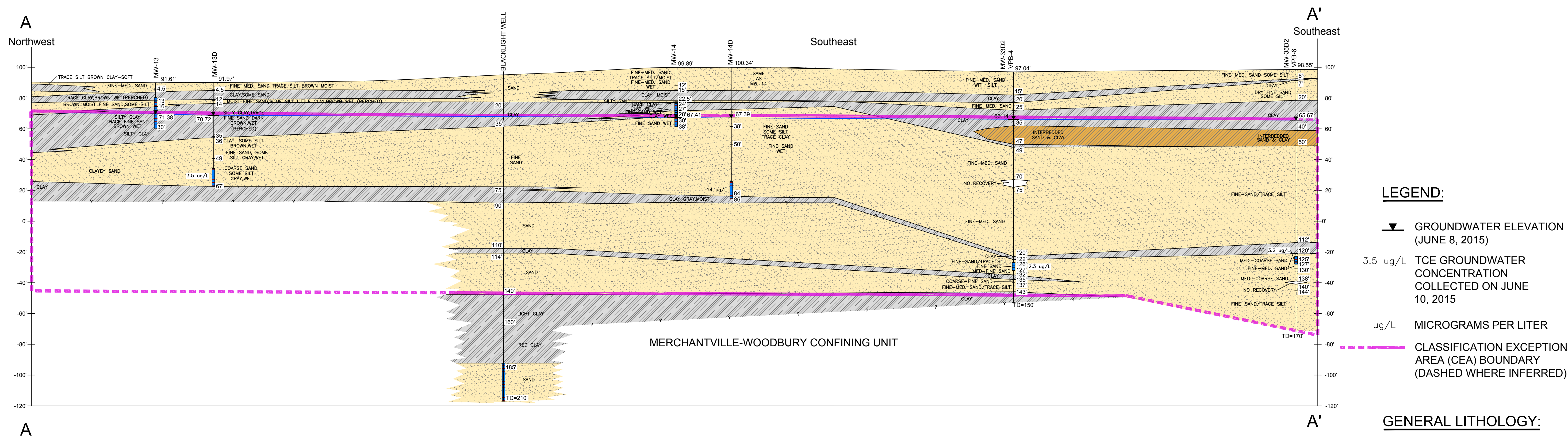
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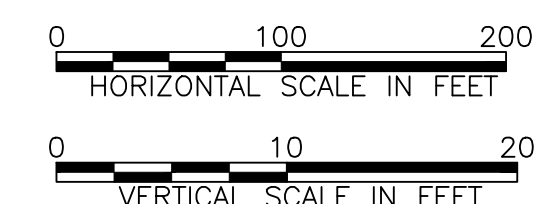
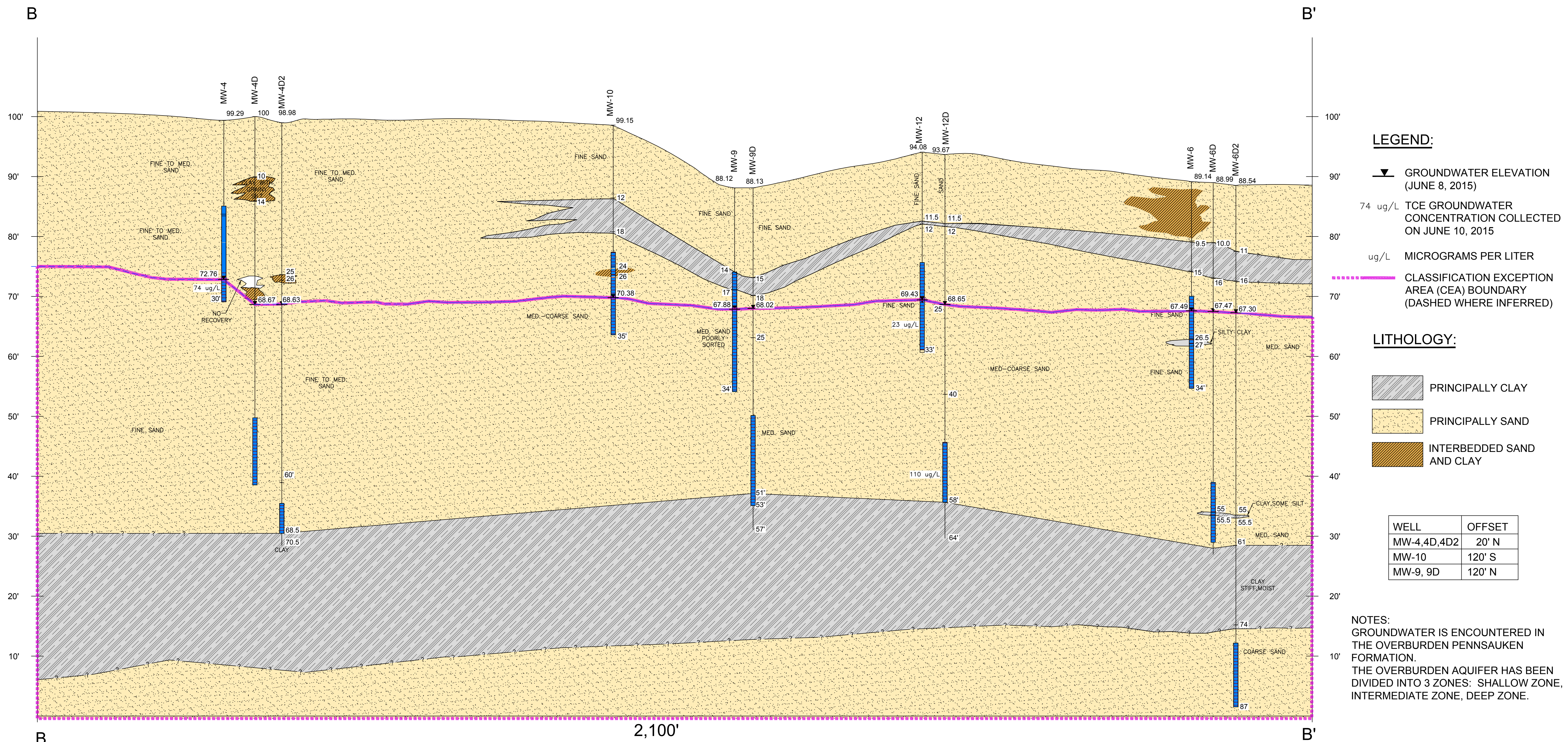
Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**GEOLOGICAL CROSS SECTION A-A'**

PROJECT NO. 60328624.05.02	DRAWN BY: RB	DATE: 10/05/2015	<b>EXHIBIT B-4</b>
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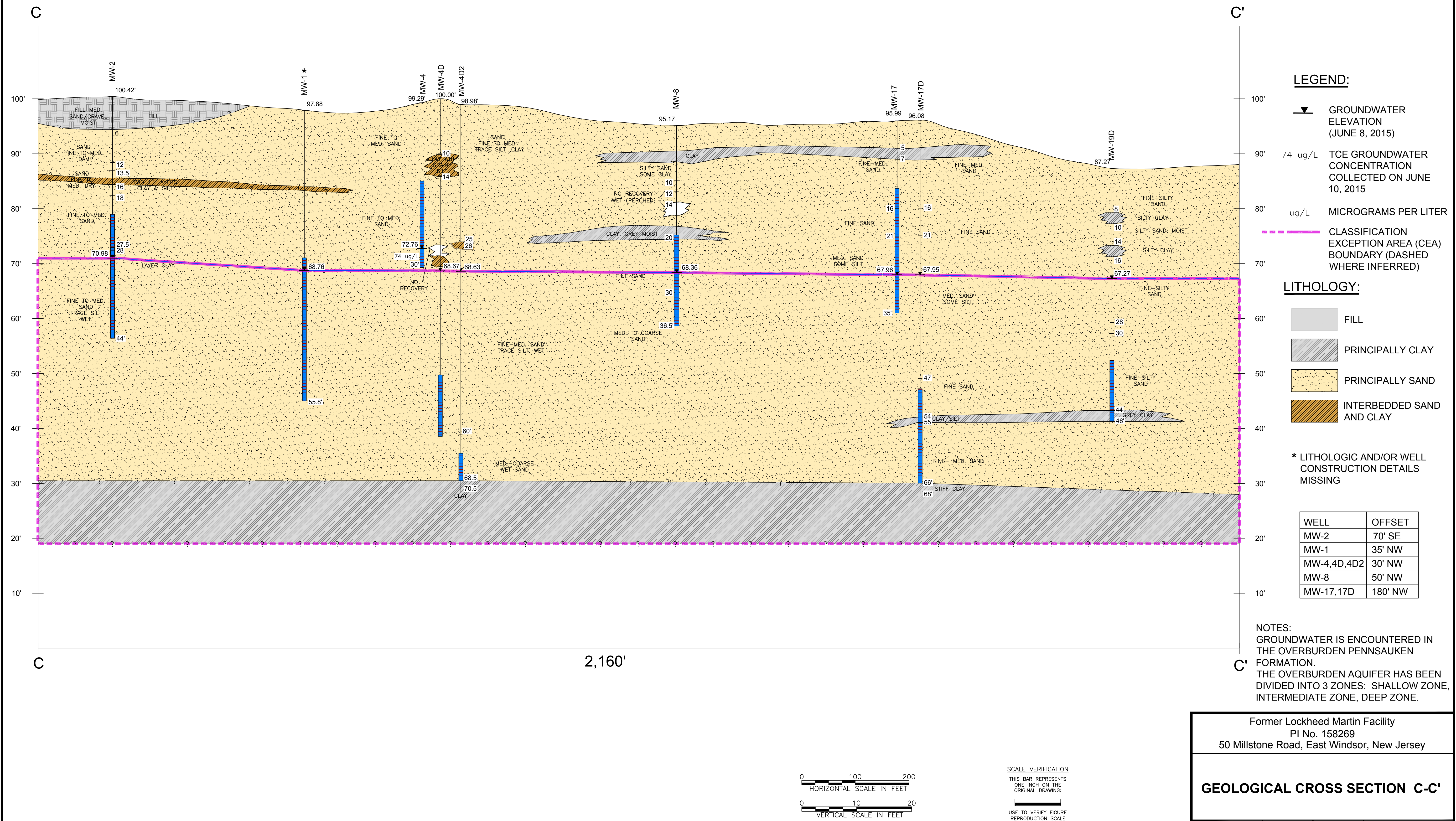


SCALE VERIFICATION  
THIS BAR REPRESENTS  
ONE INCH ON THE  
ORIGINAL DRAWING:  
USE TO VERIFY FIGURE  
REPRODUCTION SCALE

Former Lockheed Martin Facility PI No. 158269 50 Millstone Road, East Windsor, New Jersey			
GEOLOGICAL CROSS SECTION B-B'			
PROJECT NO. 60328624.05.02	DRAWN BY: TG	DATE: 10/05/2015	EXHIBIT B-5



P:\scitaway on uspsw\2\p001\Drawings\SEC-C-C - 2015-09-09.dwg Layout: Exhibit B-6  
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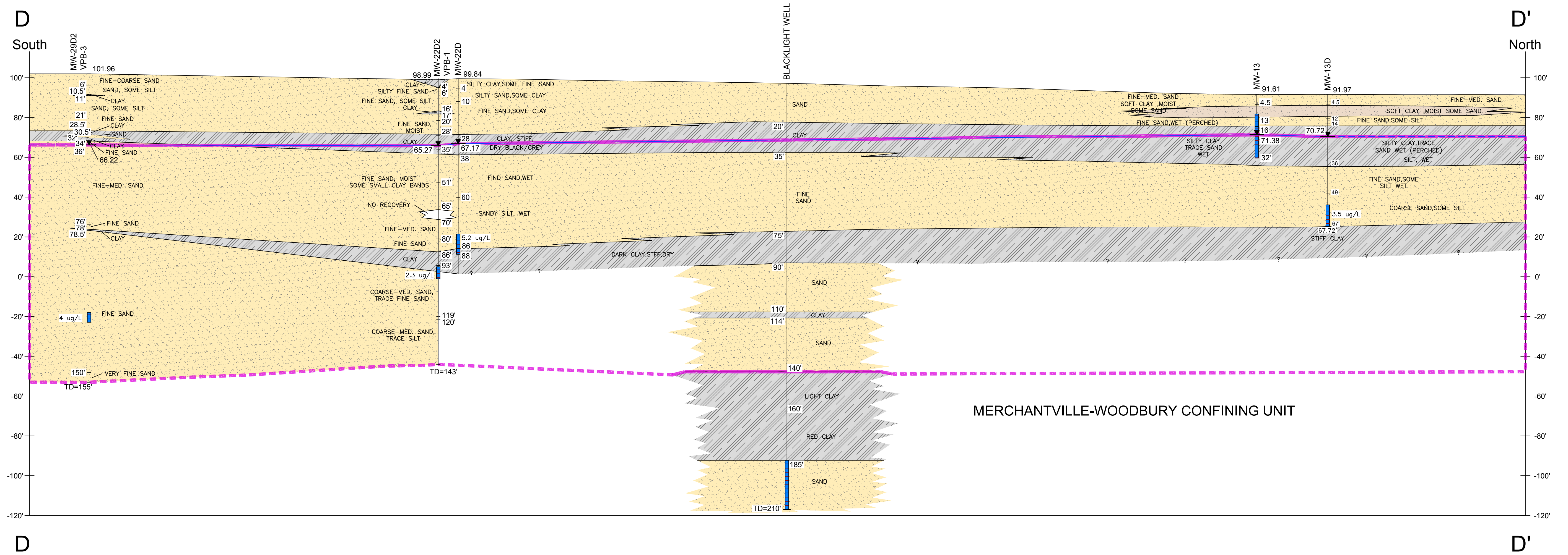
Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**GEOLOGICAL CROSS SECTION C-C'**

PROJECT NO. 60328624.05.02	DRAWN BY: TG	DATE: 10/05/2015	<b>EXHIBIT B-6</b>
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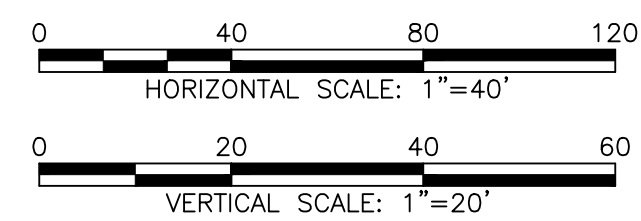
**LEGEND:**

- GROUNDWATER ELEVATION (JUNE 8, 2015)
- 4 ug/L TCE GROUNDWATER CONCENTRATION COLLECTED ON JUNE 10, 2015
- ug/L MICROGRAMS PER LITER
- CLASSIFICATION EXCEPTION AREA (CEA) BOUNDARY (DASHED WHERE INFERRED)

**GENERAL LITHOLOGY:**

- PRINCIPALLY CLAY
- PRINCIPALLY SAND

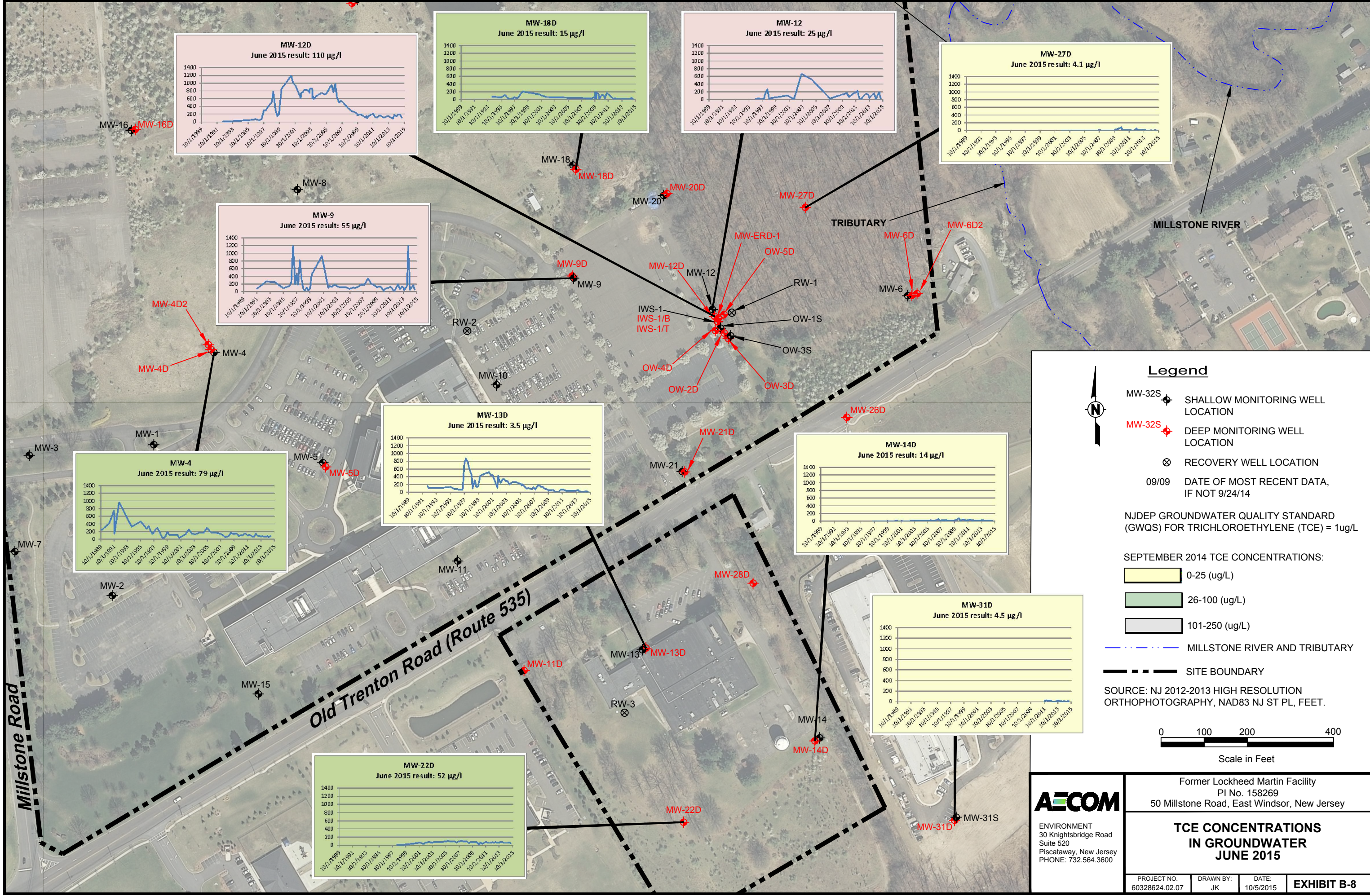
NOTES:  
GROUNDWATER IS ENCOUNTERED IN THE OVERBURDEN PENNSAUKEN FORMATION.  
THE OVERBURDEN AQUIFER HAS BEEN DIVIDED INTO 3 ZONES: SHALLOW ZONE, INTERMEDIATE ZONE, DEEP ZONE.



SCALE VERIFICATION  
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:  
  
USE TO VERIFY FIGURE REPRODUCTION SCALE

Former Lockheed Martin Facility PI No. 158269 50 Millstone Road, East Windsor, New Jersey			
<b>GEOLOGICAL CROSS SECTION D-D'</b>			
PROJECT NO. 60328624.05.02	DRAWN BY: RB	DATE: 10/05/2015	<b>EXHIBIT B-7</b>





ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

PROJECT NO. 60328624.02.07	DRAWN BY: JK	DATE: 10/5/2015	EXHIBIT B-8
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## **Exhibit C**

**Submitted Electronically on  
October 1, 2015. Email  
Confirmation Attached**



**From:** [Cramer, Don](#)  
**To:** [Fyock, Ellen](#)  
**Subject:** Re: 158269, CEA (CEA Submittal Date: 10/1/2015 2:55:55 PM)  
**Date:** Friday, October 02, 2015 10:55:06 AM

---

SRP successfully processed the GIS deliverable attached to the 10/01/2015 email referenced above. The CEA shape was created on 10/01/2015 for Preferred ID 158269. The shape(s) were extracted from:

158269\_100115CEA.shp

The boundary of the institutional control will be reviewed by the appropriate SRP program at a later date.

(DEP Submission ID: 2640)





Environment

Submitted to:  
Lockheed Martin Corporation  
Bethesda, MD

Submitted by:  
AECOM Technical Services, Inc.  
Piscataway, NJ 08854  
60328624  
October 8, 2015

# Remedial Investigation Report

Former Lockheed Martin Facility  
50 Millstone Road  
East Windsor, New Jersey  
NJDEP PI #158269

AECOM Project No: 60328624





Environment

Submitted to:  
Lockheed Martin Corporation  
Bethesda, MD

Submitted by:  
AECOM Technical Services, Inc.  
Piscataway, NJ 08854  
60328624  
October 8, 2015

# Remedial Investigation Report

Former Lockheed Martin Facility  
50 Millstone Road  
East Windsor, New Jersey  
NJDEP PI #158269

AECOM Project No: 60328624

Revision 1

A handwritten signature in blue ink that reads "Erin Govern".

Prepared By: Erin Govern, Staff Scientist

A handwritten signature in blue ink that reads "Rita Papagian".

Prepared By: Rita Papagian, Staff Scientist

A handwritten signature in blue ink that reads "Daniel W. Folan".

Reviewed By: Daniel W. Folan, PhD, PG

A handwritten signature in blue ink that reads "David J. Russell".

Reviewed By: David J. Russell, PE, BCEE, LSRP # 574867



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## List of Acronyms

ADT	Aquifer Drilling & Testing, Inc.
AECOM	AECOM, Inc.
AFCEE	Air Force Center for Environmental Excellence
Amsl	above mean sea level
AOC	areas of concern
AST	aboveground storage tanks
BGR	General Remediation Clean-up permit
BGS	below ground surface
BNs	base neutral organic compounds
CEA	Classification Exception Area
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CID	Case Inventory Document
COC	contaminants of concern
DKQP	Data of Known Quality Protocol
DQA	Data Quality Assessment
DUE	Data Usability Evaluation
ECRA	Environmental Cleanup Responsibility Act
EE	Ecological Evaluation
EIPT	environment improvement pilot test
EM	electro-magnetic
ERD	enhanced reductive dechlorination
EWMUA	East Windsor Municipal Utilities Authority
Freon 11	Trichlorofluoromethane
FSPM	Field Sampling Procedures Manual
GIN	General Information Notice
GIS	Geographical Information Systems
GPR	ground-penetrating radar
GWQS	Groundwater Quality Standards
GWSL	Groundwater Screening Levels
GWTS	groundwater extraction and treatment system
HASP	Health and Safety Plan
HCR	Handex Consulting & Remediation
IASL	Indoor Air Screening Levels
IDW	Investigation Derived Waste



ISRA	Industrial Site Recovery Act
IWAS	in-well air sparging
LMC	Lockheed Martin Corporation
LSRP	Licensed Site Remediation Professional
MDL	Method Detection Limit
MEK	methyl ethyl ketone
MIBK	methyl isobutyl ketone
MNA	monitored natural attenuation
NAD	North American Datum
NEH	New Environmental Horizons
NFA	No Further Action
NJDEP	New Jersey Department of Environmental Protection
NJPDES	New Jersey Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Units
PAHS	polycyclic aromatic hydrocarbons
PAR	Preliminary Assessment Report
PCB	polychlorinated biphenyls
PCE	tetrachloroethylene
PI ID	Program Interest Identification
PID	photoionization detector
POP	Project Operating Procedure
POTW	publicly owned treatment works
PP	priority pollutant
PPM	parts per million
PRM	Potomac-Raritan-Magothy
QAPP	Quality Assurance Project Plan
QC	Quality Control
QL	Quantitation Limit
RAPR	Remedial Action Progress Report
RAWP	Remedial Action Work Plan
RE	Receptor Evaluation
RES	Recovery Environmental Services
RIR	Remedial Investigation Report
SDG	Sample Delivery Group
SES	Site Evaluation Submission



SGSL	Soil Gas Screening Levels
SITE	intersection of Millstone Road and Route 535 in East Windsor Township, Mercer County, New Jersey
SIU	Significant Indirect User
SRP	Site Remediation Program
SRRA	Site Remediation Reform Act
SU	Standard Units
TCA	1,1,1-trichloroethane
TCE	Trichloroethene
TCL	Target Compound List
TOC	Total Organic Carbon
TPH	total petroleum hydrocarbons
TSS	total suspended solids
TWA	Treatment Works Approval
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
VOCs	volatile organic compounds
VPB	vertical profile borings
WET	whole effluent toxicity
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter



## 1.0 INTRODUCTION

On behalf of Lockheed Martin Corporation (LMC), AECOM Technical Services, Inc. (AECOM) has prepared this Remedial Investigation Report (RIR) for the Former Lockheed Martin Facility (Site) located at 50 Millstone Road, East Windsor, Mercer County, New Jersey (NJDEP ISRA #86488, PI #158269). Note that this Site is listed in the New Jersey Department of Environmental Protection (NJDEP) Data Miner database under the name RCA Astro Electronics.

Activities reported herein were conducted as part of the assessment and investigation work conducted to define and delineate Site-related impacts to groundwater resulting from the Site's former operations as a research and development manufacturer of satellites. Portions of the Site were used to build and paint satellites and several laboratories were located throughout the facility for electronics work, testing and evaluation. All operations at the former Lockheed Martin Facility were discontinued in 1998 and all equipment and operations have been relocated to other LMC facilities. Field activities were performed in accordance with the Quality Assurance Project Plan (QAPP) included as Appendix A.

### 1.1 Objectives

A supplemental RI was conducted in 2015 to further delineate impacted groundwater at the Site. These RI activities were performed to supplement previously documented remedial investigation activities, including an RIR prepared by H2M Group and submitted to the NJDEP in 1999. Historic reports and responses from the NJDEP approved remediation of soil impacts at the various areas of concern (AOCs) confirmed that horizontal groundwater delineation in the shallow and intermediate zones was complete prior to opting into the Licensed Site Remediation Professional (LSRP) program under the Site Remediation Reform Act (SRRA). The supplemental RI activities documented in this report were conducted to address vertical groundwater delineation which included the following:

- further characterization of aquifer conditions and assessment of contaminant concentrations at the leading edge of the groundwater contaminant plume;
- completion of vertical profile borings, groundwater screening and installation/sampling/analysis of deep monitoring wells;
- collection of additional Site-wide quarterly groundwater monitoring data; and
- further evaluation of the groundwater data to support monitored natural attenuation (MNA) as the Site remedy.

A sample summary table listing all samples collected as part of the supplemental investigation activities is included as **Table 1**.



## 2.0 BACKGROUND

### 2.1 Site Location

The Site is located at the intersection of Millstone Road and Route 535 in East Windsor Township, Mercer County, New Jersey. The Site extends over two parcels that encompass a total of 127 acres. The 50 Millstone Road parcel, located north of Route 535, consists of 116-acres of land and is identified on the East Windsor Township tax maps as Block 2, Lots 1.02 and 2.02. This parcel includes an office complex, access roads, paved parking lots and a storm water detention basin. The 493 Edinburg Road parcel consists of 11-acres of land situated south of Route 535 and is identified on the East Windsor Township tax maps as Block 5, Lot 3. The smaller parcel contains a commercial building, operated by Black Light Power Inc., and a paved parking area. The Site is located in a predominantly commercial area with three single-family residences and one child care facility located within 200 feet (ft) of the Site. The northern parcel is bound to the west by Millstone Road, beyond which is a residential property and several commercial properties; to the north by the East Windsor Wastewater Treatment Plant; to the east by trees and light vegetation, the Millstone River, and a residential property; and to the south by Edinburg Road (also referred to as Old Trenton Road or Route 535), beyond which is a daycare facility, residential property and several commercial buildings. The southern parcel is bound to the west by a medical facility (Healthy Kids Pediatric Group); to the north by Edinburg Road, to the east by a residential property and Elementis Specialties; and to the south by vegetation, beyond which is Route 133.

A Site Location Map presenting local topography and surrounding areas on a United States Geological Survey (U.S.G.S) 7.5 Minute Series Topographic Quadrangle for Hightstown, New Jersey is presented as **Figure 1**. **Figure 2** is a Site Plan showing pertinent Site features and boundaries and tax block and lot information.

#### 2.1.1 Ownership Information

The following table summarizes the historical owners of the Site based on information obtained from the East Windsor Tax Assessor and historical Site reports.

Northern Parcel		Dates of Operation	
Name of Owner		Start	End
Raith Capital Partners, LLC		2015	Current property owner
Windsor Acquisitions, LLC		2006	2015
Lockheed Martin Corporation		1995	2006
Martin Marietta Corporation		1993	1995
General Electric (through merger with RCA)		1986	1993
RCA Corporation Aerospace Technical Department		1982	1986
United States Steel and Carnegie Pension Fund		1959	1982
Applied Science Corp. of Princeton		1957	1959
Farmland, owner unknown		1957	1957
Vacant, naturally vegetated		Prior to 1957	1957



Southern Parcel		Dates of Operation	
Name of Owner		Start	End
Blacklight Real Estate		1998	Current property owner
Lockheed Martin Corporation		1990	1998
<i>Lockheed Martin Corporation – lease</i>		1986	1990
<i>General Electric – lease</i>		1981	1986
C&W Realty		1966	1990
Creative Playthings/CBS, Inc.		1960	1966
Vacant, naturally vegetated		Prior to 1960	1960

### 2.1.2 Adjacent Sites

The northern parcel is bound to the west by Millstone Road, beyond which is a cosmetics manufacturing company known as Shiseido America. North of Shiseido America and west of the northern parcel is a residential property located at 93 Millstone Road. The East Windsor Wastewater Treatment Plant is located on two parcels northwest and north of the northern parcel, beyond which are residential properties. Northeast and east of the northern parcel is vegetated and covered with trees. Beyond the tree line is a farm building located at block 22, lot 8.01. A residential property is also located adjacent to the east side of the northern parcel. Edinburg Road bounds this parcel to the south (**Figure 2**).

Healthy Kids Pediatric Group is located west of the southern parcel, beyond which are Windsor Radiology and Knowledge Beginnings Daycare. Edinburg Road bounds this parcel to the north. A residential property is located northeast of the southern parcel and Elementis Specialties is located to the east. The southern property boundary is vacant and naturally vegetated, beyond which is Route 133 (**Figure 2**).

## 2.2 Site History

Based on a review of aerial photographs the Site was undeveloped land as early as 1931 through 1957. The property was used for farming in 1957. In an aerial photograph dated 1963, the main facility buildings are visible on the northern and southern parcels. The building configuration on the northern parcel changed over the years from the late-1960s through the late-1990s. Demolition of former buildings was conducted in 1999 on the northern parcel and the Site was redeveloped to its current layout. The current Site building is visible in the 2002 aerial photograph and the Site appears unchanged since that time. No visible changes were observed on the southern parcel except for a building expansion that occurred between 1987 and 1995.

The primary function of the facility was to design, manufacture, and test electronic communication and meteorological and navigation satellites for government and commercial use. The first building was constructed on the northern parcel by Applied Sciences Corp. of Princeton in 1957. Operations historically conducted on-Site included electroplating, chemical degreasing and metal working.

A Site Evaluation Submission (SES) dated September 10, 1986 was submitted to the NJDEP in accordance with the Environmental Cleanup Responsibility Act (ECRA). The SES was prepared in anticipation of Site operations' closing. According to the SES, test bays formerly located on-Site were used for the construction and preliminary testing of spacecraft and these areas used solvents for cleaning and degreasing electronic hardware and solar array panels. This area also utilized epoxies and flux core solder for electrical work in day-to-day operations. A Mix Lab and Conformal Coating Area was where epoxies, urethane coatings, paints and silicone coatings were used in spacecraft integration. The coating area was used to coat or fasten materials to



spacecraft parts. An environmental test area was used to test spacecraft under various environmental conditions. These systems included hydraulic vibration platforms, humidity chambers and heated and refrigerated vacuum chambers. Freon was used as coolant for the thermovacuum systems used in the environmental test area formerly located on-Site. Lubricating and hydraulic oils were used throughout the environmental test area to operate heating and refrigeration equipment and hydraulic vibration platforms. Trichloroethene (TCE) was used in the environmental test area as a cleaning and flushing agent for thermovacuum systems. High voltage electronic laboratories were located in the basement of Building 410 and were used to test and design new spacecraft components and hardware. Solvents were used in this basement area for cleaning electronic parts. Urethanes, epoxies and paints were also used in the basement of Building 410. Antenna test operation areas were used for radio testing of spacecraft antennas and integrated spacecraft antenna systems. Cleaning solvents and soldering equipment were used in these test areas on a day-to-day basis. A propulsion laboratory was located in Building 416 for the testing of fuel tanks and propulsion systems on communication spacecraft. Cleaning solvents were used in this laboratory to clean and degrease electric parts and assemblies. A failure analysis laboratory was used as a test center of spacecraft parts after stress analysis was complete. A wide variety of chemicals were reportedly used in the failure analysis laboratory. An unnamed area on-Site (referred to as Index No. 8 in the SES) was used to develop micro-circuit component parts for spacecraft. A variety of chemical test materials, solvents and specialized electroplating materials were used in this area. A materials technology laboratory was used for the chemical engineering and testing of new spacecraft structural materials. A variety of chemicals and solvents were used in this laboratory. A thermal/power system/solar array welding laboratory was located in Building 410. Cleaning solvents were used in this laboratory for maintaining electronic components. The former Building 410 antenna technology laboratory used Freon in degreasing operations during circuit board assembly. The facility also reportedly contained a paint shop and water wash spray booth for painting spacecraft hardware. According to the SES, materials which were "not suitable for release to the neutralization tank and sewer were removed in 55-gallon drums and shipped as hazardous waste." The courtyard was used as a chemical, solvent and hazardous waste storage area. Building 407 was used as a radiation test facility and formerly housed a cobalt-60 radiation source used for testing spacecraft parts for radiation breakdown. The radiation source was a Gamma cell 220 Research Irradiator licensed by the United States Nuclear Regulatory Commission. A neutralization tank in the sewer line was used by the printed circuit facility to neutralize acid as it flowed from the printed circuit sink room. Historic building locations are presented on **Figure 3**.

Monitoring well MW-1 was installed on the northern parcel in 1989 following removal of a 2,000-gallon gasoline underground storage tank (UST). Post-excavation soil sampling indicated that there were no soil exceedances of gasoline constituents but TCE, 1,1,1-TCA and Freon were detected in soil above applicable remediation standards. Gasoline constituents were detected in groundwater during the first three rounds of sampling in 1989 but were below the NJDEP Groundwater Quality Standards (GWQS). TCE was detected in groundwater above GWQS in 1989 and a Site-wide groundwater investigation to delineate the TCE impacts was initiated. Twenty-three monitoring wells were installed in 1989 as part of the initial groundwater RI. According to a Preliminary Assessment Report (PAR) submitted in 1992, groundwater analytical results from sampling conducted in March 1991 indicated that monitoring well MW-1 contained concentrations of 1,1,1-TCA detected at 27 µg/l and TCE detected at 130 µg/l. Monitoring well MW-5 contained concentrations of 1,1,1-TCA detected at 6 µg/l and TCE detected at 500 µg/l. Concentrations of 1,1,1-TCA and TCE were not detected at the upgradient well MW-3. . The facility had three permitted outfalls to the Millstone River. Non-contact cooling water and on-Site storm drainage discharged to the Millstone River. The Site maintained permits with the NJDEP for a dust collector, vaporizer, hood and oven.

According to the 1992 PAR, the Site was listed in Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) under United States Environmental Protection Agency (USEPA) No. NJD001643840. Waste units reported in the PAR included a 1,650-gallon capacity drum storage area, a second drum storage area, a 95,000-gallon per day capacity aboveground treatment tank and an explosive materials building. Drums stored in the two designated drum locations were divided into five areas: Area A stored halogenated non-flammable solvents, freons, 1,1,1-trichloroethane (TCA) and TCE; Area B stored flammable solvents, acetone, alcohols, methyl isobutyl ketone (MIBK), methyl ethyl ketone (MEK) and toluene; Area C stored combustible materials, oils, rags and wipes; Area D stored reactive/corrosive materials, waste



printed circuit materials and water treatment materials; and Area E stored waste solvents and empty solvent containers. No releases of substances stored in the drum storage areas were reported in the PAR.

In the 1990s, the facility conducted circuit board integration and spacecraft assembly. Portions of the facility were used to build and paint satellites and several laboratories were used throughout the facility for electronics work, testing and evaluation. Office buildings were located throughout the facility and were used for research, equipment and materials purchasing, accounting and support functions. According to a Phase I report submitted to the NJDEP in 1997, the facility contained a number of electronics assembly and test laboratories within its various buildings and the majority of the laboratories used electrical solvents for cleaning applications. Freon 113 was used in the vapor degreasing and precision cleaning operations associated with satellite construction. Photographic and x-ray developing areas were located on-Site and acetic acid wastewater was generated from these processes. The x-ray wastewater was stored in 55-gallon drums in the operating areas. According to the 1997 Phase I Report, many drums containing hazardous materials were observed sitting on concrete floors within facility buildings and without any secondary containment. Cracks were observed in some areas of the concrete flooring. A berm and floor drains were observed in the hazardous waste storage building (Building 421). In 1997 the facility maintained two 1,000-gallon USTs containing propane and two 10,000-gallon USTs containing #2 fuel oil. The tanks were removed in 1999 and the NJDEP issued a letter of No Further Action (NFA) on September 12, 2000. Five aboveground storage tanks (ASTs) were also historically on-Site (four containing propane and one containing #2 fuel oil).

A General Information Notice (GIN) was prepared for the Site and submitted to the NJDEP on July 26, 1995. The GIN listed the name of the industrial establishment as Lockheed Martin Astro Space, owned by Chesapeake Park, Inc. of Baltimore, Maryland. The GIN states that an Industrial Site Recovery Act (ISRA) determination had previously been submitted for the establishment, known at that time as GE Aerospace Astro Space, due to a cessation of operation transaction. The ISRA Case Numbers referenced in the GIN include: 86488 (submitted in June 1986); 92697 (submitted in December 1992); and 94645 (submitted in October 1994).

The northern parcel was sold several times but its continued use was for the manufacture of satellites until operations were discontinued in 1998. Equipment and operations were relocated to other LMC facilities at that time. The property was acquired by its current owner in 2015 and is currently used as an office complex.

Building 500 (located on the southern parcel) was built in 1960 by Creative Playthings Company and was used as a warehouse and for the manufacture of toys. General Electric leased Building 500 from C&W Realty in 1981 and LMC leased the building from 1986 until they purchased the parcel in 1990. The southern parcel was sold to Blacklight Real Estate in 1998 and was then used by Blacklight Power Inc. (the current operator).

## **2.3 Summary of Historic Remedial Investigation and Remedial Activities**

The primary source of groundwater contamination is believed to have originated from the former Chemical Storage area, former Building 410, and the puncture of a sanitary sewer line adjacent to the former Chemical Storage Area (former courtyard area; south of former Building 402). Both the former Chemical Storage area and the former Building 410 staged and/or used solvents for the former operations. Volatile organic compound (VOC) impacts in groundwater were also attributed to discharges of contaminants of concern (COC) to the sanitary lines that exited during a rupture of a sanitary sewer line adjacent to the former Courtyard/Chemical Storage Area. Evaluation with remote cameras indicated that a lightning rod had been driven through the sanitary line. The mounding effect previously detected in that area was due to the head pressure of water from this sanitary line leak. According to the 1986 SES the Chemical Storage Area was used to store chemicals, solvents and hazardous waste materials. The sources were successfully addressed through remedial actions addressing soil impacts at the Site. The residual effects of the impacts continue to be evident in groundwater.



### 2.3.1 Areas of Concern

According to the 1992 PAR prepared by Halliburton NUS Environmental Corporation, the following AOCs were identified for the property:

- an aboveground treatment tank with a capacity of 95,000-gallons per day formerly used for elementary acid neutralization;
- three liquid nitrogen aboveground tanks on the northern side of the building;
- three oil spills reported to have occurred at the facility (a leak of diesel fuel during the filling of a non-PCB containing generator in 1989, overfill of an underground storage tank containing No. 6 fuel oil, a No. 6 fuel oil spill reported during the filling of an underground storage tank); and
- an on-Site explosive materials building.

The aboveground neutralization tank and liquid nitrogen tanks were identified as areas of concern but were not investigated as part of the 1992 PAR. The three oil spills were reported to the NJDEP and according to the PAR were fully contained and remediated. Halliburton NUS Environmental Corporation conducted an inspection of the explosives materials building and concluded that wastes were not stored in the building. Sealed electronic explosive circuit boards were stored inside in steel cabinets. No further investigation of the explosives material building was conducted.

The 1999 RIR listed seventeen AOCs, none of which required further action with the exception of impacted groundwater (formerly identified as AOC GW1). The AOCs are described in the Case Inventory Document (CID) included with this report and their locations identified on **Figure 4**.

### 2.3.2 Historic Remedial Investigations

#### 2.3.2.1 Soil

According to the 1992 PAR, three oil spills occurred on-Site in the 1980s during UST filling activities. The spills were reported by facility personnel to the NJDEP and according to the PAR, were fully contained and remediated. No other information on these three spills from the 1980s was provided.

AOC 1 was the location of a former on-Site sewage treatment plant that received all plant sewage from 1957 to 1962 (**Figure 4**). When the plant was closed in 1962 the filter beds were cleaned and an Imhoff tank was pumped out and filled with soil. One soil sample was collected from a boring in the vicinity of the former treatment plant in 1987. The soil sample was analyzed for priority pollutant (PP) metals, cyanide, VOCs, and base neutral organic compounds (BNs). Concentrations of all parameters were below NJDEP's soil cleanup criteria in effect at that time.

AOC 2 was the location of a former activated sludge aeration system which replaced the former filter bed system. In 1987 two soil samples were collected from borings advanced in the vicinity of the system. These soil samples were analyzed for PP metals and cyanide and results were below applicable soil cleanup criteria.

Soil samples were collected from a former chemical storage area (**Figure 4**) in 1987. The chemical storage area was designated AOC 3 and samples were analyzed for PP metals, cyanide, total petroleum hydrocarbons (TPH) and VOCs. TPH concentrations were elevated in two of the three samples but were attributed to asphalt pavement located immediately above the sample locations. Two additional soil samples were collected in 1988 and analyzed for BNs. Concentrations of BNs were below applicable soil remediation standards. Based on results of a soil gas survey in this area, additional soil samples were collected from AOC 3 in 1994. At that time, three borings were advanced outside a drum storage shed. Concentrations of VOCs



in the soil samples collected near the drum storage shed were below applicable soil cleanup criteria and it was concluded that AOC 3 was not a continuing source area for TCE and Freon impacts in groundwater.

An underground neutralization pit (AOC 4) was formerly located on-Site. The neutralization pit was removed in July 1993 and prior to removal the content of the pit was sampled for VOCs and metals. It was confirmed that concentrations of VOCs and metals detected in the pit were below applicable standards. The pH of the content was found to be 12.7 Standard Units (SU). The concrete neutralization pit was excavated and removed by OHM Remediation Services Corp. A soil sample was collected from the bottom of the pit prior to backfilling and was analyzed for metals. Concentrations of the pit bottom sample were below applicable soil cleanup criteria.

A 2,000-gallon UST containing gasoline (AOC 5) was removed in 1988 and soils were excavated. Post-excavation soil samples were collected and analyzed for TPH and VOCs. Concentrations of VOCs (TCE and Freon) were detected above the impact to groundwater soil cleanup criteria in effect at the time, prompting a groundwater investigation. After initial sampling of groundwater monitoring wells, it was demonstrated that groundwater was unaffected with respect to gasoline compounds and H2M concluded that no further investigation was warranted for this AOC relative to the gasoline UST. No additional soil investigation or remedial action was required by the NJDEP.

A temporary generator was formerly located adjacent to Building 410 (**Figure 4**). Prior to its removal an oil leak (AOC 6) occurred which stressed the vegetation in two areas adjacent to the generator. Visually stained soils were excavated in 1990 and post-excavation soil samples were collected for TPH and BNs. Due to elevated concentrations of TPH, both areas were further excavated and additional confirmatory post-excavation soil samples were collected. TPH results from the second set of soil samples were below applicable soil cleanup criteria.

AOC 7 refers to the location of a diesel spill occurring in 1990. Post-excavation soil samples were analyzed for TPH and BNs. Due to elevated concentrations of TPH further excavation was performed and additional soil samples were collected. TPH concentrations were below applicable soil cleanup criteria.

According to the 1992 PAR, oil-contaminated soil resulting from compressor blowdown adjacent to Building 402 was observed in 1990. This area was named AOC 8 and stained soils were excavated from the area in 1991. Post-excavation soil samples were collected and analyzed for TPH and polychlorinated biphenyls (PCBs). Based on elevated concentrations of TPH in the soil samples, the NJDEP required further excavation of AOC 8, which was conducted. Two additional soil samples were collected after the second excavation and TPH results were below applicable soil cleanup criteria. According to the 1999 RIR, the NJDEP agreed that no further action was required for AOC 8.

Stained soils (AOC 9) were observed around vent pipes and fill ports of two No. 4 fuel oil USTs located adjacent to Building 401 (**Figure 4**). Stained soils were excavated and post-excavation soil samples were collected and analyzed for TPH. Due to elevated levels of TPH additional excavation was performed and four more soil samples were collected. Analytical results for the second set of post-excavation soil samples were below applicable soil cleanup criteria.

A waste disposal area (AOC 10) for construction debris, waste liquids from facility operations and cafeteria waste was investigated in 1993 (**Figure 4**). According to an NJDEP letter dated August 29, 1994, the waste disposal area received incinerator ash, light bulbs, metal scraps, waste liquids and circuit board cleaner during the 1960s and 1970s. Test pits and soil borings were advanced within the area and fill material was identified in six of the eight test pits. Soil samples were collected and analyzed for VOCs, BNs, PP metals and TPH. Antimony was the only parameter detected above soil cleanup criteria and was attributed to laboratory interference.

A spill of approximately 25-gallons of non-PCB transformer oil (AOC 11) occurred in the maintenance courtyard in 1995. The material spilled was a hydro-treated light naphthenic petroleum distillate used in the transformer, which was situated on a concrete pad. The spill was reported to the NJDEP Spill Hotline and



Case No. 95-2-23-1551-15 was assigned. LMC's transformer service contractor, M&L Power Systems Maintenance, Inc. responded to the spill and repaired the transformer. The cleanup residuals consisting of stained soil and stone and oil-soaked pads were disposed of by Laidlaw Environmental Services, Inc. of Laurel, Maryland facility (EPA ID #MDD980554653). At the time of the spill, contamination was not believed to have impacted the subsurface beneath the transformer pad. In June 1995, widening of the area around the transformer pad was conducted and 2 ft of stone and soil were removed to accommodate a new transformer. During the widening, contamination was detected in the soil along the south side of the pad. The soils were removed and post-excavation soil sampling was conducted. Samples were analyzed for TPH and polycyclic aromatic hydrocarbons (PAHs). All results were below the direct contact soil cleanup criteria in effect at the time.

A spill which totaled one to two-gallons of gasoline (AOC 12) from a parked automobile occurred in May 1995 (Case No. 95-5-19-0844-50). The leak occurred from a fuel line of a parked van located in the parking area along Edinburgh Road near the facility's main entrance (**Figure 4**). Following the spill, impacted soil was removed from adjacent to the parking area and post-excavation soil samples were collected. Samples were analyzed for VOCs and lead and results were below applicable soil cleanup criteria.

A spill occurred in July 1996 (AOC 13) following a broken hydraulic line from a forklift. Approximately 0.5-gallons of hydraulic oil was released onto the Building 417 parking area. The NJDEP Spill Hotline was notified and Case No. 96-7-24-1417-55 was assigned. Of the 0.5-gallon spill, approximately 8 ounces were spilled onto a sand and gravel area. The impacted soils were removed and post-excavation soil samples were collected for TPH and PAHs. The results indicated an exceedance of the NJDEP unrestricted and restricted direct contact soil cleanup criteria for benzo(a)pyrene and benzo(b)fluoranthene. The 1999 RIR concluded that based on the limited nature of the release and the concentration at which the two compounds exceeded soil cleanup criteria; the spill was not a substantial risk.

A Discharge Confirmation Report was included with the GIN submittal. The discharge occurred on June 19, 1996 when a vacuum pump in the environmental testing area released oil (AOC 14) at the facility. The incident was reported by the LMC Environmental Health & Safety Manager and was the result of a faulty valve which had been left in the open position causing oil to flow from the pump to a floor drain leading to the storm sewer system, the on-Site detention basin and ultimately the Millstone River. The total quantity of discharged oil was estimated to be 4-gallons. Absorbent pads were laid on the floor around the pump and floor drain preventing any additional oil from reaching the storm sewer system. The NJDEP hotline was notified of the release and Case No. 96-6-20-0207-33 was assigned. LMC personnel inspected the detention basin and a slight sheen was observed on the water surface. Facility personnel placed a boom in the detention basin to collect oil and floor drains were plugged and capped in the environmental testing area to prevent future spills from reaching the river.

Based on the results of a soil gas survey, a soil sampling plan was developed to investigate soils in the vicinity of the highest soil gas concentrations (within Buildings 402 and 403). Sampling was performed in October 1998. Fourteen locations were sampled throughout Buildings 402 and 403 and the surrounding vicinity. Samples were analyzed for VOCs and Freon. TCE and Freon 11 were detected in the soil samples but at concentrations below applicable soil cleanup criteria. No further investigation was warranted for the soils beneath Buildings 402 and 403 (AOC 15).

H2M concluded in the 1999 RIR that extensive soil remedial investigations have been conducted at the Site since the late 1980s including several investigations to identify potential source areas contributing to VOC impacts in groundwater. Soil remediation of select areas had been conducted and no on-going source area was identified. Based on these results, no further action was recommended for Site soils.

In a letter dated April 15, 1994, the NJDEP stated that AOCs 1 through 10 were approved for NFA (**Appendix B**). According to the 1999 RIR, investigative work at the remaining five soil AOCs (AOCs 11 through 15) demonstrated that NFA for these areas was warranted. As of the date of this report, NFA has been approved by the NJDEP for AOCs 1 through 10 and AOC 14. The NJDEP has not responded to requests for NFA for AOC 11, 12, 13 or 15.



### 2.3.2.2 Groundwater

In 1989, monitoring well MW-1 was installed and sampled to assess if groundwater was affected by a former 2,000-gallon UST containing gasoline (AOC 5). Compounds indicative of gasoline were present in the first three rounds of groundwater sampling conducted in 1989 and results were below GWQS. Concentrations of TCE and Freon were detected in the groundwater above GWQS and a Site-wide groundwater investigation was initiated.

Twenty-three monitoring wells were installed in the shallow and intermediate zones in 1989 as part of the initial groundwater remedial investigation (MW-1, MW-2, MW-3, MW-4, MW-4D, MW-4D2, MW-5, MW-5D, MW-6, MW-6D, MW-6D2, MW-7, MW-8, MW-9, MW-9D, MW-10, MW-11, MW-12, MW-12D, MW-13, MW-13D, MW-14 and MW-14D). According to the 1999 RIR, monitoring well MW-6D2 was installed beneath a semi-confining clay unit (the intermediate zone). A confining clay layer exists at depths greater than approximately 140 ft below ground surface (bgs). A fire protection well was installed on the Blacklight Property (Block 5, lot 3) in March 1960 to a depth of 210 ft bgs. The Blacklight well is the only well screened beneath the confining clay layer (boring log included in **Appendix C**). Monitoring well locations are depicted on **Figure 5** and construction information presented in **Table 2**. Twelve rounds of groundwater sampling were conducted and results indicated that groundwater contamination existed in both the shallow and intermediate zones. According to a Remedial Action Work Plan (RAWP) prepared by H2M and submitted to the NJDEP in 1994, TCE impacts were migrating in a southeastern direction and well MW-4 was the closest well to the suspected source area.

Seven additional monitoring wells were installed in 1994 (MW-15, MW-16, MW-16D, MW-17, MW-17D, MW-18 and MW-18D) in the shallow and intermediate zones. Monitoring wells MW-11D (intermediate) and MW-19D (shallow) were installed in 1996. Monitoring wells MW-20, MW-20D, MW-21, MW-21D, MW-22D, MW-23, MW-24D, MW-25D and MW-26D were installed in 1998 in the shallow and intermediate zones. Well construction details were previously submitted to the NJDEP in the 1999 RIR. Cross sections for monitoring wells located on-Site are included as **Figures 6a** through **6d**. Concentrations of VOCs have historically been detected above GWQS in both the shallow and intermediate zones but investigation of the deep zone was not conducted. COC for Site groundwater were TCE and Freon 11. The highest concentrations of TCE and Freon 11 were detected in samples collected from well MW-4, the suspected source area (consistent with the location of the former chemical storage area). Freon 11 was also detected at several wells downgradient of well MW-4 but at concentrations below the GWQS at the time of the 1999 RIR submittal. Other chlorinated compounds (1,1-dichloroethene, 1,2-dichloroethane, tetrachloroethene, 1,1,2-trichloroethane, 1,2-dichloropropane and 1,1,2,2-tetrachloroethane) have historically been detected above GWQS in Site wells but at a lower frequency than the COCs. Delineation of VOCs in the shallow and intermediate zones was demonstrated in the 1999 RIR.

Monitoring wells MW-27D, MW-28D and MW-29D were installed in June 2002 in the intermediate zone. Groundwater sample results from the newly installed wells on the southern parcel (MW-28D and MW-29D) were reported by the laboratory as non-detect. TCE, 1,2-dichloroethene and Freon 11 were detected in groundwater samples collected from MW-27D but at concentrations below the GWQS. Monitoring wells MW-31S, MW-31D, MW-32S and MW-32D were installed in June 2013. Groundwater samples collected from these wells in 2013 and 2014 were reported by the laboratory as non-detect. The permit number and installation information for monitoring well MW-30D located on Block 1, lot 5 could not be located as of the date of this submittal and well records have been requested from the NJDEP. Forms A and B for the remaining monitoring wells installed between 2002 and 2013 are included as **Appendix D**.

### 2.3.2.3 Soil Gas

A Site-wide soil gas survey was conducted by Tetra Tech, Inc. of Pasadena, California in February 1998 (**Appendix E**). Soil gas sampling locations corresponded to areas where solvents or other chemicals that contained VOCs were stored, used or potentially released to the subsurface soil. These areas included Building 402, 403, the north and central areas of Building 401, Building 421, the former drum storage shed in



the courtyard south of Building 402, Buildings 404 and 405, the drum storage shed located at the courtyard east of the buildings, the hazardous waste storage area, the former neutralization pit near MW-5, the cycle-let building, the former wastewater treatment systems/leach field, Building 500 and the former drum storage area east of Buildings 416 and 417. In addition to these specifically targeted areas, the soil gas survey also included a 500-foot grid across the Site. A total of 128 soil gas samples were collected and analyzed for VOCs, Freon 11 and Freon 113. Of the 128 samples, three primary VOCs (TCE, Freon 11 and Freon 113) were detected at elevated concentrations in Buildings 402, 402A and 403 and the immediately surrounding vicinity at the 5-foot depth (AOC 17). The maximum concentration of Freon 11 was 929,119 µg/l collected from the 5-foot sample at location SV-33 in the northeast portion of Building 402. The highest concentration of Freon 113 was 759.26 µg/l. The Freon 113 impacts appeared to be localized in the Building 402/403 area and the area east of these buildings. Freon 12 was detected in sample SV-33 at Building 402. TCE was detected above 100 µg/l in three samples within Buildings 402 and 403. The highest TCE concentration was 792.55 µg/l.

The 1998 survey demonstrated that TCE and Freon were present at higher concentrations in soil gas collected in the vicinity of the former chemical storage area (AOC 3) and the Buildings 402/403 area than at any other Site location. AOC 3 was presumed to be a potential source area for VOCs in groundwater.

Arcadis conducted a soil gas investigation in 2007 (**Appendix E**). Soil gas locations from the 2007 investigation are presented on **Figure 7**. The conceptual site model developed for the 2007 VI investigation considered the presence of VOCs in groundwater within 100 ft of Site buildings. Concentrations of tetrachloroethylene (PCE) and TCE at the time of the investigation exceeded the NJDEP Indoor Air Screening Levels (IASL) in shallow wells on the northern parcel and in intermediate wells on the southern parcel. Sub-slab soil gas samples were collected from Buildings 100, 200 and 300. Building 100 reportedly contained a basement and field technicians observed a potential vapor barrier at the time of drilling. Near slab soil gas samples were collected from Building 400. As presented in Arcadis's VI Workplan, sub-slab soil gas samples were not appropriate for Building 400 since it contained a vapor barrier. Sub-slab and near slab soil gas samples were collected from the Blacklight Power building. According to the 2007 VI Report, portions of the Blacklight Power building were built with a vapor barrier in place. At the time of the VI investigation, there were no buildings on the Woodmont site (block 5, lot 5) located east of the Blacklight Power site. Sampling at this location included only soil gas samples. Two soil gas samples were also collected from block 5, lot 27.05 where a daycare center was proposed. A residence (block 5, lot 2) located east of the main parcel was also sampled. Soil gas samples were analyzed for USEPA Method TO-15 by Accutest Laboratories of Dayton, NJ.

All results from Buildings 100, 200, and 300 were reported below the NJDEP Soil Gas Screening Levels (SGSL). PCE, TCE, and Freon 11 exceeded the NJDEP non-residential SGSLs in three, two, and one sample(s), respectively collected near Building 400. All exceedances noted near Building 400 were in the deeper samples, collected at 25 ft bgs. All shallow soil gas samples collected near Building 400 were below the NJDEP SGSLs for all constituents.

One COC (PCE) was detected above SGSL at the Blacklight Power building (location SG-2) at a depth of 23 ft bgs. Arcadis collected a second sample at this location at 5 ft bgs and that result was below the SGSL. PCE was also detected above the SGSL from the deep sample collected at the Woodmont property (sample SG-03). The shallow soil gas sample collected at 7 ft bgs was not detected above the reporting limit. All results from the shallow and deep soil gas samples collected from the proposed daycare site were reported below the SGSL. No Site-related COCs were detected in soil gas samples from the adjacent residence but benzene, which is not a COC, was detected above the residential SGSL in sample SG-9 (**Figure 7**). Arcadis concluded that the benzene could be attributed to the use of gasoline at the residential property and was not related to the Site since benzene had not been detected in groundwater from the nearby well cluster. No further VI evaluation was warranted.



### 2.3.3 Historic Remedial Activities

According to a Remedial Action Progress Report (RAPR) prepared by Arcadis and dated February 2009, previous remedial studies for the Site's groundwater AOC included an in-well air sparging (IWAS) pilot study and an enhanced reductive dechlorination (ERD) pilot study. Results from the IWAS and ERD pilot studies indicated that both remedial alternatives were not feasible technologies to address VOC impacts in Site groundwater. ARCADIS implemented a remedial approach consisting of a groundwater extraction and treatment system (GWTS) followed by discharge to surface water to mitigate dissolved-phase VOC concentrations in the aquifer beneath the Site. Startup of the GWTS was initiated in January 2007. Based on VOC concentrations across the Site and accessibility, three extraction wells (RW-1, RW-2, and RW-3) were installed. The three extraction wells recovered groundwater and pumped it through underground piping to an on-Site treatment building, where VOCs were removed and the pH of the extracted water (which ranges from approximately 3 to 5 S.U.) amended with dilute sodium hydroxide to maintain compliance with the surface water discharge permit limit of 6 to 9 S.U. Treated groundwater was conveyed through underground piping to an existing stormwater outfall channel and discharged to the Millstone River under a New Jersey Pollutant Discharge Elimination System (NJPDES) Permit for General Remediation Clean-up (BGR Permit), Permit Number NJG0163091, Program Interest Identification (PI ID) Number 283190, which was issued on April 3, 2006. Additionally, the NJDEP issued an Air Pollution Control Pre-Construction Permit and Certificate to operate an air stripper on October 28, 2004, and issued an amended Air Permit on June 26, 2006, due to a modification to the original treatment system design. A Treatment Works Approval (TWA) for the treatment system was issued by NJDEP on June 14, 2006. An environment improvement pilot test (EIPT) air permit was issued in May 2009 to permit operation of an air stripper as part of a pilot study. This permit was renewed in August and December 2009 to enable continuation of pilot study evaluations.

The treatment system was operated intermittently due to permit exceedances (TSS and whole effluent toxicity (WET) compliance) from 2007 through 2009. When operational, the treatment system reportedly removed approximately 99% of TCE from the pumped groundwater during normal system operations. A MNA feasibility evaluation was conducted that determined that the plume was stable with MNA as the most optimum remedy for Site groundwater. As a result, the Arcadis LSRP selected MNA as the selected remedy for shallow groundwater and approved decommissioning of the treatment system. The treatment system shut down in November 2009 and was decommissioned in 2014.



## 3.0 SITE TOPOGRAPHY AND DRAINAGE, GEOLOGY AND HYDROGEOLOGY

### 3.1 Site Topography and Drainage

The Site is located at an approximate elevation of 90 ft above mean sea level (amsl) and the local surface topography slopes to the northeast towards the Millstone River. The Site lies in the Millstone River Basin and the eastern property boundary is hydraulically influenced by a tributary which flows northward to join the Millstone River (**Figure 2**). Surface water is diverted via storm sewers into the Millstone River. According to a Phase I submitted to the NJDEP in 1997 wetlands are located on-Site. The overburden hydrogeology is divided into shallow, intermediate, and deep aquifer zones. The aquifer zones are separated by multiple discontinuous clay layers that have helped to impede the movement of Site contaminants through the water column. Groundwater flow direction in the shallow zone is variable, but the primary flow directions are east-southeast and northeast towards the river, flow in the intermediate zone is primarily east-southeast and southwest towards Bear Brook, and flow in the deep zone is primarily a southeasterly direction with an easterly component to the northern portion of the Site (**Figures 8a through 8c**).

### 3.2 Site Geology

The Site is located within the Coastal Plain physiographic province of west-central New Jersey. The Site and surrounding area is underlain by unconsolidated deposits of Cretaceous-aged sand, silt, clay, and gravel that rest unconformably on pre-Cretaceous aged bedrock. The geology is also characterized by various sized and colored clay lenses within the upper unconsolidated sediments. Geologic maps for the area indicate that the Cretaceous aged Potomac-Raritan-Magothy (PRM) aquifer system is present beneath the Site. The uppermost deposits that are present beneath the Site and above the PRM are the hydrogeologically undifferentiated deposits of the Pleistocene age Pennsauken Formation. The Site lies in the area between Princeton Junction and Hightstown, where the Pennsauken was deposited in a pre-Pleistocene river valley. Pennsauken deposits vary lithologically from coarse, well-sorted gravels to well-sorted sands, sands and gravels and relatively impermeable clayey gravels and sands.

Site geology has been characterized through soil borings, monitoring well installation (most recently, the supplemental remedial investigation), and review of drillers' logs. Production well logs for former on-Site wells and logs for nearby municipal wells located in East Windsor, published in the USGS document "Selected Borehole Logs and Drillers' Logs, Northern Coastal Plain of New Jersey (1989)" indicate a clay layer is present from approximately 100 ft bgs to nearly the bedrock surface at approximately 235 ft bgs. This clay unit is interpreted to be the Merchantville-Woodbury confining unit that caps the PRM aquifer system. The Merchantville-Woodbury clays are typically composed of varying gray and black clay with sand and gravel lenses near the bedrock surface (approximately 235 ft bgs) (H2M Group, 1999). The thickest clay layer (grey to grey-white in color) identified during RI activities is present at the base of cross sections A-A' and D-D' at a depth of approximately 140 to 185 ft in the Blacklight Well and in monitoring wells MW-33D2 (145 ft bgs) and MW-34D2 (148 ft bgs). This clay unit was not observed in monitoring wells MW-22D2, MW-29D2, MW-30D2, and MW-35D2 at depths of 143 ft, 155 ft, 155 ft, and 170 ft respectively. These data suggest that this clay is a lateral, thinner part of the Merchantville-Woodbury confining clay. Deposits above this deep clay unit are composed of interbedded thin clay layers with fine to medium sand that have been classified as the Pennsauken Formation (**Figures 6A, 6B, 6C, and 6D**).

All of the monitoring wells were completed within these interbedded, and sometimes laterally discontinuous deposits, which may explain localized perched water table conditions as discussed below.



### 3.3 Site Hydrogeology

The Site monitoring wells were completed within the interbedded, and sometimes laterally discontinuous overburden deposits of the Pennsauken Formation. According to the USGS report: *Hydrogeologic framework of the New Jersey Coastal Plain*, the associated hydrogeologic unit is classified as “undifferentiated” (Zapeczka, 1989). The hydrogeologic characteristics of this unit are that it acts locally as a confining bed, but can be interconnected to the underlying aquifers. At this Site, it appears that the undifferentiated Pennsauken unconformably overlies the Merchantville-Woodbury confining unit. Depth to groundwater across the Site ranges from 5.88 ft in MW-24D to 39.65 ft below grade in MW-30D2.

The overburden aquifer has been divided into three zones – the shallow zone ranging from surface grade to a depth of 14 to 50 feet bgs; an intermediate zone ranging from as shallow as 28 feet bgs to a depth of between 66 and 120 feet bgs; and a deep zone ranging from as shallow as 75 feet bgs to a depth of 140 to greater than 170 feet bgs. The aquifer zones consist of multiple discontinuous clay layers that have impacted Site contaminant flow through the aquifer system.

Horizontal groundwater gradients were calculated for each groundwater zone using data from the June 8, 2015 groundwater gauging event. Please see section 4.3.2 for a more detailed discussion of aquifer properties. The average shallow zone gradient was 0.009 ft/ft while the average intermediate zone gradient was 0.001 ft/ft. The average groundwater gradient in the deep zone was calculated from one transect as 0.002 ft/ft.

The vertical hydraulic gradients were calculated between the “shallow-to-intermediate” zones and between the “intermediate-to-deep” zones using data from June 8, 2015. The average vertical gradient for the “shallow-to-intermediate” zone is approximately 0.094 ft/ft and is downward. The vertical gradients in the “intermediate-to-deep” zone are variable. A strong upward gradient is observed in the northwestern corner of the Site. A downward gradient is observed in the northeast corner of the Site. In the southeastern portion of the Site, where the newly-installed deep wells are present, a strong downward gradient (0.085 ft/ft) is observed at well pair MW-22D/MW-22D2.

Based on the slug tests conducted at the six newly-installed monitoring wells (supplemental RI wells), an estimate of the calculated hydraulic conductivity values for the deep aquifer ranged from 38.9 ft/d to 233.9 ft/d. These values are as expected due to the wide range of overburden materials present at the Site. The average hydraulic conductivity generated from the mean of all six wells was 112 ft/d and is representative of the deep (120 to 160 ft bgs) aquifer materials at the Site.

Using groundwater elevations measured during the June 8, 2015 gaging event, a groundwater velocity was determined for the deep zone using data from a transect between monitoring wells MW-4D2 and MW-22D2. The velocity calculated for this transect in the deep zone is equal to 1.12 ft/d.

Mounded groundwater conditions have been documented in the vicinity of recharge basins and near well MW-18 (RIR, H2M, 1997). The mounding at well MW-18 was attributed to the active discharge to groundwater from the on-Site recharge basin. Geology at this location, consisting of silty sands intermixed with low permeability clay to approximately 35 ft bgs also contributed to this condition. Perched water conditions were documented at the location of well MW-13, which is screened across a clay lense and well MW-4, where a clay lense is present at approximately 25 ft bgs. Saturated soils at MW-4 occur at 18 to 20 ft bgs (approximately 10 ft higher than that found in other wells in the vicinity). The presence of saturated soils at 18 to 20 ft and a clay lense at approximately 25 ft indicates that the groundwater mound at MW-4 is due to perched conditions.

#### 3.3.1 Overburden Shallow Zone

The shallow aquifer zone is defined as the zone above the discontinuous uppermost clay unit that is consistently present in the southern portion of the Site at depths of approximately 14 ft to 50 ft bgs and



includes wells screened from approximately to depths ranging from 14 ft to 50 ft. This shallow clay unit is intermittent or missing completely in the northern portion of the Site.

Groundwater flow direction in the shallow zone is towards the Millstone River and is bifurcated. As depicted on **Figure 8a**, groundwater flows in an east-southeastern direction on the main facility parcel and in a northeastern direction on the Building 500 parcel across Edinburg Road. Mounding is evident at MW-18 and is consistent with conditions observed previously at the Site. Additional mounding is evident at MW-16 in the northwest corner and at MW-31S in the southeast corner. The causes for these mounds may be due to perched water table conditions and/or localized recharge basins. The observed overall groundwater flow direction towards the north and east is consistent with the regional groundwater flow direction, that is, towards the Millstone River which is the local discharge point.

### 3.3.2 Overburden Intermediate Zone

The intermediate aquifer is defined as the zone above a clay unit that averages between 2 and 15 ft thick, is intermittently present across the Site (forming the base of the intermediate zone), and ranges in depth from approximately 60 ft to 120 ft bgs. This intermediate clay unit appears to pinch out in the south and southeastern portion of the southern parcel of the Site. Downward contaminant migration has been limited by the presence of this intermediate clay in most areas of the Site. Wells in the intermediate zone are screened from as shallow as 28 ft to a depth of 66 ft and 120 ft. Groundwater flow direction in the intermediate zone is east- southeast and south-southwest toward Bear Brook (**Figure 8b**). Groundwater flow in the intermediate flow zone is influenced by the slope of the clay unit. The elevation of the clay unit across the center of the Site is greatest near well MW-18D and lowest or absent to the southeast near wells MW-14D and MW-22D. Cross sections showing the change in clay surface elevation across the Site are depicted in **Figures 6a, 6b, 6c, and 6d**.

### 3.3.3 Overburden Deep Zone

The deep aquifer zone is defined as the portion of the aquifer lying below the intermediate clay unit, but above the confining clay unit (approximately 140 ft to greater than 170 ft). Groundwater flow is primarily in a southeasterly direction with an easterly component to the northern portion of the Site and is consistent with previous findings for the Site (**Figure 8c**). The groundwater elevations obtained from the six newly installed deep wells confirm this flow direction.



## 4.0 SUPPLEMENTAL REMEDIAL INVESTIGATION AND MONITORING PROGRAM

### 4.1 Supplemental Remedial Investigation Field Activities

#### 4.1.1 Underground Utility Clearance

Prior to the initiation of intrusive fieldwork, the drilling subcontractors, Aquifer Drilling & Testing, Inc. (ADT) contacted New Jersey One Call to arrange for the location and marking of all underground utilities in the vicinity of the proposed soil boring and monitoring well locations. Where possible, AECOM worked directly with the representatives of each utility company to ensure that all underground lines were properly identified and marked-out.

Utility clearance for the RI was performed by NAEVA Geophysics, INC under contract to AECOM. NAEVA used ground-penetrating radar (GPR) and electro-magnetic (EM) survey methods to scan each proposed investigation location. The NAEVA GPR report is included as **Appendix F**. Prior to advancing soil borings using a drill rig, each boring location was hand excavated by ADT to a minimum depth of 5 ft bgs with 2 ft by 2 ft dimensions. Excavations were performed to locate any utilities that may have been marked incorrectly, are privately owned, have been abandoned, were not known to exist, or were not detectable by surface investigation methods. Hand-clearing was performed by the drilling contractor utilizing shovels, posthole diggers, and other non-mechanical means.

#### 4.1.2 Vertical Profile Borings

##### 4.1.2.1 Soil Sampling

Vertical profile borings (VPB) were completed at six locations (VPB-1 through VPB-6) during the supplemental RI (**Figure 9**). A rotosonic drill rig was used to advance each location to a maximum depth of 170 ft bgs. The borings were drilled under the supervision of an AECOM geologist. Continuous soil samples were collected from 5 ft bgs to the base of each borehole. Soil samples were collected for observation from borings by driving a 4-inch diameter, 5-foot long sample barrel through the sample interval and then advancing the 6-inch outer casing through the sample interval. Soils were then emptied into 5-foot plastic liners for evaluation. All boreholes were advanced in this manner from ground surface to depth. All soil was logged for composition and evaluated for visual and olfactory impacts, and presence of clay. A photoionization detector (PID) was used to field screen the soil for the presence of VOCs. The lithology of the upper 5 ft of each boring was logged during the utility preclearance. Boring logs are provided in **Appendix C** of this report. Soil samples were not collected for laboratory analysis.

During drilling activities, discrete interval groundwater sampling was conducted to collect grab samples at discrete depths, as described below. All downhole drilling equipment was decontaminated by steam cleaning between each boring location. Upon completion, boreholes were completed with permanent monitoring wells.

##### 4.1.2.2 Discrete Interval Groundwater Sampling

During advancement of each VPB, a series of groundwater grab samples were collected in the deep aquifer at select intervals using a discrete sampler. This tool involved the use of a two-foot long stainless steel well screen that telescoped below the six-inch diameter over-ride casing when the drill casing was pulled back several ft. The well screen was 10-slot in size (0.010-inch), two ft long and two inches in diameter. As the casing was retracted, the formation would settle around the well screen of the discrete sampler. Access to the discrete interval sampler was via a small diameter drill stem that connected to the top of the discrete sampler.



For five of the six borings (VPB-1, VPB-2, VPB-3, VPB-5 and VPB-6), a total of four discrete groundwater grab samples were collected from each boring. At VPB-4, clay was encountered from 142.5 ft bgs to depth, prohibiting the collection of groundwater grab samples within that interval. In general, the depth of the first groundwater grab sample was collected directly below the bottom of the intermediate clay unit where present (between 93 ft bgs and 155 ft bgs). The remaining sampling intervals were adjusted according to the bottom depth of the deep clay unit. After development, a groundwater grab sample was collected using a 0.85-inch Geotech® bladder pump inserted down the inner casing of the drill stem. The groundwater grab sampling interval for each boring is provided in **Tables 1 and 3**.

Slug tests were conducted at each temporary groundwater sampling interval using a pneumatic slug testing method. Issues were encountered including potential leakage of the drill stem and well development issues that prevented the collection of good quality slug test data during this part of the study. Therefore, no formal slug test data analysis was performed for the temporary sampling intervals. The amount of time for the water levels to recover following a pneumatic pulse was used as a screening tool to evaluate the relative permeability of each discrete sampling zone. Slug tests were successfully performed on the permanent monitoring wells installed in each boring and results are discussed below and presented in **Appendix G**.

#### 4.1.2.3 Temporary Well Point Development

Each discrete groundwater sampling interval was developed in an attempt to remove fine sediments from within the discrete sampler to promote good hydraulic connection between the temporary sampler and the formation. An inertial style pump was used for well development, and a Horiba U-52 was used to read water quality parameters, including turbidity, dissolved oxygen (DO), Oxygen Reduction Potential (ORP), pH, specific conductivity, and temperature.

Each discrete sampling interval was developed until approximately three well volumes of water were removed or until turbidity was low (less than 25 Nephelometric Turbidity Units [NTU]) and ORP and DO stabilized. Water quality data monitored during development is summarized on the well development forms provided in **Appendix H**. All of the development water was containerized in 55-gallon open-top drums.

#### 4.1.2.4 Groundwater Analytical Sampling

The grab groundwater samples collected during the Supplemental RI were analyzed for Target Compound List (TCL) VOCs plus TICS by USEPA SW-846 Method 8260B. These analyses were performed by Accutest Laboratories in Dayton, NJ (Certification # 12129) in accordance with NJDEP Protocols.

### 4.1.3 Monitoring Well Installation

The selection of the screened intervals for the permanent wells installed at the VPB locations were based on results of the analytical groundwater grab samples. Screen locations were biased towards the areas of impact reported during the temporary well investigation. Grab groundwater samples were collected and analyzed on an expedited turnaround in order to define a clean zone and achieve vertical delineation. Once vertical delineation was achieved, screened intervals were selected and the temporary wells were finished as permanent monitoring wells. Analytical results from the temporary wells are presented in **Table 3** and **Figure 9**. Overburden monitoring wells were installed at each of the six VPB locations as follows:



Vertical Profile Boring ID	Monitoring Well ID	Date Well Completed
VPB-1	MW-22D2	4/29/2015
VPB-2	MW-30D2	6/5/2015
VPB-3	MW-29D2	5/29/2015
VPB-4	MW-33D2	5/26/2015
VPB-5	MW-34D2	5/1/2015
VPB-6	MW-35D2	4/20/2015

The wells were installed using roto sonic techniques in accordance with monitoring well installation and development procedures outlined in the AECOM SOW (**Appendix A**). The monitoring wells were constructed of 2-inch PVC with 5-foot well screens and a 2-foot sump at the base of the well. A sand pack extends from the base of each well screen to at least 1-foot above the top of the screened interval. The sand pack is overlain by a minimum, 2-foot bentonite slurry seal and the remaining annular space is filled with bentonite grout to within approximately 1-foot of ground surface. Flush-mounted limited access road boxes were used to complete the wells in visible areas and stick ups were used in all wooded areas. The areas surrounding the wells were restored to pre-drilling conditions. Monitoring well construction logs are provided in **Appendix D**. Monitoring well Forms A and B for the six new wells are also provided in **Appendix D**. A well construction summary is provided in **Table 2**.

#### 4.1.3.1 Well Development

The overburden monitoring wells were developed a minimum of 24 hours after well installation to remove fine sediments from within the well, well screen, sand pack, and aquifer to promote good hydraulic connection between the well and the formation. Various techniques were used for well development, including surging using a submersible pump that was not running, a one stage downhole centrifugal pump, and submersible pump.

All of the wells installed were developed until approximately 10 well volumes of water were removed or until turbidity was low (less than 25 NTU) and groundwater pH, temperature, and conductivity parameters stabilized. Water quality data monitored during well development are summarized on the well development forms provided in **Appendix H**. All of the development water was containerized in 55-gallon open-top drums.

#### 4.1.3.2 Slug Testing

Hydraulic conductivity tests (slug tests) were performed in each newly installed permanent monitoring well (MW-22D2, MW-29D2, MW-30D2, MW-33D2, MW-34D2 and MW-35D2) to obtain information on the hydraulic properties of the deep aquifer zone. The slug tests were performed using a pneumatic method which involved installing pressure transducers inside each well and applying slight pressure with a hand pump to each overburden well while recording water level displacement versus time. The general steps that were performed during slug testing are as follows:

- static water level was measured to the nearest 0.01-foot;
- a pressure transducer, attached to a data logger, was placed into the well and the water level was allowed to equilibrate to static conditions;
- the well was pressurized to allow for approximate 1.0-foot, 2-foot, and 3- foot displacement of the water level. The pressure was released and the water level was recorded every 0.5-seconds with the pressure transducer and data logger until the water level equilibrated; and



- this process was repeated a minimum of three times in each well.

The data from these tests were analyzed using commercially-available software (i.e., AQTESOLV) to calculate average hydraulic conductivity values for the overburden. The slug test data evaluation and results are discussed below and included in **Appendix G**.

#### 4.1.4 Site Survey

The RI monitoring well locations were surveyed by Vargo Associates, a surveyor licensed in the State of New Jersey. These locations were surveyed in the 1983 North American Datum (NAD 83) of the New Jersey State Plane Coordinate System and were referenced to the 1988 North American Vertical Datum (NAVD88). Elevations were surveyed to the nearest 0.01-foot. The new monitoring well locations are presented in **Figure 5**.

#### 4.1.5 Management of Investigation Derived Waste (IDW)

The management of IDW was performed by AECOM field personnel during the RI activities at the Site. Waste generated during Site activities included soil cuttings, and groundwater purge and development water. All of the waste was containerized in open-top 55-gallon drums. The drums were collected at the end of each day and transported to the equipment storage area on-Site. Drums were labeled and composite samples were collected by Recovery Environmental Services (RES) for waste characterization analysis. Due to an excess of water drums a frac tank was used to containerize water on-Site. All water drums were consolidated into the frac tank by RES. All IDW was transported off-Site by RES for disposal.

### 4.2 Quarterly Groundwater Monitoring Program

The objectives of the quarterly monitoring events were to collect and analyze groundwater samples to assess contaminant concentrations in support of developing a remedy for the Site. The quarterly monitoring activities were conducted in accordance with the NJDEP Field Sampling Procedures Manual (FSPM), August 2005 (updated April 2011). Groundwater sampling was conducted by Handex Consulting & Remediation (HCR) and samples were analyzed by Spectrum Analytical, Inc. (New Jersey Laboratory Certification #RI001). Generally, the results from the last four quarters of groundwater monitoring (September and December 2014, March and June 2015) sampling events are consistent with historic downward trends or show stable fluctuating concentrations for the COCs. The following sections describe the most recent sampling event conducted in June 2015 and quarterly reports for the remaining three events are included as **Appendix I**.

#### 4.2.1 Water Level Measurements

AECOM arranged for the collection of water level ( $\pm 0.01$  ft) and total well ( $\pm 0.1$  ft) depth measurements from all monitoring wells (61 existing wells and 6 newly installed vertical delineation wells) in accordance with the approved Site-specific Sampling and Analysis Plan (SAP, AECOM, 2014). The water level and total well depth measurements (presented in **Table 4**) were collected during the September 2014 and June 2015 monitoring events by HCR. Groundwater elevation measurements were separated to depict shallow, intermediate and deep aquifer regimes. An AECOM groundwater monitoring professional generated groundwater contour maps, based on gauging measurements, which were transposed onto the most recent AutoCAD Site map to produce shallow, intermediate and deep groundwater contour plots (**Figures 8a through 8c**). These groundwater contour maps depict the current interpretation of the groundwater elevation and illustrate groundwater flow direction in each zone. In general, the flow in each zone is towards the Millstone River and its tributaries. Groundwater flow is consistent with previous findings for the Site.



## 4.2.2 Groundwater Sampling

AECOM arranged for the collection and analysis of groundwater samples including Quality Control (field and trip blank) samples in accordance with the 2014 Site-specific SAP. Groundwater sampling details for September and December 2014 and March 2015 were summarized in Quarterly Groundwater Monitoring Reports included as appendices to this report. Groundwater sampling for the second quarter (June/July 2015) was conducted at 16 monitoring well locations (MW-4, MW-9, MW-12, MW-12D, MW-13D, MW-14D, MW-18D, MW-22D, MW-22D2, MW-27D, MW-29D2, MW-30D2, MW-31D, MW-33D2, MW-34D2 and MW-35D2) by HCR and AECOM. The Site-specific Health and Safety Plan (HASP) was reviewed by HCR and AECOM prior to the field events and tailgate safety meetings were held each morning. Monitoring wells were purged and sampled utilizing low flow sampling methods in accordance with the NJDEP FSPM. Monitoring wells were purged using a Grundfos Redi-flo<sup>®</sup> submersible pump powered by a generator. The submersible pump was equipped with 3/8-inch Teflon<sup>®</sup>-coated dedicated tubing and was disassembled and decontaminated between sample locations. The Teflon<sup>®</sup>-coated tubing is left in each monitoring well for use during the next sampling mobilization. Samples were collected directly from the dedicated Teflon<sup>®</sup>-coated tubing for analysis of TCL VOCs, 1,4-dioxane, total and dissolved arsenic, iron and manganese, sulfate, nitrate, chloride, sulfide, Total Organic Carbon (TOC), methane, ethane, ethene and dissolved hydrogen. The pump was set approximately 2 ft above the bottom of the monitoring well screen. The depth intervals were consistent with 2014 quarterly sampling event depths.

HCR is certified under the NJDEP Laboratory Certification Program (Lab ID #11042) for monitoring and recording of the following water quality parameters during purging: pH (SU), temperature (°C), specific conductance (mS/cm), dissolved oxygen (mg/l), oxidation reduction potential (mV) and turbidity (NTU). AECOM is also certified under the NJDEP Certification Program (Lab ID #12995). Low flow groundwater sampling collection records are provided as **Appendix J**. It should be noted that pH values recorded in June 2015 ranged from 3.0 – 12.5 SU. Low pH values are consistent with previous groundwater sampling events for the Site. A summary of the June 2015 sampling event results is included as **Table 5**. Field parameters were collected using a laboratory certified Horiba U-52 (US Environmental Equipment Company, Laboratory ID #11037) and were recorded in five minute intervals. A duplicate field parameter reading was collected every 20 minutes by a HCR/AECOM technician to determine if recalibration was necessary. Monitoring wells were purged until stabilization of field parameters was achieved. Equipment calibration information is provided as **Appendix K**. Water generated during well purging and equipment decontamination procedures was handled and managed as specified in the approved Project Operating Procedure (POP) previously submitted to and approved by LMC. HCR and AECOM technicians established a decontamination area in the vicinity of each sampling location and removed non-hazardous wastes from the Site upon completion of sampling activities. Field technicians wore nitrile gloves when handling sample equipment and collecting samples, which were changed between sample locations. During sample transfer, agitation and exposure to the atmosphere was minimized to prevent volatilization of possible contaminants. Groundwater samples were transported to Spectrum Analytical Inc. of North Kingstown, Rhode Island for analysis. Historic groundwater analytical results are provided in **Table 6**.

## 4.3 Supplemental Remedial Investigation Results

### 4.3.1 Field Observations

There were no visual or olfactory impacts encountered during boring installation. Soils were screened with a PID and all readings were reported by the field geologist as zero parts per million (ppm). There was no soil staining observed during drilling. Boring logs are included as **Appendix C**. The following geologic information was observed during the installation of the vertical profile borings.



#### VPB-1

Three clay units were observed separated by sand units. The shallow clay unit consisting of silty clay and trace fine gravel from 0-4 ft bgs was stiff, with low plasticity, and trace lignite from 16-17 bgs and from 28-35 ft bgs. The intermediate clay unit was stiff, with low plasticity, and trace lignite observed from 86-93 ft bgs. The deep clay unit was not observed in this boring. Sand units encountered included silty fine sand, fine sand, and coarse sand units. The boring was terminated at 143 ft bgs.

#### VPB-2

Principle units of clay were not observed. Sand with clay lenses throughout was observed from 15-20 ft bgs and, 33-40 ft bgs. Sand units observed consisted of well graded, poorly graded, and silty sand. The boring was terminated at 155 ft bgs.

#### VPB-3

Two clay units were observed separated by sand units. The shallow clay unit consisted of a medium to stiff silty clay with lignite present from 28.5-30.5 ft bgs and from 32-34 ft bgs separated by a sand lens. The intermediate clay unit was observed from 78-78.5 ft bgs. The deep clay unit was not observed. Sand units observed consisted of fine poorly graded and silty sands. The boring was terminated at 155 ft bgs.

#### VPB-4

Three clay units were observed separated by sand units. The shallow clay unit consists of stiff, low plasticity, with trace amounts of lignite. The shallow clay unit was observed from 15-20 ft bgs and 25-49 ft bgs, intersected with a fine sand unit. The shallow clay unit includes an interbedded sand and clay unit from 35-47 ft bgs. The intermediate clay unit consists of hard, dense clay with trace lignite from 120-122 ft bgs and 134-135 ft bgs and is separated by a fine sand/silty sand unit. The deep clay unit was observed from 143-155 ft bgs. The sand units encountered include fine to coarse sands, silty sands, and well graded poorly sorted sand. The boring was terminated at 155 ft bgs.

#### VPB-5

Three clay units were observed separated by sand units. The shallow clay unit consisted of hard clay with low plasticity and trace lignite was observed from 7-17.5 ft bgs and 25.5-36.5 ft bgs. There was an intersecting fine sand unit from 10-11.5 ft bgs. The intermediate clay unit consisting of a sandy clay and hard, plastic clay was observed from 121.5-122 ft bgs and from 125.5-130 ft bgs. The deep clay unit consisting of hard clay with low plasticity was observed from 148-155 ft bgs. The sand units observed include fine, silty, poorly sorted well graded sand. The boring was terminated at 155 ft bgs.

#### VPB-6

Two clay units were observed separated by sand units. The shallow clay unit consisting of silt, low plasticity, hard, trace lignite observed from 6-7 ft bgs and from 20-40 ft bgs. An interbedded sand and clay unit was observed from 40-50 ft bgs. The intermediate clay unit consisting of hard, low plasticity observed from 112-120 ft bgs and clay consisting of trace gravel and silt from 138-140 ft bgs. The deep clay unit was not observed. The sand units consist of fine, silty, well sorted, poorly graded sand. The boring was terminated at 170 ft bgs.

### **4.3.2 Aquifer Properties and Groundwater Flow Velocity Estimate**

This section provides a summary of hydraulic gradients for the different aquifer zones and groundwater flow velocity for the deep aquifer. Both horizontal and vertical gradients were calculated for each of the three



aquifer zones: shallow, intermediate and deep. Using hydraulic conductivity values from the slug tests completed in the deep wells, groundwater flow velocity was calculated for the deep aquifer zone.

#### 4.3.2.1 Hydraulic Gradients

The hydraulic gradients for the Site were calculated using water levels collected during the June 8, 2015 water level gauging round. Due to the variability of the groundwater flow directions in the shallow zone, three separate transects were used to calculate the overall horizontal gradient for the shallow zone. Horizontal hydraulic gradients in the shallow aquifer range from 0.001 ft/ft in the central part of the Site to 0.021 ft/ft in the northern portion of the Site where mounding has been documented. An average horizontal hydraulic gradient equivalent to 0.009 ft/ft was calculated for the shallow zone.

Two separate transects were used to calculate the overall horizontal gradient for the intermediate zone. Horizontal hydraulic gradients in the intermediate aquifer for both transects are equal to 0.001 ft/ft and therefore provide an average horizontal hydraulic gradient for the intermediate zone.

A single transect was used to calculate the horizontal gradient in the deep zone. The horizontal gradient between wells MW-4D2 and MW-22D2 is equal to 0.002 ft/ft. A summary of the horizontal hydraulic gradients for each zone is provided in **Table 7**.

The vertical hydraulic gradients were calculated between the “shallow-to-intermediate” zones and between the “intermediate-to-deep” zones. Water levels were collected during the June 8, 2015 gauging round in twelve pairs of wells that cover the “shallow-to-intermediate” zone. Six pairs of wells were included within the “intermediate-to-deep” zone. All but one well pair (MW-21/MW-21D) showed downward gradients in the “shallow-to-intermediate” zone. Strong downward gradients ranging from 0.320 to 0.365 ft/ft were observed in well pairs MW-16/MW-16D and MW-18/MW-18D and are believed to be due to localized mounding. The average vertical gradient for the “shallow-to-intermediate” zone is approximately 0.094 ft/ft and is downward.

The vertical gradients in the “intermediate-to-deep” zone are variable. A strong upward gradient is observed in the northwestern corner of the Site at well pair MW-4D/MW-4D2. A downward gradient of 0.007 ft/ft is observed at well pair MW-6D/MW-6D2 in the northeast corner of the Site. In the southeastern portion of the Site where the newly-installed deep wells were installed there is a predominantly downward gradient, with the exception of well pair MW-29D/MW-29D2 which had an upward gradient of 0.007 ft/ft. A strong downward gradient (0.085 ft/ft) is observed at well pair MW-22D/MW-22D2. A summary of the vertical hydraulic gradients for each zone is provided in **Table 8**.

#### 4.3.2.2 Groundwater Flow Velocity for Deep Aquifer

Based on the slug tests conducted at the six newly-installed monitoring wells, an estimate of the calculated hydraulic conductivity values for the deep aquifer ranged from 38.9 ft/d to 233.9 ft/d. This range is not unexpected given the wide range of overburden soils that included gravel, sands, silts and clays with variable degrees of sorting. The poorly sorted sands gave rise to some of the higher hydraulic conductivities observed in the deep aquifer zone. The average hydraulic conductivity generated from the mean of all six wells equals 112 ft/d and is representative of the deep (120 to 160 ft bgs) aquifer materials at the East Windsor Site. The slug test data and hydraulic conductivity calculations are presented in **Appendix G**.

Using the horizontal gradient of 0.002 ft/ft for the deep zone and the representative hydraulic conductivity value of 112 ft/d, an estimate of the groundwater seepage velocity is provided. An effective porosity of 20% (0.20) was estimated from the scientific literature (Fetter, 1980) and represents an average value for fine- to coarse-grained sands such as those observed in the deep aquifer.

Groundwater flow velocity for the deep aquifer was calculated using a variation of Darcy's Law:



$$v = \frac{k}{n_e} \frac{dh}{dl}$$

Where:

$v$  = velocity

$n_e$  = effective porosity

$k$  = hydraulic conductivity

$dh/dl$  = gradient

Using groundwater elevations measured during the June 8, 2015 gaging event, a groundwater velocity was determined for the transect between monitoring wells MW-4D2 and MW-22D2. The velocity calculated for this transect in the deep zone is equal to 1.12 ft/d.

### 4.3.3 Summary of Analytical Procedures and Quality Control

Grab groundwater samples collected from the discrete interval sampler advanced in the vertical profile borings were analyzed for TCL VOCs plus TICs by Accutest Laboratories. Low flow groundwater samples collected from the permanent monitoring wells were analyzed for TCL VOCs, 1,4-Dioxane, total and dissolved arsenic, iron and manganese, sulfate, nitrate, chloride, sulfide, TOC, methane, ethane, ethene and dissolved hydrogen by Spectrum Analytical, Inc. Field blanks and duplicates were analyzed for the same suite of parameters as the low flow groundwater samples. Trip blanks were analyzed only for TCL VOCs.

### 4.3.4 Analytical Results

#### 4.3.4.1 Vertical Profile Boring Groundwater Sampling

Grab groundwater samples were collected at various depths from the discrete interval sampler advanced in vertical profile boring VPB-1 (later finished as permanent well MW-22D2) for TCL VOCs. The groundwater sample collected from the uppermost interval (93-95 ft) on March 19, 2015 had a detection of benzene above the GWQS. Benzene is not a site-related COC. This sample had high level of turbidity which is believed to cause the anomalous result of benzene. The interval was resampled on April 13, 2015 with a low detection of benzene below the GWQS. Groundwater samples collected at the upper most interval (93-95 ft) contained concentrations of TCE above the GWQS, but the results collected from the lower three intervals (109-111 ft, 125-127 ft, and 141-143 ft) were below the GWQS or not detected (**Table 3**). Grab groundwater samples collected at various depths from the discrete interval sampler advanced in vertical profile boring VPB-2 (later finished as permanent well MW-30D2) contained concentrations of TCE above the GWQS in the top interval (120-122 ft) but results in the next three lower intervals (131-133 ft, 142-144 ft, 153-155 ft) were below GWQS or not detected (**Table 3**). Grab groundwater samples collected at various depths from the discrete interval sampler advanced in vertical profile boring VPB-3 (later finished as permanent well MW-29D2) did not contain any detections of TCE in the four intervals sampled. Grab groundwater samples collected at various depths from the discrete interval sampler advanced in vertical profile boring VPB-4 (later finished as permanent well MW-33D2) contained a detection of TCE above the GWQS at the upper interval (122-124 ft) but the two lower intervals (132-134 ft and 140-142 ft) were not detected (**Table 3**). Grab groundwater samples at various depths collected from the discrete interval sampler advanced in vertical profile boring VPB-5 (later finished as permanent well MW-34D2) contained concentrations of TCE above the GWQS in the second interval (130-132 ft) but the remaining intervals (121-123 ft, 142-144 ft, and 146-148 ft) were reported by the laboratory as non-detect (**Table 3**). Grab groundwater samples collected at various depths from the discrete interval sampler advanced in vertical profile boring VPB-6 (later finished as permanent well MW-35D2) contained concentrations of TCE above the GWQS at the upper two intervals (109-111 ft and 120-122 ft) but TCE was not detected at the lower two intervals (136-138 ft and 152-154 ft) (**Table 3**). Non Site-related VOCs, bromodichloromethane and dibromochloromethane, were detected above the GWQS in selected depth samples collected from VPB-2 (131-133 ft), VP-3 (131-133 ft, 142-144 ft, and 153-155 ft), and VPB-4 (132-134



ft.). These compounds are typically associated with municipal drinking water and are not considered to be Site-related. Analytical results from the VPB groundwater investigation are presented on **Figure 9**.

There were no exceedances of Freon in the grab groundwater samples collected from the deep zone. 1,4-Dioxane was not requested for analysis for the grab groundwater samples from the discrete interval samplers as the objective of the grab samples was to delineate TCE impacts and determine the optimal screen location. 1, 4-Dioxane was included as an analyte for samples collected from the monitoring wells installed at the VPB profile locations.

#### 4.3.4.2 Quarterly Groundwater Sampling

AECOM arranged for the collection and analysis of groundwater samples over four quarters (September and December, 2014 and March and June 2015).

##### **September 2014**

Groundwater sampling of 10 monitoring wells (MW-4, MW-9, MW-12, MW-12D, MW-13D, MW-14D, MW-18D, MW-22D, MW-27D and MW-31D) was conducted on September 24, 2014 by HCR. TCE was detected above its GWQS of 1 µg/l in the samples collected at all monitoring well locations (**Table 6**). TCE concentrations above regulatory standards ranged from 1.7 µg/l (sample MW-12) to 140 µg/l (sample MW-12D).

Additional analytes detected above NJDEP GWQS or the Interim Specific Groundwater Quality Criterion (ISC) in groundwater samples collected during the September 2014 quarterly sampling event included:

- PCE, 2.2 µg/l in sample MW-13D
- Freon 11, 2,900 µg/l in sample MW-4
- 1,4-dioxane, 11 µg/l in sample MW-14D
- Chloride, 350,000 µg/l in sample MW-13D
- Sulfate, 290,000 µg/l in sample MW-18D
- Total Arsenic, detected in only two wells: 4.4 µg/l collected from well MW-31D and 5.3 µg/l in the sample collected from MW-9
- Total Iron, detected in the majority of wells, ranged from 404 µg/l in sample MW-13D to 16,100 µg/l in sample MW-9
- Total Manganese, detected in the majority of wells, ranged from 89.3 µg/l from well MW-22D to 260 µg/l in sample MW-4

Ethane and ethene were not detected in any of the groundwater samples collected during September 2014 event. Methane was detected in all of the samples collected and was elevated (6,000 µg/l) in the sample collected from well MW-31D. Hydrogen was also detected in all of the samples collected.

##### **December 2014**

Groundwater sampling of 16 monitoring wells (MW-4, MW-9, MW-12, MW-12D, MW-13D, MW-14D, MW-18D, MW-22D, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, MW-29D, MW-31D and MW-32D) was conducted between December 2 and 3, 2014 by HCR. Concentrations of TCE were detected above the NJDEP GWQS of 1 µg/l in groundwater samples collected from all monitoring wells except MW-24D, MW-25D, MW-26D, MW-28D, MW-29D, MW-31D and MW-32D (**Table 6**). TCE concentrations detected above regulatory standards ranged from 2.4 µg/l (sample MW-27D) to 180 µg/l (sample MW-12D). There were no



concentrations of 1,4-dioxane detected above the ISC of 10 µg/l during the December 2014 sampling event. Concentrations of 1,4-dioxane in December 2014 ranged from 0.17 µg/l (MW-29D) to 8.1 µg/l (MW-14D).

Additional analytes detected above the GWQS in groundwater samples collected during the December 2014 quarterly sampling event included:

- 1,1-Dichloroethene, 2.6 µg/l in sample MW-22D
- 1,1,2-Trichloroethane, 16 µg/l in sample MW-22D
- Tetrachloroethene, 3.2 µg/l in sample MW-13D
- Chloride, 354,000 µg/l in sample MW-13D
- Chloride, 336,000 µg/l in sample MW-18D
- Total Arsenic, 4.2 µg/l in sample MW-31D
- Total Iron, detected in the majority of wells, ranged from 478 µg/l in sample MW-22D to 12,500 µg/l in sample MW-14D
- Total Manganese, detected in the majority of wells, ranged from 83.1 µg/l from well MW-28D to 319 µg/l in sample MW-4

Ethane and ethene were not detected in any of the groundwater samples collected during this event with the exception of sample MW-13D (ethane concentration was 1.6 µg/l and ethene concentration was 1.9 µg/l). Methane was detected in all of the samples collected in December 2014.

### **March 2015**

Groundwater sampling of 10 monitoring wells (MW-4, MW-9, MW-12, MW-12D, MW-13D, MW-14D, MW-18D, MW-22D, MW-27D and MW-31D) was conducted on March 18, 2015 by HCR. Concentrations of TCE were detected above the GWQS of 1 µg/l in groundwater samples collected from all monitoring wells (**Table 6**). TCE concentrations detected above regulatory standards ranged from 2.8 µg/l (sample MW-27D) to 190 µg/l (sample MW-12). There were no concentrations of 1,4-dioxane detected above the ISC of 10 µg/l during the March 2015 sampling event. Concentrations of 1,4-dioxane in March 2015 ranged from 0.21 µg/l (MW-18D) to 8.9 µg/l (MW-14D).

Additional analytes detected above the GWQS in groundwater samples collected during the March 2015 quarterly sampling event included:

- 1,1-Dichloroethene, 2.6 µg/l in sample MW-22D (GWQS = 1 µg/l)
- 1,1,2-Trichloroethane, 15 µg/l in sample MW-22D (GWQS = 3 µg/l)
- Tetrachloroethene, 1.9 µg/l in sample MW-13D (GWQS = 1 µg/l)
- Chloride, 329,000 µg/l in sample MW-13D (GWQS = 250,000 µg/l)
- Sulfate, 388,000 µg/l in sample MW-18D (GWQS = 250,000 µg/l)
- Iron, detected above the GWQS in the majority of wells, ranged from 1,300 µg/l in sample MW-9 to 13,300 µg/l in sample MW-14D (GWQS = 300 µg/l)
- Manganese, detected above the GWQS in the majority of wells, ranged from 89 µg/l from well MW-22D to 368 µg/l in sample MW-4 (GWQS = 50 µg/l)

Ethane and ethene were not detected in any of the groundwater samples collected during this event. Methane was detected in the majority of the samples.



## **June 2015**

Low flow purging and sampling was conducted at the newly installed permanent wells (MW-22D2, MW-29D2, MW-30D2, MW-33D2, MW-34D2 and MW-35D2) after the wells were able to stabilize for at least a two week period. Freon was detected in all permanent well samples but at concentrations below the GWQS. Concentrations of TCE exceeded the GWQS at five of the six deep well locations (MW- 22D2, MW-30D2, MW-33D2, MW-34D2 and MW-35D2) and ranged in value from 2.3 to 6.5 µg/l. TCE was not detected in well sample MW-29D2. All 1,4-dioxane results were reported below the ISC. Previous reports for this Site have indicated that dissolved concentrations of COCs exist in the shallow and intermediate flow zones but not in the deep zone beneath the intermediate clay lense; however, the 2015 supplemental RI has demonstrated that low concentrations of TCE are detected slightly above standards at certain depths beneath the intermediate clay. Vertical grab groundwater samples confirmed the vertical extent of impacts. The higher depth grab groundwater samples collected from each discrete interval sampler contained concentrations of TCE slightly above GWQS. Permanent wells were installed with screens located at these areas of impact to further monitor these impacts directly beneath the clay layer. Concentration isopleth maps of TCE in groundwater for the shallow, intermediate and deep zones are presented as **Figures 10a through 10c**.

Groundwater results were compared to NJDEP GWQS for Class IIA aquifers. The analytical results for the June 2015 sampling event are summarized in **Table 5**. A historical table showing results from 2010 (after shut down of the former groundwater treatment system) through 2015 is included as **Table 6**. Analytical laboratory reports for the supplemental RI are provided as **Appendix L**. Electronic Data Deliverables for each laboratory package have been completed and submitted to the NJDEP and confirmation emails are provided as **Appendix M**. The following presents a summary of the analytical results from the June 2015 quarterly sampling event.

Concentrations of TCE were detected above the GWQS of 1 µg/l in groundwater samples collected from all monitoring wells except MW-29D2 where TCE was not detected (**Table 5**). TCE concentrations detected above regulatory standards ranged from 1.9 µg/l (sample MW-33D2) to 110 µg/l (sample MW-12D). There were no concentrations of 1,4-dioxane detected above the Interim Specific Groundwater Quality Criterion (ISC) of 10 µg/l during the June 2015 sampling event. Concentrations of 1,4-dioxane in June 2015 ranged from 0.21 µg/l (MW-9) to 10 µg/l (meeting but not exceeding the ISC) in MW-14D. **Figures 11a, b and c** present analytical results for samples collected from monitoring wells with exceedances of the GWQS. If an analyte was detected above the GWQS in June 2015, results for that particular analyte from all monitoring well samples were presented.

Additional VOCs detected above the GWQS in groundwater samples collected during the June 2015 quarterly sampling event included:

- 1,1-Dichloroethene, 2.4 µg/l in sample MW-22D (GWQS = 1 µg/l)
- 1,1,2-Trichloroethane, 13 µg/l in sample MW-22D (GWQS = 3 µg/l)

Additional General Chemistry exceedances (**Figure 11**) included:

- Chloride, 294,000 µg/l in sample MW-13D (GWQS = 250,000 µg/l)
- Sulfate, 434,000 µg/l in sample MW-9 (GWQS = 250,000 µg/l)
- Sulfate, 323,000 µg/l in sample MW-18D

Additional Total Metals exceedances (**Figure 11**) included:



- Iron, detected above the GWQS in the majority of wells, ranged from 460 µg/l in sample MW-33D2 to 62,600 µg/l in sample MW-22D2 (GWQS = 300 µg/l)
- Manganese, detected above the GWQS in the majority of wells, ranged from 77 µg/l from well MW-33D2 to 665 µg/l in sample MW-22D2 (GWQS = 50 µg/l)

#### 4.3.4.3 Quality Assurance/Quality Control

Quality Assurance/Quality Control samples were collected in accordance with the Site-specific QAPP (**Appendix A**). Field blanks were collected each day and analyzed to determine if equipment decontamination procedures were sufficient. The field blanks were prepared by passing laboratory-supplied analyte-free water through the sampling pump and a clean section of Teflon<sup>®</sup>-coated tubing. As previously mentioned, dedicated tubing is left in each monitoring well and is reused at individual well locations. The rinsate was collected into the appropriate laboratory-supplied sample containers. The field blank samples were analyzed for the same suite of analytical parameters as the groundwater samples and the results are presented in **Table 9**.

Data validation of laboratory package P1054 was conducted by New Environmental Horizons, Inc. (NEH). According to the data validation report, acetone and total arsenic in field blank sample F061115 was reported by the laboratory at the level of the Method Detection Limit (MDL) rather than the Quantitation Limit (QL). This was considered an acceptable approach by the data validator to achieving sensitivity needs for the program; however the results were estimated (J) due to potential uncertainty at a level below the calibration range. The acetone and total arsenic data is considered usable. Dichloromethane (in sample MW-22D2), acetone and toluene (in samples MW-29D2 and MW-35D2), hydrogen (in samples MW-34D2 and MW-4), and nitrate (in sample MW-18D) were estimated (J) with possible high bias due to detections of these analytes in the field blank sample. Non-detections of two chloride results (for field blanks F061015 and F061115) were negated by the data validator due to necessary dilutions of the laboratory method blank. Non-detect results for total organic carbon in both field blank samples in this data package were also negated due to dilutions in the laboratory method blank. The field blank data in laboratory package P1054 is considered usable.

Trip blanks were collected to determine if any atmospheric VOCs impacted the sample vials or if any cross-contamination of samples occurred during the shipment or storage of sample containers. Trip blanks accompanied the sample bottles to the Site and remained unopened in the shipping container until the sample bottles were returned to the laboratory. The trip blanks were prepared by the laboratory prior to the sampling event by filling two 40-ml VOC vials with laboratory VOC-free water and hydrochloric acid preservative and sealing with septum-lined caps allowing no headspace. The trip blank samples were analyzed for TCL VOCs and analytical results are provided in **Table 9**.

A duplicate sample was collected from monitoring well MW-12. The parent sample and duplicate sample containers were filled in an alternating fashion (i.e., one parent sample container filled, one duplicate container filled). The duplicate groundwater sample was collected to compare quality of the data for the remaining groundwater samples. The duplicate sample (identified on the chain of custody as "DUPLICATE") was analyzed for the same parameters as the parent sample. The duplicate sample results are included in **Table 5**. Duplicate precision was determined by NEH to be acceptable for all parameters. The non-detect nitrate result in the duplicate sample was negated due to detections in the field blank. The TOC result in the duplicate sample was estimated (J) since TOC was detected in the associated laboratory method blank. Total and dissolved arsenic were reported by Spectrum at the level of the MDL rather than the QL. This was considered an acceptable approach by NEH to achieving sensitivity needs for the program. The duplicate sample results for total and dissolved arsenic were estimated (UJ) due to potential uncertainty at a level below the calibration range. The estimated duplicate data is considered usable.



### 4.3.5 Reliability of Data

A Data Quality Assessment (DQA) and Data Usability Evaluation (DUE) was performed in accordance with the NJDEP Site Remediation Program (SRP) Data Quality Assessment and Data Usability Evaluation Technical Guidance, Version 1.0, April 2014, NJDEP SRP Analytical Laboratory Data Generation, Assessment and Usability Technical Guidance, Version 1.0, April 2014, and NJDEP SRP Data of Known Quality Protocols Technical Guidance, Version 1.0, April 2014. Data validation of laboratory package P1054 was conducted by NEH and of packages P1105 and P1162 by AECOM. This data validation addresses the quality of the analytical data associated with the June 2015 sampling event. The following is a summary of the DQA/DUE findings as they pertain to the data presented herein.

The data presented in **Tables 5** and **9** is usable for the intended purpose and representative of Site conditions at the time of sampling. All results were considered acceptable compared to the NJDEP Data of Known Quality Protocol (DKQP) and method criteria, with the understanding of the potential uncertainty (bias) in the qualified results. The remainder of this section explains project-specific issues for clarification of sample collection or processing and documents “exceptions” to method or DKQP criteria. Quality Control (QC) elements not discussed below either met all acceptance criteria or no actions were required based on the USEPA Data Validation criteria or NEH’s professional judgment. The full documentation of all QC elements reviewed and actions taken during the validation of these data are presented in the Data Validation Checklists (**Appendix N**), which are considered an integral part of the validation analysis. No impact to Site decisions is anticipated due to the conditions listed below.

#### Laboratory Package P1054, data validation performed by NEH:

- J values were assigned to results for dichloromethane in MW-22D2, acetone and toluene in MW-29D2 and MW-35D2, nitrate in MW-18D, hydrogen in MW-34D2 and MW-4, TOC in samples MW-13D, MW-14D, MW-18D, MW-4, MW-9, MW-12, MW-27D, and DUPLICATE with possible high bias since the compounds were detected in associated Field Blanks.
- J values were assigned to the following results due to uncertainty in reporting at a level below the instrument calibration range (result was < QL):
  - Acetone in F061115
  - 1,1-Dichloroethane in MW-14D, MW-33D2, MW-34D2, and MW-35D2
  - 1,1-Dichloroethylene in MW-12D and MW-14D
  - Chloroform in MW-22D and MW-35D2
  - cis-1,2-Dichloroethene in MW-34D2
  - Trichlorofluoromethane in MW-34D2
- Chloride results in samples F061015, F061115, MW-22D2, MW-31D, MW-12, MW-27D, MW-35D2, and DUPLICATE were negated (assigned a U value in place of estimated J) due to detections in the laboratory blank sample.
- TOC results in samples MW-22D, F061015, and F061115 were negated (assigned a U value in place of estimated J) due to detections in the laboratory blank sample.
- Total and dissolved metals were estimated UJ with indeterminate bias due to uncertainty in reporting the non-detections to the MDL and not the QL for the following samples: DUPLICATE, MW-12, MW-12D, MW-13D, MW-18D, MW-22D, MW-22D2, MW-27D, MW-29D2, MW-4, MW-9, F061015, and F061115.
- J values were assigned to the following results due to uncertainty in reporting at a level below the instrument calibration range (result was < QL)
  - Nitrate results in samples F061015 and F061115



- Total Arsenic results in samples MW-9, MW-14D, MW-22D2, MW-29D2, MW-33D2, MW-34D2, and MW-35D2
- Dissolved Arsenic result in samples MW-14D, MW-31D, MW-33D2, MW-34D2, and MW-35D2
- Total Iron results in samples MW-4, MW-13D, and MW-34D2
- Dissolved Iron results in samples MW-4, MW-13D, and MW-22D
- Total Manganese result in sample F061115
- Dissolved Manganese result in sample MW-33D2

Laboratory Package P1105, data validation performed by AECOM:

- Methylene chloride was detected in the field blank (F062515), but since the associated sample results for methylene chloride were non-detect, no qualifications were required.
- Reported results (flagged J by the laboratory) that were less than the RL, but greater than or equal to the MDL, are approximate values. These J-flags have been retained during validation.
- The continuing calibration blank associated with the samples in this package was contaminated with iron at a concentration above the MDL but below the RL. The result for iron in filtered field blank F062515-F was negated (U) at the reporting limit. Since the other associated sample results for iron were either non-detect or greater than ten times the blank contamination, no other qualifications were required.
- Arsenic, iron, and manganese were detected in the filtered field blank (F062515-F), associated with the filtered samples in this Sample Delivery Group (SDG). The result for arsenic in filtered sample MW-30D2-F was negated (U) at the reporting limit. Since the other associated sample results for these analytes were greater than ten times the blank contamination, no qualifications were required.
- Reported results (flagged B by the laboratory) that were less than the RL, but greater than or equal to the MDL, are approximate values and have been qualified as estimated (J).
- The initial and continuing calibration blank associated with the samples in this SDG were contaminated with chloride at a concentration above the MDL but below the RL. The result for chloride in field blank F062515 was negated (U) at the reporting limit since the result was less than three times the blank contamination. Since the other associated sample result for chloride was greater than ten times the blank contamination, no other qualifications were required.
- The continuing calibration blanks associated with the samples in this SDG were contaminated with TOC at a concentration above the MDL but below the RL. The result for TOC in field blank F062515 was negated (U) at the reporting limit. Since the other associated sample result for TOC was greater than ten times the blank contamination, no other qualifications were required.

Laboratory Package P1162, data validation performed by AECOM:

- Reported results (flagged J by the laboratory) that were less than the RL, but greater than or equal to the MDL, are approximate values. These J-flags have been retained during validation.
- Negative instrument drift was detected for arsenic in the continuing calibration blank associated with the samples in this SDG. The positive and non-detect results for arsenic were qualified as estimated (J-/UJ) and may be biased low due to negative instrument drift.
- Reported results (flagged B by the laboratory) that were less than the RL, but greater than or equal to the MDL, are approximate values and have been qualified as estimated (J).
- The initial and continuing calibration blank associated with the samples in this SDG were contaminated with chloride at a concentration above the MDL but below the RL. The result for chloride in field blank F070915 was negated (U) at the reporting limit. Since the other associated



sample results for chloride were greater than ten times the blank contamination, no other qualifications were required.

- The field blank (F070915) associated with the samples in this SDG was contaminated with chloride at a concentration above the MDL but below the RL. Since the result for chloride in F070915 was negated due to laboratory blank contamination, no qualifications based on the field blank were required.
- The continuing calibration blanks associated with the samples in this SDG were contaminated with TOC at a concentration above the MDL but below the RL. The result for TOC in field blank F070915 was negated (U) at the reporting limit. Since the other associated sample results for TOC were greater than ten times the blank contamination, no other qualifications were required.

NEH and AECOM's data validators determined all results to be acceptable. No data was rejected. It is AECOM's opinion that the actions listed in the validation reports do not affect the overall project-specific data quality objectives and are not anticipated to impact Site decisions.



## 5.0 CONCEPTUAL SITE MODEL

### 5.1 Site Setting

The Site is located within the Coastal Plain physiographic province of west-central New Jersey. Site geology has been characterized through soil borings, monitoring well installation (most recently, the supplemental remedial investigation), and review of drillers' logs. The Site lies in the area between Princeton Junction and Hightstown, where the Pennsauken Formation was deposited in a pre-Pleistocene river valley. The surrounding areas, including the Site, are underlain by the Pennsauken Formation deposits which are interpreted to be of Pleistocene age. According to the USGS report: Hydrogeologic Framework of the New Jersey Coastal Plain, the Pennsauken Formation's associated hydrogeologic unit is classified as "undifferentiated" (Zapeczka, 1989). Lithologically these deposits vary from coarse, well-sorted gravels to well-sorted sands, sands and gravels and relatively impermeable clayey gravels and sands. The Pennsauken Formation is also characterized by interbedded clay lenses of various colors and thicknesses, and is the primary aquifer that has been impacted. It appears that the undifferentiated Pennsauken Formation unconformably overlies the Cretaceous aged Merchantville-Woodbury confining unit which is represented locally as a thick clay unit ranging in thickness from nearly 100 feet to more than 135 feet thick. Though the Merchantville-Woodbury unit acts locally as a confining unit, the hydrogeologic characteristics of this formation indicate that it can be interconnected to the underlying aquifer units. The Potomac-Raritan-Magothy (PRM) Formation, which consists of unconsolidated sand, silt, clay, and gravel deposits underlies the Merchantville-Woodbury confining unit and rests unconformably on pre-Cretaceous aged bedrock.

The Facility operated on two parcels between 1957 and 1998, and was used to research, develop, manufacture and test satellites, as well as to conduct associated projects. Both parcels were sold by Lockheed Martin in 1998. Subsequently the smaller parcel was sold to BlackLight Power, and the larger parcel was sold to Windsor Limited Partnership of NJ, who later subdivided the lot and sold the developed portion of the property to Windsor Acquisitions, LLC in 2006. BlackLight Power has laboratories on their property and they perform electrochemical system research, development and testing, characterization of chemical processes, thermal power measurement, and chemical, material, and plasma characterization and spectroscopy to enhance their SunCell power technology. The properties are also used for office space or are undeveloped.

The Site is located at an approximate elevation of 100 ft amsl and the local surface topography slopes north and northeast towards the Millstone River. The Site lies in the Millstone River Basin and the eastern property boundary is hydraulically influenced by a tributary which flows northward to join the Millstone River. Surface water is diverted via storm sewers into the Millstone River.

**Figures 6 and 6a, b, c and d** present cross-sections, on-Site and off-Site, which illustrate subsurface geology of the impacted areas associated with the Site. These cross-sections were developed based upon soil borings, monitoring well installation (most recently, the supplemental remedial investigation), and review of drillers' logs. Production well logs for former on-Site wells and logs for nearby municipal wells indicate a clay layer is present from approximately 100 ft bgs to nearly the bedrock surface at approximately 235 ft bgs.

The thickest clay layer in the study area is illustrated in cross-sections A-A' and D-D'. The thickness of this clay unit, in the Blacklight Well (approximately 140 to 185 ft below grade), suggests that it is a lateral, thinner part of the Merchantville-Woodbury confining clay. The overburden aquifer deposits comprise the units above this lowermost clay and are composed of interbedded thin clay layers with fine to medium sand that have been classified as the Pleistocene Pennsauken Formation.

The overburden aquifer has been divided into three zones – the shallow zone ranging from surface grade to a depth of 14 to 50 feet bgs; an intermediate zone ranging from as shallow as 28 feet bgs to a depth of between 66 and 120 feet bgs; and a deep zone ranging from as shallow as 75 feet below grade to a depth of 140 to



greater than 170 feet bgs. The aquifer zones consist of multiple discontinuous clay layers that have impacted Site contaminant flow through the aquifer system.

The base of the shallow zone is defined by an uppermost clay unit that is consistently present in the southern portion of the Site at depth of approximately 15 to 50 feet bgs. This shallow clay unit is intermittent or missing completely in the northern portion of the Site.

The intermediate zone is defined by a clay unit that averages between 2 to 15 ft thick, is intermittently present across the Site (forming the base of the intermediate zone) and ranges in depth from approximately 60 to 120 ft. This intermediate clay unit appears to pinch out in the south and southeastern portion of the southern parcel of the Site.

The Site monitoring wells were completed within these interbedded, and sometimes laterally discontinuous deposits of the Pennsauken Formation. Groundwater flow in the shallow zone is primarily in an east-southeastern direction on the main facility parcel and in a northeasterly direction (toward the Millstone River) on the Building 500 parcel. In the intermediate zone, flow is primarily east-southeast at the main facility parcel and south-southwest at the Building 500 parcel, whereas, flow within the deep zone is primarily in a southeasterly direction.

Depth to groundwater across the Site ranges from 5.88 ft in MW-24D to 39.65 ft in MW-30D2. The average shallow zone gradient was 0.009 ft/ft using data from three transects to account for the variation of flow in the shallow zone. The average intermediate zone gradient was 0.001 ft/ft using data from two transects. The average groundwater gradient in the deep zone was calculated from one transect as 0.002 ft/ft. The vertical hydraulic gradients were calculated between the "shallow-to-intermediate" zones and between the "intermediate-to-deep" zones. The average vertical gradient for the "shallow-to-intermediate" zone is approximately 0.094 ft/ft and is downward. The vertical gradients in the "intermediate-to-deep" zone are variable. A strong upward gradient is observed in the northwestern corner of the Site. A downward gradient is observed in the northeast corner of the Site. In the southeastern portion of the Site where the newly-installed deep wells are present, a strong downward gradient (0.085 ft/ft) is observed at well pair MW-22D/MW-22D2. An estimate of the calculated hydraulic conductivity values for the deep aquifer ranged from 38.9 ft/d to 233.9 ft/d. These values are as expected due to the wide range of overburden materials present at the Site. The average hydraulic conductivity generated from the mean of all six wells was 112 ft/d and is representative of the deep (120 to 160 ft bgs) aquifer materials at the Site. The calculated groundwater velocity for the deep zone was 1.12 ft/d.

## 5.2 Source Media and Transport Mechanisms

The primary sources of identified impacts were due to historic discharges of chlorinated solvents that occurred during the facility's operation. The discharges to soil migrated to shallow groundwater resulting in impacts to the aquifer. The sources of groundwater impacts have been addressed through the ISRA remedial process under NJDEP oversight and the only remaining impacts are limited to dissolved concentrations in groundwater.

Over time a number of transport mechanisms have resulted in these impacts migrating vertically into deeper zones and expanding horizontally. Four primary mechanisms typically contribute to contaminant transport:

- Advection
- Hydrodynamic Dispersion
- Sorption
- Degradation



Advection is the movement of contaminants as a result of groundwater flow. This process appears to be the primary process that has caused the contaminants to reach the current horizontal extent and may be responsible for most of the vertical transport.

Hydrodynamic dispersion is the process of contaminant movement due to both diffusion and dispersion. Diffusion is typically a minor component of contaminant transport and is the result of chemicals moving from areas of high concentration to areas of low concentration. Diffusion is driven by chemical gradients and is an attempt to establish an equilibrium within the impacted system (aquifer) and will occur even when there is no groundwater flow. Dispersion is the movement of contaminants through the porous media and is influenced by the aquifer material. The primary factors impacting dispersion include the aquifer material pore size, the length of the flow path including the connectivity of aquifer pores, and pore friction. In addition, the density of the contaminant will influence the vertical dispersion of the resulting plume.

Sorption is the process of contaminants adsorbing or otherwise adhering to aquifer materials. Sorption tends to retard the expansion of contaminant plumes. Sorbed contaminants are not completely removed from the aquifer since they can later desorb from the aquifer material.

Degradation is the result of a contaminant being broken down into less complex chemical structures. This process is driven by microbes that use the target contaminant as an energy source. Degradation is dependent upon the microbes available within the impacted area, and is dependent upon the aquifer having a suitable environment for the microbes to thrive.

As a result of a lack of degradation compounds, identified during groundwater sampling at the Site, it appears that the primary forces affecting plume migration is advection and dispersion. Furthermore, with a long history of active pumping wells at or near the Site (as well as the former on-Site treatment system) the plume has bifurcated into the current configuration.

Lockheed Martin began evaluating the groundwater and remediation options during the 1990s, and, over time, have implemented several technologies to remediate seven Site-related constituents, which have been observed in Site groundwater above GWQS or Interim Specific Criterion (ISC). These Site-related constituents of concern (COC) include: TCE; Freon-11<sup>®</sup>; 1,1-Dichloroethene; 1,1,1-TCA; 1,1,2-TCA; methylene chloride; PCE; and recently detected 1,4-dioxane. TCE, 1,1,1-TCA, 1,1,2-TCA, methylene chloride and PCE are commonly used industrial solvents/degreasers. Freon-11<sup>®</sup> was a commonly used refrigerant, degreaser and aerosol propellant. 1,1-Dichloroethene is a common natural breakdown product of TCE and PCE.

While each of the Site-related COC has been identified in groundwater on the Site, exceedances of the constituents' respective GWQS typically has been sporadic and localized, except for TCE. TCE is the only constituent that has been observed consistently and Site-wide; therefore, TCE has been the primary COC at this Site. Current concentrations of TCE in Site groundwater range from non-detect to 110 µg/L. It should be noted that during recent sampling events 1,4-dioxane was detected sporadically at concentrations that exceeded the ISC; however, 1,4-dioxane has not been detected above the ISC since September 2014.

Remedial investigations have been ongoing to further define and characterize the horizontal and vertical extent of groundwater impacts. Due to the characteristics of chlorinated solvents and subsurface transport mechanisms, vertical migration of COC has occurred into deeper zones of the overburden aquifer. The most recent remedial investigations have defined the horizontal and vertical extent of groundwater impacts. The vertical profile borings conducted in the downgradient direction of the deeper zones determined that the clay layers encountered on the main parcel pinch out to the south and are discontinuous in the downgradient direction indicating that the aquifer is not confined, and is in essence vertically connected in this area. The vertical migration of impacts was defined to extend approximately to 132 ft bgs in the downgradient area. The contiguous clay layer identified to be present at depths greater than 140 ft acts as a confining layer preventing any further vertical migration into deeper zones of the PRM. It should be noted that this confining clay layer was not encountered in the most downgradient vertical profile boring (VPB-6) at 170 ft bgs indicating that the confining clay layer dips deeper in this area. Based on historic groundwater monitoring data in the shallow



aquifer, horizontal expansion is limited to the former source areas while the horizontal expansion of the deeper zones of the aquifer have extended to the southeast onto adjacent properties. The most recent RI activities have completed the horizontal and vertical delineation of these impacts and a monitoring network has been installed that will allow future monitoring of the defined horizontal and vertical extent of impacts. The cross-sections for the Site (**Figure 6**) include TCE concentrations detected in the VPBs and monitoring wells illustrating the vertical extent of impacts on-Site and off-Site.

Following implementation of groundwater extraction and treatment, declining concentrations of the COC have been observed in groundwater samples from many monitoring wells on the Site. This pattern suggests that natural attenuation of these constituents is occurring. In 2010, the treatment system was shut down so that the fate and transport of the Site-related constituents could be evaluated and to confirm whether the decline in concentrations due to natural attenuation was occurring Site-wide, and could be expected to continue.

### 5.3 Potential Receptors and Complete Exposure Pathways

In July 2015, an updated NJDEP Data Miner Well Search was conducted to identify any new wells installed since the previous well search and to expand the search to 1-mile for non-domestic potable wells. Seven new wells were permitted since the last search, and 11 additional wells between ½ -mile and 1-mile were identified. A review of 2011 NJDEP Geographical Information Systems (GIS) data did not identify any public community supply wells within 1-mile of the Site. No new wells were identified within 500 ft of the Site, and therefore no potable well sampling is required per regulation 7:26E-1.14(a). The area in the vicinity of the Site is supplied by a municipal water source. A NJDEP Data Miner search of active water allocation permits by county did not identify any permits for East Windsor Township in Mercer County. No potential drinking water receptors were identified within the area.

An Ecological Evaluation (EE) was conducted by ARCADIS and reported in the June 2004 Remedial Action Workplan Addendum. The report concluded that based on results from the evaluation, no contaminants of potential environmental concern were identified at the Site, and there was limited potential for the Site-related contaminants in groundwater to discharge to surface water at significant concentrations. The report surmised that no mechanism exists for ecological receptor exposure above acceptable limits and that the need for remedial investigation of ecological receptors was not required. The primary environmental receptor is the Millstone River that is groundwater fed and located hydraulically downgradient of the former source areas. Current and historic groundwater monitoring data indicates that this ecological receptor has not been impacted to date.

A soil gas survey was conducted by Arcadis in 2007. Soil gas results from the 2007 survey were below soil gas screening levels in effect at that time. A VI Evaluation was performed by Arcadis in August 2013 since the NJDEP VI Screening Levels were modified in March 2013. The revisions resulted in order of magnitude changes to vapor intrusion screening levels for specific constituents. Only the soil gas concentration of ethylbenzene collected near Building 300 in 2007 exceeded the updated SGSL. Although ethylbenzene exceeds the SGSL in this one sample, Arcadis concluded that this detection was not Site-related and no further action was necessary. Concentrations of TCE exceeded the NJDEP Groundwater Screening Levels (GWSL) in the most recent sampling round conducted in June 2015 but based on the depth of the groundwater sample results, decreasing trends evident in shallow zone wells and previous soil gas surveys, the VI Pathway is not complete.

### 5.4 Transport Pathway Elimination

The effective remediation of the various sources of contamination at the Site has addressed the potential for public health and environmental exposure. These remedial efforts have also reduced the potential for an ongoing source of impacts to groundwater and vapor intrusions. The confirmation that drinking water sources in the area are from municipal drinking water supplies eliminates the potential exposure from impacts in the affected aquifer. Significant vapor intrusion assessment activities have been conducted on-Site and off-Site to confirm no impact from residual groundwater contamination. With the continued decreasing trends observed



in recent groundwater events, the potential for vapor intrusion impacts from groundwater has been sufficiently addressed by the previous assessments. The presence of a confining unit with depth in the overburden aquifer prevents additional vertical migration into deeper zones. The shallow and intermediate discontinuous clay units also reduce vertical migration although to a lesser extent. The shallow aquifer impacts have been limited in area due to a low hydraulic gradient. Historic decreasing trends, in the shallow wells sampled, indicate that a source area is no longer present and that the plume is likely stable. This reduces the potential for further horizontal migration of the plume and limits the resulting impact to ecological receptors.

## 5.5 Summary

The conceptual site model developed for the Site provides an overall view of the environmental impacts associated with the historical operations conducted at the Site. Historic releases of COCs impacted the subsurface environment resulting in soil and groundwater impacts. The sources were successfully addressed through remedial actions addressing soil impacts at the Site. The residual effects of the impacts continue to be evident in groundwater. While each of the Site-related constituents has been identified in groundwater on the Site, exceedances of the constituents' respective GWQS typically has been sporadic and localized, except for TCE. TCE is the only constituent that has been observed consistently and Site-wide; therefore, TCE has been the primary COC at this Site.

Significant remedial investigation activities have been conducted to better characterize and define the extent of groundwater impacts. The complex subsurface geology has resulted in horizontal and vertical migration of impacts in groundwater to the various overburden zones on-Site and off-Site. The most recent remedial investigation (Supplemental Remedial Investigation) activities have provided additional information concerning the characteristics of the subsurface geology including the intermittent discontinuous clay layers observed on-Site and off-Site. These supplemental remedial investigation activities have completed the horizontal and vertical delineation of these impacts and provided a monitoring well network for future monitoring.

The historic remedial activities have addressed potential contaminant exposure to public health and the environment associated with soils. The receptor evaluation has confirmed that there is no potential impact to public health through drinking water sources since municipal drinking water supplies are present as local water sources. Ecological and vapor intrusion assessment activities have confirmed that there is no complete pathway to environmental or public health receptors at this time.

The dissolved impacts to groundwater at the Site is the only remaining issue associated with the Site. Remedial actions have been implemented to address dissolved COC in groundwater including implementation of a groundwater recovery and treatment system. Following implementation of groundwater extraction and treatment, declining concentrations of the COC have been observed in groundwater samples from many monitoring wells on the Site. This pattern suggests that natural attenuation of these constituents is occurring. A remedy evaluation including a natural attenuation evaluation is currently being conducted to assess viable remedial actions for groundwater. Current groundwater modelling results have implied the potential exists for shallow groundwater impacts to eventually migrate to the Millstone River. This potential impact to this receptor will need to be addressed as part of the remedy evaluation and monitored through ongoing groundwater sampling to confirm no adverse impact to the surface water receptor occurs in the future.



## 6.0 RECEPTOR EVALUATION AND UPDATE

An initial Receptor Evaluation (RE) for the Site was submitted by Arcadis in November 2011 in accordance with NJDEP Technical Regulations for Site Remediation. Based on the initial RE, no further investigation was necessary regarding land use, vapor intrusion, human health (i.e., well search), or environmentally sensitive natural resources (ESNRs). An updated RE was conducted in July 2015 by AECOM. The updated RE included an evaluation of current land use and proposed land use changes within 200 ft of the Site, a well search within one mile of the Site, and an ecological evaluation to determine if ESNRs exist on-Site or in the vicinity of the Site. Results of the 2015 RE are provided in **Sections 5.1** through **5.3** below.

### 6.1 Land Use

A receptor evaluation of land use was conducted in July 2015 to identify all current land uses at the Site and of each property located within 200 ft of the property boundary. Based on available tax record data, 3 single-family residences and 1 child care facility are within 200 ft of the Site (**Figure 12**). No proposed land use changes were identified within 200 ft of the property. Sensitive populations within 200 ft of the Site are listed in **Table 10**.

### 6.2 Well Search

A well search was conducted in 2008 and updated in 2011 using records requested from the New Jersey Bureau of Water Allocation, East Windsor Health Department and East Windsor Municipal Utilities Authority. Bureau well search results included well records for all monitoring, domestic, irrigation, industrial and public supply wells within an half mile. In 2008, 28 potable wells were identified, but 10 were removed from the final list as they could not be located and it was assumed that they were permitted but never installed. The 2011 update identified 10 potable wells, one of which was non-potable and was decommissioned in 2009.

In July 2015, an updated NJDEP Data Miner Well Search was conducted to identify any new wells installed since the previous well search and to expand the search to 1-mile for non-domestic potable wells as per regulation 7:26E-1.14(a). Seven new wells were permitted since the last search, and 11 additional wells between ½ -mile and 1-mile were identified (**Figure 13**). A review of 2011 NJDEP Geographical Information Systems (GIS) data did not identify any public community supply wells within 1-mile of the Site. No new wells were identified within 500 ft of the Site, and therefore no potable well sampling is required per regulation 7:26E-1.14(a). The area in the vicinity of the Site is supplied by a municipal water source. A NJDEP Data Miner search of active water allocation permits by county did not identify any permits for East Windsor Township in Mercer County. Well search results are presented in **Table 11** and the results were submitted to the NJDEP on August 4, 2015 (confirmation email included as **Appendix O**).

### 6.3 Ecological Evaluation

An Ecological Evaluation (EE) was conducted by ARCADIS and reported in the June 2004 Remedial Action Workplan Addendum. The report concluded that based on results from the evaluation, no contaminants of potential environmental concern were identified at the Site, and there was limited potential for the Site-related contaminants in groundwater to discharge to surface water at significant concentrations. The report surmised that no mechanism exists for ecological receptor exposure above acceptable limits and that the need for remedial investigation of ecological receptors was not triggered. Based on a review of current and historic groundwater sampling data compared to the current NJDEP ecological screening criteria (ESC) for TCE (NJDEP, 2009), no further investigation of ecological receptors is required.



## 6.4 Vapor Intrusion

Soil gas sampling was conducted across the Site in 1998. Soil gas sampling locations corresponded to areas where solvents or other chemicals that contained VOCs were stored, used or potentially released to the subsurface soil. A total of 128 soil gas samples were collected and analyzed for VOCs, Freon 11 and Freon 113. Of the 128 samples, three primary VOCs (TCE, Freon 11 and Freon 113) were detected at elevated concentrations in Buildings 402, 402A and 403 and the immediately surrounding vicinity at the 5-foot depth. Based on the results of the 1998 soil gas survey, a soil sampling plan was developed to investigate soils in the vicinity of the highest soil gas concentrations. Sampling was performed in October 1998. Fourteen locations were sampled throughout Buildings 402 and 403 and the surrounding vicinity. Soil samples were analyzed for VOCs and Freon. TCE and Freon 11 were detected in the soil samples but at concentrations below applicable soil cleanup criteria. No further investigation was warranted for the soils beneath Buildings 402 and 403.

A soil gas survey was conducted by Arcadis in 2007. Soil gas results from the 2007 survey were below soil gas screening levels in effect at that time. A VI Evaluation was performed by Arcadis in August 2013 since the NJDEP VI Screening Levels were modified in March 2013. The revisions resulted in order of magnitude changes to vapor intrusion screening levels for the following constituents: ethylbenzene, 1,1-dichloroethane, and 1,2,4-trichlorobenzene. These three constituents were re-evaluated by comparing the historical soil gas data collected at the Site to the new screening levels. This review identified the presence of ethylbenzene in exceedance of the new non-residential soil gas screening level in one historical sample. The compounds 1,1-dichloroethane and 1,2,4-trichlorobenzene were not detected in any VI samples collected in 2007. The soil gas concentration of ethylbenzene in sample SS-11 collected near Building 300 in 2007 exceeded the updated SGSL of 250 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Although ethylbenzene exceeds the SGSL in this one sample, Arcadis concluded that this detection was not Site-related and no further action was necessary.

Concentrations of TCE exceeded the NJDEP GWSL in the most recent sampling round conducted in June 2015, but based on the depth of the groundwater sample and results of previous soil gas surveys, no additional VI sampling is required at this time.



## 7.0 CLASSIFICATION EXCEPTION AREA

### 7.1 Groundwater Fate and Transport Modeling

A Classification Exception Area (CEA) application is included with this report submittal. **Table 6** presents groundwater analytical results reported since the shut-down of the former pump and treat remediation system (in November 2009). Fate and transport modeling of TCE impacts in groundwater was used to estimate the effective area of the CEA (**Figure 14**). Fate and transport conditions were modeled using BIOCHLOR (2000, 2002), a screening model developed in conjunction with the Air Force Center for Environmental Excellence (AFCEE) technology transfer division and Groundwater Services, Inc. BIOCHLOR is based on the Domenico Single Species Analytical Model (1987) and is designed to run within the Microsoft Excel spreadsheet. The Domenico model uses a semi-analytical solution to model solute transport with no degradation; transport with sequential first order decay in one zone; and transport with sequential first order decay in two zones. The intent of the model is to assess how far the chlorinated plume will migrate with no engineering controls or source area reductions. The model results were used to assess whether monitored natural attenuation (MNA) was occurring; whether MNA (if occurring) could effectively address the TCE impacted groundwater; and as a method to predict the extent of the residual dissolved contaminants consisting primarily of TCE. BIOCHLOR is not designed to address chemical diffusion processes that may occur where the source area includes low flow conditions resulting from clay and silt lithologies.

The Site specific parameters that the BIOCHLOR model utilizes include Advection, Dispersion, Adsorption, Biotransformation, and Analytical Data (from various Site locations identified along the centerline of the plume). In addition, the model allows the user to modify the width and length of the modeled and source areas as well as the model simulation time. Based on the Site specific data from the monitoring well identified as the "source" well, the model determines the likely concentrations over the modeled area, that would be the result of solute movement alone (Advection, Dispersion, Adsorption), versus the likely concentration that would be the result of first order decay in one or two zones. The Site analytical data is plotted along with the solute movement alone and with the solute movement including first order decay – i.e., natural attenuation.

Parameters selected for use in the model were based on actual field determined values whenever possible. In cases where multiple values existed, an average value was selected and, in many cases multiple values were run to assess the sensitivity of the model to the various parameters.

Three data inputs are required for Advection – Hydraulic Conductivity, Effective Porosity and Hydraulic Gradient. From these three values a Seepage Velocity is calculated within the spreadsheet. The values used were those values determined from the most recent investigative studies. Porosity was set at 0.20.

Dispersion is the process of mechanical mixing of dissolved constituents in both the horizontal and vertical directions. Horizontal dispersion consists of both longitudinal (in the direction of groundwater flow) as well as lateral (contaminant flow perpendicular to groundwater flow) dispersion. Lateral dispersion is typically 10% of the longitudinal dispersion however, in this case, the plume width (~300 feet) appears to be about 15% of the plume length (~2,000 feet) therefore 15% was used as the lateral dispersion value. The vertical dispersion parameter was left at the default value in order to return a conservative estimate for plume dispersion.

Adsorption has two data inputs – soil bulk density and the organic carbon fraction of soil. The value used for the soil bulk density (1.7 Kg/L) is an estimated value for porous aquifer material while the value for the fraction of organic carbon (0.0063) was reported in earlier reports. The organic carbon fraction can play a significant role in reducing concentrations and this value may change along the expected flow path.

The Biotransformation values describe the first-order decay process for dissolved constituents. For TCE values were selected between 0 and 3.2 yr<sup>-1</sup>. Since biotransformation does not appear to be documented in the northern part of the site, lower values were used. In the southern part of the site nominal biotransformation appears to be observed and the larger value for this parameter was utilized.



The General section of the model is used to input the model time duration as well as the length and width of the model area. The model area is established by the expected flow path with the northern plume in the shallow zone expected to discharge at the Millstone River – a distance of 2,000 feet. The model width was previously established at 15% the longitudinal pathway and is therefore set at 300 feet. The duration was varied until an appropriate time frame was selected to demonstrate compliance across the site.

Source Data and Field Data For Comparison provides a location to input Site specific data in order to facilitate calibration of the model. The saturated zone source thickness for the northern and southern plumes are estimated at an average of 25 feet thick with the width of the plume previously established at 300 feet wide. The decay rate was set at  $0.05 \text{ yr}^{-1}$  for the shallow aquifer based on the average of the decreasing contaminant trends observed at the shallow wells. In the intermediate aquifer a decay rate of  $0.2 \text{ yr}^{-1}$  was set based on the average of contaminant trends observed in intermediate wells.

Parameter values selected are provided in **Table 12**. As a result of the recent cessation of the pump and treat system, the hydraulic conditions have changed and incorporating older monitoring well data into the BIOCHLOR model would result in unreliable output. Periodic monitoring, under existing hydraulic conditions, will allow incorporation of current collected data into the BIOCHLOR model to confirm and refine model output.

### **Shallow Results**

Based on the field data, it appears that minimal to no first order decay is occurring in the shallow zone. Under these conditions the model suggests that the plume will migrate over time a distance of approximately 2,400 ft. Model results indicate that the TCE plume could potentially extend downgradient to the Millstone River. The model further indicates that there is potential for impacts in the shallow zone to migrate to this receiving surface water body; however, historical data indicates that the shallow plume has not migrated to the sentinel wells located between the source area and the Millstone River. The sentinel well results were historically reported as non-detect although these wells have not been sampled for many years. Additional groundwater monitoring of these wells will be conducted to calibrate and determine the accuracy of the shallow zone model's prediction to current groundwater quality. Based upon these additional monitoring rounds the model can be recalibrated to confirm the downgradient extent under current Site-specific conditions.

### **Intermediate Results**

The available data set for the intermediate zone implies that limited first order decay is occurring in this zone of the Site. Under current hydraulic conditions, model results indicate that, with limited first order decay, the plume will expand to an approximate distance of 1,600 ft from MW-22D in approximately 5 years. At that point the plume front appears to reach stability and groundwater concentrations are expected to meet GWQS. If first order decay is occurring more slowly than anticipated, the GWQS for TCE (1 ppb) will be met at a distance of more than 5,000 ft from monitoring well MW-22D, after 8 years, at which point the plume is expected to be stable. With no first order decay, the intermediate zone will be impacted for an approximate duration of 75 years. However, with limited first order decay, the duration reduces to 20 years or less.

### **Deep Results**

Based on the limited data collected from the deep zone, the vertical delineation of the plume is complete. It is expected that the contaminants will not migrate beyond the Merchantville-Woodbury confining unit that is at the base of the Pennsauken Formation

## **7.2 CEA Dimensions**

The extent of the CEA is depicted on **Figure 14**. According to the calculations, the dimensions of the CEA are approximately 2,200 ft by 3,200 ft. Aquifer impacts are identified to a maximum depth of approximately 135 ft deep but the CEA will identify the vertical extent to the top of the Merchantville-Woodbury clay confining unit.



### **7.3 CEA Duration**

The CEA timeframe will be set to 70-years based upon the results of the fate and transport modelling (BIOCHLOR). The CEA/Well Restriction Area Fact Sheet is included as an enclosure with this report.

A copy of the CEA application is included as Appendix P of this report.



## 8.0 SUMMARY AND CONCLUSIONS

### 8.1 Nature and Extent of Constituents of Interest

The primary source of groundwater contamination originated from the puncture of a sanitary sewer line in the courtyard area. Evaluation with remote cameras indicated that a lightning rod had been driven through the sanitary line. The mounding effect previously detected in that area was due to the head pressure of water from this sanitary line leak. VOC impacts in groundwater were attributed to discharges of COCs to the sanitary lines that exited during this rupture. According to the SES dated 1986, the courtyard was used to store chemicals, solvents and hazardous waste materials. The sources were successfully addressed through remedial actions addressing soil impacts at the Site. The residual effects of the impacts continue to be evident in groundwater.

The Site-related COCs detected in groundwater included: TCE; Freon-11<sup>®</sup>; 1,1-Dichloroethene; 1,1,1-TCA; 1,1,2-TCA; methylene chloride; PCE, and 1,4-dioxane. While each of the Site-related constituents has been identified in groundwater on the Site, exceedances of the constituents' respective GWQS typically has been sporadic and localized, except for TCE. TCE is the only constituent that has been observed consistently and Site-wide; therefore, TCE has been the primary COC at this Site.

Significant remedial investigation activities have been conducted to better characterize and define the extent of groundwater impacts. Contamination at the Site is primarily transported via advective transport with groundwater and the complex subsurface geology at the site has contributed to horizontal and vertical distribution of contaminants at the Site. The most recent remedial investigation activities have provided additional information concerning the characteristics of the subsurface geology including the intermittent discontinuous intermediate clay layers observed on-Site and off-Site. This investigation defined the horizontal and vertical delineation of TCE impacts to the GWQS in downgradient off-Site areas through a vertical boring profile sampling program. The vertical profile boring groundwater grab samples confirmed overall vertical extent of impacts in the deeper zone. Thus the plume extends about 700 ft offsite to a depth of 135 ft bgs. The isoconcentration maps presented for each zone incorporate current and historic groundwater monitoring data and depict the horizontal extent of groundwater impacts on-Site and off-Site.

### 8.2 Conclusions

Grab groundwater samples collected in the deep zone using a discrete interval sampler were below GWQS beyond a depth of 135 ft bgs. Based on these results, vertical delineation of groundwater impacts has been achieved. The results of the initial round of groundwater monitoring of the permanent wells installed in the deep zone confirmed that TCE concentrations in this zone are low and approaching the GWQS. Although the initial groundwater sampling conducted in the wells installed in the deeper downgradient zone revealed TCE concentrations above the GWQS, these results comply with NJDEP's current policy for definition of a complete RI. A concentration gradient was used to define the horizontal extent in the deeper zone. Historic and supplemental RI activities have completed the horizontal and vertical delineation of groundwater impacts and provided a sufficient monitoring well network for future groundwater monitoring. The RI for the Site is complete.

A CEA will be established for the Site groundwater. The extent of the CEA is depicted on Figure 14 and is approximately 2,200 ft by 3,200 ft. Aquifer impacts are identified to a maximum depth of approximately 135 ft deep but the CEA will identify the vertical extent to the top of the Merchantville-Woodbury clay confining unit. The CEA timeframe is set to 70 years based upon the results of the fate and transport modelling (BIOCHLOR).

The ongoing groundwater monitoring program continues to reveal that declining concentrations of the COCs have been observed in groundwater samples from the majority of monitoring wells on the Site. This pattern suggests that natural attenuation of these constituents is occurring. Additional rounds of groundwater monitoring will be conducted to confirm the current groundwater monitoring results and lines of evidence that



natural attenuation is occurring. The results of the ongoing groundwater monitoring program will be integrated into the overall remedy evaluation for Site groundwater.

A Site Remediation Reform Act RIR form, Updated Receptor Evaluation Form, Classification Exception Area Application and Case Inventory Document are provided with the cover letter accompanying this RIR and are included as Appendix P.

### 8.3 Recommendations

The results of the supplemental RI will be integrated with the data collected during the ongoing groundwater monitoring program to develop an overall remedial approach to Site groundwater. A remedy evaluation for overall Site groundwater will be conducted to identify the optimum remedial action(s) to address residual impacts in groundwater. The following recommendations will be incorporated into the current groundwater monitoring program to provide additional Site-specific aquifer data to better characterize remaining groundwater impacts:

- the well screen of monitoring well MW-4 is not adequately monitoring the shallow aquifer and may not be providing accurate groundwater quality or elevation data. The well will be overdrilled and reinstalled using a 10 ft screen set at approximately 25 to 35 ft bgs; and
- add select monitoring wells to the current groundwater monitoring program
  - sample shallow monitoring wells MW-18 and MW-6 for at least two consecutive sampling events. If the analytical results confirm historic concentrations, continue with annual monitoring to demonstrate that the plume is not impacting the Millstone River. Data from these wells will be used to refine the Biochlor Model.
  - sample intermediate sentinel wells, MW-6D, 30D, and 32D, annually to confirm historical concentrations.
  - sample shallow, upgradient well, MW-20, annually to confirm historical concentrations.
  - sample shallow sentinel well, MW-8, annually to confirm historical concentrations.

The selected remedial action for Site groundwater will be submitted to the NJDEP in a Remedial Action Workplan.



## 9.0 REFERENCES

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## Tables



**TABLE 1**  
**Remedial Investigation Groundwater Analytical Sample Summary**  
**Former Lockheed Martin Facility**  
**PI #158269**  
**East Windsor, New Jersey**

Sample ID	Lab ID	Sample Date	Sample Interval (in feet below ground surface)	Duplicate	Matrix	Analysis (Method)	Lab Job Number
MW-4	P1054-01	6/10/2015	28 – 28.5	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C), methane, ethane, ethene (Method RSK-175), 1,4-dioxane (USEPA SW846 Method 8270D SIM), total arsenic, iron, and manganese (USEPA SW846 Method 6020), Anions: sulfate, nitrate, chloride (USEPA 300.0), sulfide (SM 4500 S), TOC (USEPA SW846 Method 9060A), dissolved hydrogen (USEPA Method 3C)	P1054
MW-9	P1054-02	6/10/2015	30.8 – 31.3	no	Groundwater		P1054
MW-12D	P1054-03	6/10/2015	55.3 – 55.8	no	Groundwater		P1054
MW-13D	P1054-04	6/10/2015	63 – 63.5	no	Groundwater		P1054
MW-14D	P1054-05	6/10/2015	83.5 – 84	no	Groundwater		P1054
MW-18D	P1054-06	6/10/2015	48.9 – 49.4	no	Groundwater		P1054
MW-22D	P1054-07	6/10/2015	87.8 – 88.3	no	Groundwater		P1054
MW-31D	P1054-08	6/10/2015	76.5 – 77	no	Groundwater		P1054
F061015	P1054-09	6/10/2015	N/A	no	Field Blank		P1054
MW-22D2	P1054-10	6/10/2015	97 – 97.5	no	Groundwater		P1054
MW-33D2	P1054-11	6/10/2015	126 – 126.5	no	Groundwater	Dissolved arsenic, iron and manganese (USEPA SW846 Method 6020)	P1054
MW-34D2	P1054-12	6/10/2015	132 – 132.5	no	Groundwater		P1054
T061015	P1054-13	6/10/2015	N/A	no	Trip Blank		P1054
MW-4F	P1054-14	6/10/2015	28 – 28.5	no	Groundwater		P1054
MW-9F	P1054-15	6/10/2015	30.8 – 31.3	no	Groundwater		P1054
MW-12DF	P1054-16	6/10/2015	55.3 – 55.8	no	Groundwater		P1054
MW-13DF	P1054-17	6/10/2015	63 – 63.5	no	Groundwater		P1054
MW-14DF	P1054-18	6/10/2015	83.5 – 84	no	Groundwater		P1054
MW-18DF	P1054-19	6/10/2015	48.9 – 49.4	no	Groundwater		P1054
MW-22DF	P1054-20	6/10/2015	87.8 – 88.3	no	Groundwater		P1054
MW-31DF	P1054-21	6/10/2015	76.5 – 77	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C), methane, ethane, ethene (Method RSK-175), 1,4-dioxane (USEPA SW846 Method 8270D SIM), total arsenic, iron, and manganese (USEPA SW846 Method 6020), Anions: sulfate, nitrate, chloride (USEPA 300.0), sulfide (SM 4500 S), TOC (USEPA SW846 Method 9060A), dissolved hydrogen (USEPA Method 3C)	P1054
F061015-F	P1054-22	6/10/2015	N/A	no	Field Blank		P1054
MW-22D2F	P1054-23	6/10/2015	97 – 97.5	no	Groundwater		P1054
MW-33D2F	P1054-24	6/10/2015	126 – 126.5	no	Groundwater		P1054
MW-34D2F	P1054-25	6/10/2015	132 – 132.5	no	Groundwater		P1054
MW-12	P1054-26	6/11/2015	30 – 30.5	no	Groundwater		P1054
MW-27D	P1054-27	6/11/2015	61.8 – 62.3	no	Groundwater		P1054
DUPLICATE	P1054-28	6/11/2015	30 – 30.5	yes	Groundwater		P1054
MW-29D2	P1054-29	6/11/2015	122 – 122.5	no	Groundwater		P1054
MW-35D2	P1054-30	6/11/2015	124 – 124.5	no	Groundwater		P1054
F061115	P1054-31	6/11/2015	N/A	no	Field Blank	Dissolved arsenic, iron and manganese (USEPA SW846 Method 6020)	P1054
T061115	P1054-32	6/11/2015	N/A	no	Trip Blank		P1054
MW-12F	P1054-33	6/11/2015	30 – 30.5	no	Groundwater		P1054
MW-27DF	P1054-34	6/11/2015	61.8 – 62.3	no	Groundwater		P1054
DUPLICATE-F	P1054-35	6/11/2015	30 – 30.5	yes	Groundwater		P1054
MW-29D2F	P1054-36	6/11/2015	122 – 122.5	no	Groundwater		P1054
MW-35D2F	P1054-37	6/11/2015	124 – 124.5	no	Groundwater		P1054
F061115-F	P1054-38	6/11/2015	N/A	no	Field Blank		P1054
MW-30D2	P1105-03	6/25/2015	122 – 122.5	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C), methane, ethane, ethene (Method RSK-175), 1,4-dioxane (USEPA SW846 Method 8270D SIM), total arsenic, iron, and manganese (USEPA SW846 Method 6020), Anions: sulfate, nitrate, chloride (USEPA 300.0), sulfide (SM 4500 S), TOC (USEPA SW846 Method 9060A), dissolved hydrogen (USEPA Method 3C)	P1105
F062515	P1105-01	6/25/2015	N/A	no	Field Blank		P1105
T062515	P1105-02	6/25/2015	N/A	no	Trip Blank		P1105
MW-30D2F	P1105-05	6/25/2015	122 – 122.5	no	Groundwater		P1105
F062515-F	P1105-04	6/25/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C), methane, ethane, ethene (Method RSK-175), 1,4-dioxane (USEPA SW846 Method 8270D SIM), total arsenic, iron, and manganese (USEPA SW846 Method 6020), Anions: sulfate, nitrate, chloride (USEPA 300.0), sulfide (SM 4500 S), TOC (USEPA SW846 Method 9060A), dissolved hydrogen (USEPA Method 3C)	P1105
MW-29D2	P1162-03	7/9/2015	122 – 122.5	no	Groundwater		P1162
MW-33D2	P1162-04	7/9/2015	126 – 126.5	no	Groundwater		P1162
F070915	P1162-01	7/9/2015	N/A	no	Field Blank		P1162
T070915	P1162-02	7/9/2015	N/A	no	Trip Blank		P1162
MW-29D2F	P1162-06	7/9/2015	122 – 122.5	no	Groundwater		P1162
MW-33D2F	P1162-07	7/9/2015	126 – 126.5	no	Groundwater		P1162
F070915-F	P1162-05	7/9/2015	N/A	no	Field Blank		P1162
VPB-1(93-95)	JB90383-1	3/19/2015	93 – 95	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB90383
VPB-1(93-95)R	JB92275-1	4/13/2015	93 – 95	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB92275
VPB-1(109-111)	JB92317-1	4/14/2015	109 – 111	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB92317
VPB-1(125-127)	JB92440-1	4/15/2015	125 – 127	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB92440
VPB-1(141-143)	JB92584-1	4/16/2015	141 – 143	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB92584
VPB-2 (120-122)	JB95905-1	6/1/2015	120 – 122	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB95905
VPB-2 (131-133)	JB95984-1	6/2/2015	131 – 133	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB95984
VPB-2 (142-144)	JB96131-1	6/3/2015	142 – 144	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB96131
VPB-2 (153-155)	JB96131-4	6/3/2015	153 – 155	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB96131



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Sample ID	Lab ID	Sample Date	Sample Interval (in feet below ground surface)	Duplicate	Matrix	Analysis (Method)	Lab Job Number
VPB-3(120-122)	JB94935-1	5/18/2015	120 - 122	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB94935
VPB-3 (131-133)	JB95002-1	5/19/2015	131 - 133	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB95002
VPB-3 (142-144)	JB95002-4	5/19/2015	142 - 144	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB95002
VPB-3 (153-155)	JB95130-1	5/20/2015	153 - 155	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB95130
VPB-4 (122-124)	JB93920-1	5/5/2015	122 - 124	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB93920
VPB-4 (132-134)	JB94058-1	5/6/2015	132 - 134	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB94058
VPB-4 (140-142)	JB94185-1	5/5/2015	140 - 142	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB94185
VPB-5(121-123)	JB93451-1	4/28/2015	121 - 123	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB93451
VPB-5(130-132)	JB93256-1	4/24/2015	130 - 132	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB93256
VPB-5(142-144)	JB93256-4	4/24/2015	142 - 144	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB93256
VPB-5(146-148)	JB93382-1	4/27/2015	146 - 148	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB93382
VPB-6 (109-111)	JB91216-1	3/31/2015	109 - 111	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB91216
VPB-6(120-122)	JB91455-1	4/2/2015	120 - 122	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB91455
VPB-6(136-138)	JB91708-1	4/7/2015	136 - 138	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB91708
VPB-6(152-154)	JB91854-1	4/8/2015	152 - 154	no	Groundwater	TCL VOCs (USEPA S846 Method 8260C)	JB91854
HYDRANT 040715	JB91708-4	4/7/2015	N/A	no	Municipal water	TCL VOCs (USEPA S846 Method 8260C)	JB91708
F031915	JB90383-2	3/19/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB90383
F033115	JB91216-2	3/31/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91216
F040215	JB91455-2	4/2/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91455
FB 040715	JB91708-2	4/7/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91708
FB040815	JB91854-2	4/8/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91854
F041315	JB92275-2	4/13/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92275
FB041415	JB92317-2	4/14/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92317
FB041515	JB92440-2	4/15/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92440
FB041615	JB92584-2	4/16/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92584
FB042415	JB93256-2	4/24/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB93256
FB042715	JB93382-2	4/27/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB93382
FB051815	JB94935-2	5/18/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB94935
FB051915	JB95002-2	5/19/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB95002
FB05202015	JB95130-2	5/20/2015	N/A	no	Field Blank	TCL VOCs (USEPA S846 Method 8260C)	JB95130
T031615	JB90383-3	3/19/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB90383
T033015	JB91216-3	3/31/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91216
T033115	JB91455-3	4/2/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91455
TB040715	JB91708-3	4/7/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91708
TB040815	JB91854-3	4/8/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB91854
T041315	JB92275-3	4/13/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92275
TB041315	JB92317-3	4/14/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92317
TB041515	JB92440-3	4/15/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92440
TB041615	JB92584-3	4/16/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB92584
TB042215	JB93256-3	4/24/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB93256
TB042715	JB93382-3	4/27/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB93382
TB051815	JB94935-3	5/18/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB94935
TB051915	JB95002-3	5/19/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB95002
TB05202015	JB95130-3	5/20/2015	N/A	no	Trip Blank	TCL VOCs (USEPA S846 Method 8260C)	JB95130

**Notes:**

VOCs = Volatile Organic Compounds.

TOC = Total Organic Carbon.

Duplicate sample collected from monitoring well MW-12.

Sample IDs designated "F" are dissolved (filtered) samples.



**TABLE 2**  
**Summary of Well Construction**  
**Former Lockheed Martin Facility**  
**PI Number 158269**  
**East Windsor, New Jersey**

Well ID	Well Depth (feet below TOC)	Aquifer Zone	Permit ID	Date Drilled	Easting (X)	Northing (Y)	Screen Length (feet)	Screened Interval (feet bgs)	Screened Interval (AMSL)	Well Diameter (inches)
MW-01	42	shallow	28-22368-3	1989	475256.699	529903.225	15	27-42	54.71 - 69.71	4
MW-02	44	shallow	28-23994-6	1989	475160.258	529553.219	20	24-44	53.19 - 73.19	4
MW-03	48	shallow	28-23994-6	1989	474967.733	529878.675	10	28-48	53.4 - 73.4	4
MW-04	30	shallow	28-23994-6	1989	475396.181	530116.837	15	15-30	68.08 - 83.08	4
MW-04D	61	intermediate	28-26975-6	1989	475389.273	530124.335	10	51-61	37.28 - 47.28	4
MW-04D2	68	intermediate	28-28631	1989	475383.018	530135.055	5	63-68	31.34 - 36.34	4
MW-05	44	shallow	28-23979-2	1989	475648.704	529861.468	20	24-44	50.93 - 70.93	4
MW-05D	62	intermediate	28-28473	1989	475655.348	529851.686	10	52-62	32.91 - 42.91	4
MW-06	34	shallow	28-24887	1989	477004.858	530248.808	15	19-34	54.02 - 69.02	4
MW-06D	60	intermediate	28-30166	1989	477014.763	530249.505	10	50-60	27.86 - 37.86	4
MW-06D2	87	deep	28-30167	1989	477026.742	530253.348	10	77-87	00.4 - 10.4	4
MW-07	41	shallow	28-26981-1	1989	474934.465	529655.204	15	26-41	59.67 - 74.67	4
MW-08	35	shallow	28-26982-9	1989	475589.66	530494.852	15	20-35	59.04 - 74.04	4
MW-09	34	shallow	28-31552	1989	476230.14	530289.62	20	14-34	52.94 - 72.94	4
MW-09D	48	shallow	28-13553	Mar-93	476226.98	530294.498	15	33-48	38.84 - 53.84	4
MW-10	36	shallow	28-26984-5	1989	476051.330	530041.907	15	21-36	60.19 - 75.19	4
MW-11	37	shallow	28-28475	1989	475961.397	529633.582	15	22-37	52.39 - 67.39	4
MW-11D	68	intermediate	28-38058b	May-96	476115.339	529379.205	10	58-68	21.77 - 31.77	4
MW-12	33	shallow	28-30170	1989	476551.846	530216.674	15	18-33	58.65 - 73.65	4
MW-12D	58	intermediate	28-30171	1989	476557.286	530200.592	10	48-58	33.49 - 43.49	4
MW-13	30	shallow	28-30172	1989	476389.615	529427.561	20	30-Oct	57.51 - 77.51	4
MW-13D	67	intermediate	28-30173	1989	476397.740	529431.621	10	57-67	20.81 - 30.81	4
MW-14	38	shallow	28-13533	1989	476800.750	529223.310	15	23-38	60.7 - 75.7	4
MW-14D	75	intermediate	28-13555	1989	476789.590	529216.330	10	65-75	24.13 - 34.13	4
MW-15	38	shallow	28-33903	May-94	475498.753	529325.048	15	23-38	60.08 - 75.08	4
MW-16	35	shallow	28-33904	May-94	475204.404	530631.888	15	20-35	67.17 - 82.17	4
MW-16D	68	intermediate	28-33905	May-94	475213.495	530634.125	15	53-68	33.66 - 48.66	4
MW-17	33	shallow	28-33906	May-94	475728.442	530935.869	20	13-33	61.88 - 81.88	4
MW-17D	66	intermediate	28-33907	May-94	475716.203	530927.218	15	51-66	28.93 - 43.93	4
MW-18	24	shallow	28-33908	May-94	476228.643	530551.820	15	9-24	62.3 - 77.3	4
MW-18D	51	intermediate	28-33909	May-94	476235.125	530541.946	15	36-51	35.19 - 50.19	4
MW-19D	46	shallow	28-38057	May-96	476066.906	531189.558	10	36-46	40.13 - 50.13	4
MW-20	28	shallow	28-41960	May-98	476438.927	530481.062	15	13-28	57.23 - 72.23	4
MW-20D	50	intermediate	28-41961	May-98	476446.526	530485.707	10	40-50	35.08 - 45.08	4
MW-21	33	shallow	28-41962	May-98	476481.894	529840.970	15	18-33	53.92 - 68.92	4
MW-21D	65	intermediate	28-41963	May-98	476487.775	529840.013	10	55-65	21.59 - 31.59	4
MW-22D	88	deep	28-41964	May-98	476485.160	529027.540	10	78-88	10.99 - 20.99	4
MW-22D2	143	very deep	E201503612	2015	476485	529027	5	95-100	(-01.01) - 3.99	2
MW-23 (permitted as MW-23D)	22	shallow	28-41965	May-98	476296.357	530889.243	10	12-22	55.13 - 65.13	4
MW-24D	51	intermediate	28-42887	Oct-98	476630.126	530962.114	15	36-51	21.24 - 36.24	4
MW-25D	52	intermediate	28-42886	Oct-98	476952.094	530734.763	10	42-52	21.42 - 31.42	4
MW-26D	51	intermediate	28-42888	Oct-98	476863.682	529966.658	15	36-51	30.95 - 45.95	2
MW-27D	61	intermediate	28-50434	Jun-02	476767.574	530453.658	10	51-61	27.03 - 37.03	2
MW-28D	78	deep	28-50436	Jun-02	476646.385	529582.094	10	68-78	08.84 - 18.84	2
MW-29D	93	deep	28-50437	Jun-02	476459.867	528775.406	10	83-93	09.83 - 19.83	2
MW-29D2	155	very deep	E201505525	2015	476469	528765	5	120-125	(-23.04) - (-18.04)	2
MW-30D	93	deep	E201115786	Sep-11	476905.9	528774.9	10	83-93	12.26 - 22.26	2
MW-30D2	155	very deep	E201506054	2015	476896	528771	5	120-125	(-19.4) - (-14.4)	2
MW-31D	79.5	intermediate	E201115781	Jun-13	477117.43	529039.29	10	69.5-79.5	17 - 27	2
MW-32D	88	deep	E201308289	Jun-13	477503.26	528899.32	10	78-88	05.69 - 15.69	2
MW-33D2	155	very deep	E201506796	2015	476991	529029	5	124-129	(-31.96) - (-26.96))	2
MW-34D2	155	very deep	E201504370	2015	477258	529169	5	130-135	(-38.36) - (-33.36)	2
MW-35D2	170	very deep	E201503613	2015	477304	528790	5	122-127	(-28.45) - (-23.45)	2
MW-32 (S)	30	shallow	E201308288	Jun-13	477501.78	528893.48	10	20-30	63.94 - 73.94	2
MW-31 (S)	32	shallow	E201308287	Jun-13	477113.57	529031.97	10	22-32	64.98 - 74.98	2
ERD-01	58	Treatment System	28-52342	2000	476565.528	530196.5	25	33-58	33.48 - 58.48	2
IWS-01/TOP	29	Treatment System	28-43846	2000	476563.98	530188.488	15	14-29	61.9 - 76.9	8
IWS-01/BOTTOM	54	Treatment System	28-43846	2000	476563.98	530188.488	5	49-54	36.9 - 41.9	8
OW-01S	30	Treatment System	28-43838	2000	476570.709	530173.503	5	25-30	60.56 - 65.56	2
OW-02D	55	Treatment System	28-43843	2000	476579.526	530162.052	5	50-55	35.56 - 40.56	2
OW-03S	30	Treatment System	28-43840	2000	-	-	5	25-30	60.32 - 65.32	2
OW-03D	55	Treatment System	28-43844	2000	476588.973	530149.521	5	50-55	35.38 - 40.38	2
OW-04D	58	Treatment System	28-52341	Jul-03	-	-	10	48-58	32.21 - 42.21	2
OW-05D	60	Treatment System	28-53102	Jul-03	-	-	10	50-60	31.94 - 41.94	2
RW-01	57	Treatment System	28-57008	Jun-06	-	-	40	17-57	32.7 - 72.7	6
RW-02	67	Treatment System	28-57009	Jun-06	-	-	40	27-67	25.26 - 65.26	6
RW-03	70	Treatment System	28-57010	Jun-06	-	-	60	60-70	18.95 - 28.95	6

Notes:  
AMSL = Above Mean Sea Level.  
bgs = Below Ground Surface.  
TOC = Top of Casing.



TABLE 3  
Comparison of Vertical Profile Boring Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

Location ID Sample ID Lab ID Sample Date Sample Depth			MW-22D2*	MW-22D2	MW-22D2	MW-22D2	MW-22D2	MW-22D2	MW-30D2	MW-30D2	MW-30D2	MW-30D2	MW-29D2	MW-29D2	MW-29D2	MW-29D2													
			VPB-1(93-95)	VPB-1(93-95)R	VPB-1(109-111)	VPB-1(125-127)	VPB-1(141-143)	VPB-2 (120-122)	VPB-2 (131-133)	VPB-2 (142-144)	VPB-2 (153-155)	VPB-3(120-122)	VPB-3 (131-133)	VPB-3 (142-144)	VPB-3 (153-155)														
			JB90383-1	JB92275-1	JB92317-1	JB92440-1	JB92584-1	JB95905-1	JB95984-1	JB96131-1	JB96131-4	JB94935-1	JB95002-1	JB95002-4	JB95130-1														
			3/19/2015	4/13/2015	4/14/2015	4/15/2015	4/16/2015	6/1/2015	6/2/2015	6/3/2015	6/3/2015	5/18/2015	5/19/2015	5/19/2015	5/20/2015														
			93 - 95	93 - 95	109 - 111	125 - 127	141 - 143	120 - 122	131 - 133	142 - 144	153 - 155	120 - 122	131 - 133	142 - 144	153 - 155														
Analyte	CAS#	GWQS																											
Acetone	67-64-1	6000																											
Benzene	71-43-2	1	101	13	8.5	J	8.3	U	50	U	10	U	10	U	9.6	J	13.7	U	9	J	9.2	J	5.6	J	10	U			
Bromochloromethane	74-97-5	-	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U			
Bromodichloromethane	75-27-4	1	1	U	1	U	1	U	2.5	U	5	U	1	U	1.2	U	0.52	J	1	U	0.57	J	1.4	U	1.2	U	1.6	U	
Bromoform	75-25-2	4	1	U	1	U	1	U	2.5	U	5	U	1	U	1.7	U	0.73	J	1	U	0.58	J	1.7	U	1.9	U	1.8	U	
Bromomethane	74-83-9	10	2	U	2	U	2	U	5	U	10	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	
2-Butanone (MEK)	78-93-3	300	19.9	10	10	U	25	U	50	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	
Carbon disulfide	75-15-0	700	4.5	2	2	U	5	U	10	U	0.41	J	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	
Carbon tetrachloride	56-23-5	1	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Chlorobenzene	108-90-7	50	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Chloroethane	75-00-3	-	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Chloroform	67-66-3	70	1.6	2.3	0.81	J	2.5	U	5	U	1.2	U	0.78	J	0.53	J	1	U	0.44	J	0.85	J	0.63	J	0.9	J			
Chloromethane	74-87-3	-	1.6	1	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Cyclohexane	110-82-7	-	5	U	5	U	5	U	13	U	25	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
1,2-Dibromo-3-chloropropane	96-12-8	0.02	2	U	2	U	2	U	5	U	10	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	
Dibromochloromethane	124-48-1	1	1	U	1	U	1	U	2.5	U	5	U	1	U	2.1	U	0.96	J	1	U	0.98	J	2.2	U	2.1	U	2.5	U	
1,2-Dibromoethane	106-93-4	0.03	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,2-Dichlorobenzene	95-50-1	600	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,3-Dichlorobenzene	541-73-1	600	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,4-Dichlorobenzene	106-46-7	75	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Dichlorodifluoromethane	75-71-8	1000	2	U	2	U	2	U	5	U	10	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	
1,1-Dichloroethane	75-34-3	50	1	U	0.36	J	1	U	2.5	U	5	U	0.29	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,2-Dichloroethane	107-06-2	2	1	U	1	U	1	U	2.5	U	5	U	0.22	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,1-Dichloroethene	75-35-4	1	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
cis-1,2-Dichloroethene	156-59-2	70	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
trans-1,2-Dichloroethene	156-60-5	100	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,2-Dichloropropane	78-87-5	1	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
cis-1,3-Dichloropropene	10061-01-5	-	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
trans-1,3-Dichloropropene	10061-02-6	-	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Ethylbenzene	100-41-4	700	2.9	1	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Freon 113	76-13-1	-	2.1	J	2.8	J	5	U	13	U	25	U	2.4	J	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
2-Hexanone	591-78-6	-	5	U	5	U	5	U	13	U	25	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
Isopropylbenzene	98-82-8	700	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Methyl Acetate	79-20-9	7000	5	U	5	U	5	U	13	U	25	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
Methylcyclohexane	108-87-2	-	5	U	5	U	5	U	13	U	25	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
Methyl Tert Butyl Ether	1634-04-4	70	1.7	2.4	1	U	2.5	U	5	U	7.9	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
4-Methyl-2-pentanone(MIBK)	108-10-1	-	5	U	5	U	5	U	13	U	25	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
Methylene chloride	75-09-2	3	2	U	2	U	2	U	5	U	10	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	
Styrene	100-42-5	100	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,1,2,2-Tetrachloroethane	79-34-5	1	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Tetrachloroethene	127-18-4	1	0.35	J	0.9	J	1	U	0.50 <sup>a</sup>	U	1.0 <sup>a</sup>	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Toluene	108-88-3	600	43.8	0.66	J	1.2	U	2.5	U	5	U	0.22	J	0.3	J	0.2	J	1	U	1	U	0.16	J	1	U	1	U	2	U
1,2,3-Trichlorobenzene	87-61-6	-	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,2,4-Trichlorobenzene	120-82-1	9	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,1,1-Trichloroethane	71-55-6	30	1	U	1	U	1	U	2.5	U	5	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
1,1,2-Trichloroethane	79-00-5	3	2.2	3	1	U	2.5	U	5	U	1.9	U	1	U	1	U	1												

Notes:

All results are presented in µg/l.

CAS-RN = Chemical Abstract Service Registry Number.

GWQS = NJDEP Ground Water Quality Standards.

**Bold** values indicate result or reporting limit shown in excess of the GWQS.

U - Indicates that the analyte was not detected at the Detection

Limit shown.

J - Indicates that the value was detected and is estimated.

The grab sample VPB-1 (93-95) collected from 93-95 ft bgs in VPB-1 on 3/19/2015 had high levels of turbidity. The temporary well was resampled on 4/13/2015. The results from the original sample are considered rejected due to high turbidity.



TABLE 3  
Comparison of Vertical Profile Boring Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID		MW-33D2		MW-33D2		MW-33D2		MW-34D2		MW-34D2		MW-34D2		MW-34D2		MW-35D2		MW-35D2		MW-35D2		MW-35D2	
			Sample ID		VPB-4 (122-124)		VPB-4 (132-134)		VPB-4 (140-142)		VPB-5(121-123)		VPB-5(130-132)		VPB-5(142-144)		VPB-5(146-148)		VPB-6 (109-111)		VPB-6(120-122)		VPB-6(136-138)		VPB-6(152-154)	
			Lab ID		JB93920-1		JB94058-1		JB94185-1		JB93451-1		JB93256-1		JB93256-4		JB93382-1		JB91216-1		JB91455-1		JB91708-1		JB91854-1	
			Sample Date		5/5/2015		5/6/2015		5/5/2015		4/28/2015		4/24/2015		4/24/2015		4/27/2015		3/31/2015		4/2/2015		4/7/2015		4/8/2015	
			Sample Depth		122 - 124		132 - 134		140 - 142		121 - 123		130 - 132		142 - 144		146 - 148		109 - 111		120 - 122		136 - 138		152 - 154	
Analyte	CAS#	GWQS																								
Acetone	67-64-1	6000		3.3	U		3.3	U		6.3	J		5.5	J		9.1	J		10	U		10	U		10	U
Benzene	71-43-2	1		0.24	U		0.24	U		0.24	U		0.5	U		0.5	U		0.5	U		0.5	U		0.5	U
Bromochloromethane	74-97-5	-		0.37	U		0.37	U		0.37	U		0.37	U		1	U		1	U		1	U		1	U
Bromodichloromethane	75-27-4	1		0.44	J		1.3			0.23	U		0.48	J		1	U		1.2			0.75	J		1	U
Bromoform	75-25-2	4		0.23	U		0.44	J		0.23	U		0.23	U		1	U		0.36	J		1	U		1	U
Bromomethane	74-83-9	10		0.42	U		0.42	U		0.42	U		0.42	U		2	U		2	U		2	U		2	U
2-Butanone (MEK)	78-93-3	300		5.6	U		5.6	U		5.6	U		5.6	U		10	U		10	U		10	U		10	U
Carbon disulfide	75-15-0	700		0.59	J		0.25	U		0.25	U		0.25	U		0.42	J		2	U		2	U		1.2	J
Carbon tetrachloride	56-23-5	1		0.22	U		0.22	U		0.22	U		0.22	U		1	U		1	U		1	U		1	U
Chlorobenzene	108-90-7	50		0.19	U		0.19	U		0.19	U		0.19	U		1	U		1	U		1	U		1	U
Chloroethane	75-00-3	-		0.34	U		0.34	U		0.34	U		0.34	U		1	U		1	U		1	U		1	U
Chloroform	67-66-3	70		1.1			1			0.73	J		0.79	J		0.44	J		0.96	J		0.81	J		3.1	
Chloromethane	74-87-3	-		0.41	U		0.41	U		0.41	U		0.41	U		1	U		1	U		1	U		1	U
Cyclohexane	110-82-7	-		0.28	U		0.28	U		0.28	U		0.28	U		5	U		5	U		5	U		5	U
1,2-Dibromo-3-chloropropane	96-12-8	0.02		0.99	U		0.99	U		0.99	U		0.99	U		2	U		2	U		2	U		2	U
Dibromochloromethane	124-48-1	1		0.36	J		1.5			0.15	U		0.45	J		1	U		1.1			0.78	J		1	U
1,2-Dibromoethane	106-93-4	0.03		0.23	U		0.23	U		0.23	U		0.23	U		1	U		1	U		1	U		1	U
1,2-Dichlorobenzene	95-50-1	600		0.19	U		0.19	U		0.19	U		0.19	U		1	U		1	U		1	U		1	U
1,3-Dichlorobenzene	541-73-1	600		0.23	U		0.23	U		0.23	U		0.23	U		1	U		1	U		1	U		1	U
1,4-Dichlorobenzene	106-46-7	75		0.27	U		0.27	U		0.27	U		0.7	U		1	U		1	U		1	U		1	U
Dichlorodifluoromethane	75-71-8	1000		0.9	U		0.9	U		0.9	U		0.9	U		2	U		2	U		2	U		2	U
1,1-Dichloroethane	75-34-3	50		0.45	J		0.17	U		0.17	U		0.17	U		1	U		1	U		1	U		0.83	J
1,2-Dichloroethane	107-06-2	2		0.26	J		0.18	U		0.18	U		0.18	U		1	U		1	U		1	U		0.97	J
1,1-Dichloroethene	75-35-4	1		0.51	U		0.51	U		0.51	U		0.51	U		1	U		1	U		1	U		1.2	
cis-1,2-Dichloroethene	156-59-2	70		0.27	U		0.27	U		0.27	U		0.27	U		1	U		1	U		1	U		1	U
trans-1,2-Dichloroethene	156-60-5	100		0.65	U		0.65	U		0.65	U		0.65	U		1	U		1	U		1	U		1	U
1,2-Dichloropropane	78-87-5	1		0.39	U		0.39	U		0.39	U		0.39	U		1	U		1	U		1	U		1	U
cis-1,3-Dichloropropene	10061-01-5	-		0.21	U		0.21	U		0.21	U		0.21	U		1	U		1	U		1	U		1	U
trans-1,3-Dichloropropene	10061-02-6	-		0.19	U		0.19	U		0.19	U		0.19	U		1	U		1	U		1	U		1	U
Ethylbenzene	100-41-4	700		0.27	U		0.27	U		0.27	U		0.27	U		1	U		1	U		1	U		1	U
Freon 113	76-13-1	-		0.52	U		0.52	U		0.52	U		0.52	U		5	U		5	U		5	U		5.2	
2-Hexanone	591-78-6	-		1.7	U		1.7	U		1.7	U		1.7	U		5	U		5	U		5	U		5	U
Isopropylbenzene	98-82-8	700		0.23	U		0.23	U		0.23	U		0.23	U		1	U		1	U		1	U		1	U
Methyl Acetate	79-20-9	7000		1.9	U		1.9	U		1.9	U		1.9	U		5	U		5	U		5	U		5	U
Methylcyclohexane	108-87-2	-		0.22	U		0.22	U		0.22	U		0.22	U		5	U		5	U		5	U		5	U
Methyl Tert Butyl Ether	1634-04-4	70		0.78	J		0.24	U		0.24	U		0.24	U		1.2			1	U		1	U		13.7	
4-Methyl-2-pentanone(MIBK)	108-10-1	-		1	U		1	U		1	U		1	U		5	U		5	U		5	U		5	U
Methylene chloride	75-09-2	3		0.73	U		0.73	U		0.73	U		0.73	U		2	U		2	U		2	U		2	U
Styrene	100-42-5	100		0.27	U		0.27	U		0.27	U		0.27	U		1	U		1	U		1	U		1	U
1,1,2,2-Tetrachloroethane	79-34-5	1		0.21	U		0.21	U		0.21	U		0.21	U		1	U		1	U		1	U		1	U
Tetrachloroethene	127-18-4	1		0.4	U		0.4	U		0.4	U		0.4	U		1	U		1	U		1	U		1	U
Toluene	108-88-3	600		0.22	J		0.33	J		2.5			1.4	J		0.42	J		1	U		1.3			0.27	J
1,2,3-Trichlorobenzene	87-61-6	-		0.23	U		0.23	U		0.23	U		0.23	U		1	U		1	U		1	U		1	U
1,2,4-Trichlorobenzene	120-82-1	9		0.21	U		0.21	U		0.21	U		0.21	U		1	U		1	U		1	U		1	U
1,1,1-Trichloroethane	71-55-6	30		0.25	U		0.25	U		0.25	U		0.25	U		1	U		1	U		1	U		1	U
1,1,2-Trichloroethane	79-00-5	3		0.21	U		0.21	U		0.21	U		0.21	U		1	U		1	U		1	U		0.36	J
Trichloroethene	79-01-6	1		1.8			0.22	U		0.22	U		0.22	U		1.9			1	U		1	U		27.3	
Trichlorofluoromethane	75-69-4	2000		0.43	U		0.43	U		0.43	U		0.43	U		2	U		2	U		2	U		2	U
Vinyl chloride	75-01-4	1		0.15	U		0.15	U		0.15	U		0.15	U		1	U		1	U		1	U		1	U
m,p-Xylene	-	-		0.38	U		0.38	U																		



TABLE 4  
Depth to Groundwater Measurements - June 2015  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269



Well ID	Gauging Date	Depth To Water (ft)	Depth to Bottom (ft)	PID (ppm)	Comments
MW-1	6/8/15	29.12	39.80	0.0	
MW-2	6/8/15	29.44	44.15	0.0	
MW-3	6/8/15	33.75	47.60	0.0	
MW-4	6/8/15	26.53	30.55	0.0	
MW-4D	6/8/15	31.33	60.77	0.0	
MW-4D2	6/8/15	30.35	68.50	0.0	
MW-5	6/8/15	27.54	41.65	0.0	
MW-5D	-	-	-	0.0	Well has been paved over with asphalt; to be abandoned.
MW-6	6/8/15	21.65	34.70	0.0	
MW-6D	6/8/15	21.52	61.70	0.0	
MW-6D2	6/8/15	21.24	87.05	0.0	
MW-7	6/8/15	32.33	36.90	0.0	
MW-8	6/8/15	26.81	36.10	0.0	soft bottom/silt on probe
MW-9	6/8/15	20.24	33.30	0.0	
MW-9D	6/8/15	20.11	47.60	0.0	
MW-10	6/8/15	28.77	33.60	0.0	
MW-11	6/8/15	22.31	33.30	0.0	
MW-11D	6/8/15	23.08	67.00	0.0	
MW-12	6/8/15	24.65	32.65	0.0	
MW-12D	6/8/15	25.02	57.80	0.0	
MW-13	6/8/15	20.23	29.05	0.0	
MW-13D	6/8/15	21.25	65.63	0.0	
MW-14	6/8/15	32.48	38.75	0.0	
MW-14D	6/8/15	32.95	85.95	0.0	
MW-15	6/8/15	30.75	36.50	0.0	
MW-16	6/8/15	22.90	35.70	0.0	
MW-16D	6/8/15	34.27	68.60	0.0	
MW-17	6/8/15	28.03	34.10	0.0	
MW-17D	6/8/15	28.13	66.50	0.0	
MW-18	6/8/15	11.14	24.40	0.0	
MW-18D	6/8/15	19.57	49.90	0.0	
MW-19D	6/8/15	20.00	44.15	0.0	soft bottom/silt on probe
MW-20	6/8/15	18.18	22.15	0.0	
MW-20D	6/8/15	18.60	48.10	0.0	soft bottom/silt on probe
MW-21	6/8/15	20.42	32.40	0.0	
MW-21D	6/8/15	20.07	63.75	0.0	
MW-22D	6/8/15	32.67	90.27	0.0	
MW-22D2	6/8/15	33.72	104.80	0.0	
MW-23	6/8/15	12.11	24.10	0.0	
MW-24D	6/8/15	5.88	58.50	0.0	
MW-25D	6/8/15	7.08	54.20	0.0	
MW-26D	6/8/15	14.73	47.65	0.0	soft bottom/silt on probe
MW-27D	6/8/15	21.77	63.79	0.0	
MW-28D	6/8/15	20.43	76.80	0.0	
MW-29D	6/8/15	36.85	95.90	0.0	
MW-29D2	6/8/15	35.74	130.65	0.0	
MW-30D	6/8/15	39.29	96.75	0.0	
MW-30D2	6/8/15	39.65	131.80	0.0	
MW-31	6/8/15	24.50	32.00	0.0	
MW-31D	6/8/15	30.62	79.10	0.0	
MW-32	6/8/15	24.31	30.00	0.0	
MW-32D	6/8/15	28.15	88.00	0.0	
MW-33D2	6/8/15	30.90	131.40	0.0	
MW-34D2	6/8/15	30.83	136.50	0.0	
MW-35D2	6/8/15	32.88	131.90	0.0	
ERD-1	6/8/15	25.03	60.50	0.0	
IWS-1/TOP	6/8/15	24.40	33.20	0.0	soft bottom/silt on probe
IWS-1/BOTTOM	6/8/15	24.40	53.65	0.0	
OW-1S	6/8/15	24.07	28.90	0.0	silty/soft bottom
OW-2D	6/8/15	23.98	53.90	0.0	
OW-3S	6/8/15	23.85	29.30	0.0	
OW-3D	6/8/15	24.16	54.10	0.0	
OW-4D	6/8/15	23.68	58.00	0.0	
OW-5D	6/8/15	-	-	0.0	not measured due to a thick liquid encountered at ~48.5 feet possibly from previous chemical injections at this location
RW-1	6/8/15	-	-	0.0	can not open
RW-2	6/8/15	25.18	67.00	0.0	
RW-3	6/8/15	11.83	19.02	0.0	



TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

Location ID Sample ID Lab ID Sample Date Sample Depth			MW-4 MW-4_P1054-01 P1054-01 6/10/2015 28 - 28.5 ft	MW-4 MW-4_P1054-01 P1054-01DL 6/10/2015 28 - 28.5 ft	MW-9 MW-9_P1054-02 P1054-02 6/10/2015 30.8 - 31.3 ft	MW-12 DUPLICATE_P1054-28 P1054-28 6/11/2015 30 - 30.5 ft	MW-12 MW-12_P1054-26 P1054-26 6/11/2015 30 - 30.5 ft	MW-12D MW-12D_P1054-03 P1054-03 6/10/2015 55.3 - 55.8 ft	MW-13D MW-13D_P1054-04 P1054-04 6/10/2015 63 - 63.5 ft	MW-14D MW-14D_P1054-05 P1054-05 6/10/2015 83.5 - 84 ft	MW-18D MW-18D_P1054-06 P1054-06 6/10/2015 48.9 - 49.4 ft	MW-22D MW-22D_P1054-07 P1054-07 6/10/2015 87.8 - 88.3 ft
Analyte	CAS RN	GWQS										
1,1,1-Trichloroethane	71-55-6	30	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.3
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	13
1,1-DICHLOROETHANE	75-34-3	50	1 U	25 U	1 U	1 U	1 U	1 U	1 U	0.54 J	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	25 U	1 U	1 U	1 U	0.7 J	1 U	0.97 J	1 U	2.4
1,2,3-TRICHLOROBENZENE	87-61-6	-	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	120-82-1	9	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.02	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	106-93-4	0.03	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	78-93-3	300	5 U	130 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	5 U	130 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000	5 U	130 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BENZENE	71-43-2	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMODICHLROMETHANE	75-27-4	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	56-23-5	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	84	68 D	6.7	3.4	3.1	6.5	1 U	22	2.1	45
CHLOROBENZENE	108-90-7	50	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.85 J
CHLOROMETHANE	74-87-3	-	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
DICHLOROMETHANE	75-09-2	3	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	100-41-4	700	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
M-DICHLOROBENZENE	541-73-1	600	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300	5 U	130 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70	1 U	25 U	1 U	1 U	1 U	1 U	1 U	6	1 U	14
METHYLCYCLOHEXANE	108-87-2	-	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
STYRENE	100-42-5	100	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	156-60-5	100	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	74	79 D	55	25	23	110	3.5	14	15	52
Trichlorofluoromethane (Freon 11)	75-69-4	2000	1700 E	2000	30	20	18	50	1 U	1.3	41	3.3
Vinyl chloride	75-01-4	1	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
Bold values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

Location ID Sample ID Lab ID Sample Date Sample Depth			MW-22D2 MW-22D2_P1054-10 P1054-10 6/10/2015 97 - 97.5 ft	MW-27D MW-27D_P1054-27 P1054-27 6/11/2015 61.8 - 62.3 ft	MW-29D2 MW 29D2_P1162-03 P1162-03 7/9/2015 122 - 122.5 ft	MW-29D2 MW-29D2_P1054-29 P1054-29 6/11/2015 122 - 122.5 ft	MW-30D2 MW-30D2_P1105-03 P1105-03 6/25/2015 122 - 122.5 ft	MW-31D MW-31D_P1054-08 P1054-08 6/10/2015 76.5 - 77 ft	MW-33D2 MW 33D2_P1162-04 P1162-04 7/9/2015 126 - 126.5 ft	MW-33D2 MW-33D2_P1054-11 P1054-11 6/10/2015 126 - 126.5 ft
Analyte	CAS RN	GWQS								
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	2	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	1 U	1 U	1 U	1 U	0.97 J	0.73 J
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	120-82-1	9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.02	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	106-93-4	0.03	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	78-93-3	300	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000	18	5 U	5 U	11 J	5 U	5 U	11	17
BENZENE	71-43-2	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.3
BROMODICHLOROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	5.2	1 U	1.1	2.4	1 U	1 U	1 U	2.8
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	1 U	1 U	1 U	1 U	2.6	1 U	1 U	1 U
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	0.99 J	1 U	0.73 J	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	1 U	1 U	1 U	1.2	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
DICHLOROMETHANE	75-09-2	3	1.2 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	100-41-4	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70	1.6	1 U	1 U	1 U	5.5	1 U	1.4	1.3
METHYLCYCLOHEXANE	108-87-2	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
STYRENE	100-42-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	2.2	1 U	0.77 J	1.9 J	1 U	1 U	1.4	1.4
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	2.3	4.1	1 U	1 U	6.4	4.5	2.3	1.9
Trichlorofluoromethane (Freon 11)	75-69-4	2000	1	3.3	1 U	1 U	2.4	1 U	1 U	1 U
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Notes:

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CAS-RN = Chemical Abstract Service Registry Number.

GWQS = NJDEP Ground Water Quality Standards.

A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.

**Bold** values indicate result or reporting limit shown in excess of the GWQS.

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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

		Location ID Sample ID Lab ID Sample Date Sample Depth	MW-34D2 MW-34D2_P1054-12 P1054-12 6/10/2015 132 - 132.5 ft	MW-35D2 MW-35D2_P1054-30 P1054-30 6/11/2015 124 - 124.5 ft
Analyte	CAS RN	GWQS		
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	0.84 J	0.65 J
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	1 U	1 U
1,2,4-TRICHLOROBENZENE	120-82-1	9	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	0.02	<b>1 U</b>	<b>1 U</b>
1,2-Dibromoethane	106-93-4	0.03	<b>1 U</b>	<b>1 U</b>
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U
2-Butanone	78-93-3	300	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	5 U	5 U
ACETONE	67-64-1	6000	16	5 J
BENZENE	71-43-2	1	1 U	1 U
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U
CARBON DISULFIDE	75-15-0	700	7.4	4
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U
CFC-12	75-71-8	1000	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	1.9	1 U
CHLOROBENZENE	108-90-7	50	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	0.6 J
CHLOROMETHANE	74-87-3	-	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	0.76 J	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U
CYCLOHEXANE	110-82-7	-	1 U	1 U
DICHLOROMETHANE	75-09-2	3	1 U	1 U
ETHYLBENZENE	100-41-4	700	1 U	1 U
Isopropylbenzene	98-82-8	700	1 U	1 U
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U
METHYL ACETATE	79-20-9	7000	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70	17	2
METHYLCYCLOHEXANE	108-87-2	-	1 U	1 U
STYRENE	100-42-5	100	1 U	1 U
Tetrachloroethene	127-18-4	1	1 U	1 U
TOLUENE	108-88-3	600	1.6	1.6 J
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	<b>6.5</b>	<b>3.2</b>
Trichlorofluoromethane (Freon 11)	75-69-4	2000	0.81 J	1 U
Vinyl chloride	75-01-4	1	1 U	1 U
Xylenes (Total)	1330-20-7	1000	1 U	1 U

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

		Location ID	MW-4	MW-9	MW-12	MW-12	MW-12D	MW-13D
		Sample ID	MW-4_P1054-01	MW-9_P1054-02	DUPLICATE_P1054-28	MW-12_P1054-26	MW-12D_P1054-03	MW-13D_P1054-04
		Lab ID	P1054-01	P1054-02	P1054-28	P1054-26	P1054-03	P1054-04
		Sample Date	6/10/2015	6/10/2015	6/11/2015	6/11/2015	6/10/2015	6/10/2015
		Sample Depth	28 - 28.5 ft	30.8 - 31.3 ft	30 - 30.5 ft	30 - 30.5 ft	55.3 - 55.8 ft	63 - 63.5 ft
Analyte	CAS RN	ISC						
1,4-Dioxane	123-91-1	10	0.1 U	0.21	0.25	0.27	0.75	0.83

**Notes:**  
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CAS-RN = Chemical Abstract Service Registry Number.  
ISC = NJDEP Interim Specific Groundwater Quality Criterion  
recommendation for 1,4-Dioxane.  
U - Indicates that the analyte was not detected at the Detection Limit  
shown.



TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID	MW-14D	MW-18D	MW-22D	MW-22D2	MW-27D	MW-29D2
			Sample ID	MW-14D_P1054-05	MW-18D_P1054-06	MW-22D_P1054-07	MW-22D2_P1054-10	MW-27D_P1054-27	MW 29D2_P1162-03
			Lab ID	P1054-05	P1054-06	P1054-07	P1054-10	P1054-27	P1162-03
			Sample Date	6/10/2015	6/10/2015	6/10/2015	6/10/2015	6/11/2015	7/9/2015
			Sample Depth	83.5 - 84 ft	48.9 - 49.4 ft	87.8 - 88.3 ft	97 - 97.5 ft	61.8 - 62.3 ft	122 - 122.5 ft
Analyte	CAS RN	ISC							
1,4-Dioxane	123-91-1	10		10	0.32	1.4	0.1 U	0.1 U	0.22

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CAS-RN = Chemical Abstract Service Registry Number.  
ISC = NJDEP Interim Specific Groundwater Quality Criterion  
recommendation for 1,4-Dioxane.  
U - Indicates that the analyte was not detected at the Detection Limit  
shown.



TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

		Location ID	MW-29D2	MW-30D2	MW-31D	MW-33D2	MW-33D2
		Sample ID	MW-29D2_P1054-29	MW-30D2_P1105-03	MW-31D_P1054-08	MW 33D2_P1162-04	MW-33D2_P1054-11
		Lab ID	P1054-29	P1105-03	P1054-08	P1162-04	P1054-11
		Sample Date	6/11/2015	6/25/2015	6/10/2015	7/9/2015	6/10/2015
		Sample Depth	122 - 122.5 ft	122 - 122.5 ft	76.5 - 77 ft	126 - 126.5 ft	126 - 126.5 ft
Analyte	CAS RN	ISC					
1,4-Dioxane	123-91-1	10	0.21	0.57	4.2	0.22	0.1 U

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ISC = NJDEP Interim Specific Groundwater Quality Criterion  
recommendation for 1,4-Dioxane.  
U - Indicates that the analyte was not detected at the Detection Limit  
shown.



TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

		Location ID	MW-34D2	MW-35D2
		Sample ID	MW-34D2_P1054-12	MW-35D2_P1054-30
		Lab ID	P1054-12	P1054-30
		Sample Date	6/10/2015	6/11/2015
		Sample Depth	132 - 132.5 ft	124 - 124.5 ft
Analyte	CAS RN	ISC		
1,4-Dioxane	123-91-1	10	0.51	0.22

Notes:  
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ISC = NJDEP Interim Specific Groundwater Quality Criterion  
recommendation for 1,4-Dioxane.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID Lab ID Sample Date Sample Depth	MW-4 MW-4_P1054-01 P1054-01 6/10/2015 28 - 28.5 ft	MW-4 MW-4_P1054-01 P1054-01RE 6/10/2015 28 - 28.5 ft	MW-9 MW-9_P1054-02 P1054-02 6/10/2015 30.8 - 31.3 ft	MW-12 DUPLICATE_P1054-28 P1054-28 6/11/2015 30 - 30.5 ft	MW-12 MW-12_P1054-26 P1054-26 6/11/2015 30 - 30.5 ft	MW-12D MW-12D_P1054-03 P1054-03 6/10/2015 55.3 - 55.8 ft
Analyte	CAS RN	GWQS							
Chloride	16887-00-6	250000		NR	65300	216000	74100	64300	45400
Ethane	74-84-0	-		5 U	NR	27	5 U	5 U	5 U
Ethene	74-85-1	-		5 U	NR	5 U	20	27	5 U
HYDROGEN	1333-74-0	-		6 J	NR	2.7 U	2.7 U	2.7 U	2.7 U
Methane	74-82-8	-		2.2 U	NR	2.2 U	2.2 U	2.2 U	152
Nitrate	14797-55-8	10000		723	NR	660	100 U	100 U	815
Sulfate	14808-79-8	250000		NR	115000	<b>434000</b>	<b>255000</b>	<b>295000</b>	140000
Sulfide	18496-25-8	-		30 U	NR	30 U	30 U	30 U	30 U
Total Organic Carbon	TOC	-		2030 J	NR	2120 J	1930 J	2040 J	5670

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Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID Lab ID Sample Date Sample Depth	MW-13D MW-13D_P1054-04 P1054-04 6/10/2015 63 - 63.5 ft	MW-14D MW-14D_P1054-05 P1054-05 6/10/2015 83.5 - 84 ft	MW-18D MW-18D_P1054-06 P1054-06 6/10/2015 48.9 - 49.4 ft	MW-22D MW-22D_P1054-07 P1054-07 6/10/2015 87.8 - 88.3 ft	MW-22D2 MW-22D2_P1054-10 P1054-10 6/10/2015 97 - 97.5 ft	MW-27D MW-27D_P1054-27 P1054-27 6/11/2015 61.8 - 62.3 ft
Analyte	CAS RN	GWQS							
Chloride	16887-00-6	250000		294000	65100	203000	88600	53900	22400
Ethane	74-84-0	-		14	5 U	5 U	5 U	36	5 U
Ethene	74-85-1	-		5 U	5 U	5 U	5 U	18	5 U
HYDROGEN	1333-74-0	-		2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
Methane	74-82-8	-		2.2 U	2.2 U	2.2 U	2.2 U	9	2.2 U
Nitrate	14797-55-8	10000		642	100 U	102 J	2120	100 U	100 U
Sulfate	14808-79-8	250000		61100	193000	323000	43300	40600	57800
Sulfide	18496-25-8	-		30 U	30 U	30 U	30 U	30 U	30 U
Total Organic Carbon	TOC	-		1350 J	1550 J	1430 J	1000 U	94400	1030 J

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All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.



TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

Location ID Sample ID Lab ID Sample Date Sample Depth			MW-29D2 MW 29D2_P1162-03 P1162-03 7/9/2015 122 - 122.5 ft	MW-29D2 MW-29D2_P1054-29 P1054-29 6/11/2015 122 - 122.5 ft	MW-30D2 MW-30D2_P1105-03 P1105-03 6/25/2015 122 - 122.5 ft	MW-31D MW-31D_P1054-08 P1054-08 6/10/2015 76.5 - 77 ft	MW-33D2 MW 33D2_P1162-04 P1162-04 7/9/2015 126 - 126.5 ft	MW-33D2 MW-33D2_P1054-11 P1054-11 6/10/2015 126 - 126.5 ft
Analyte	CAS RN	GWQS						
Chloride	16887-00-6	250000	219000 D	185000	54200 D	37400	24800	20000
Ethane	74-84-0	-	5 U	5 U	5 U	21	5 U	48
Ethene	74-85-1	-	5 U	5 U	5 U	5 U	5 U	36
HYDROGEN	1333-74-0	-	23	63	55	2.7 U	33	42
Methane	74-82-8	-	2.2 U	8	2.2 U	261	2.2 U	2.2 U
Nitrate	14797-55-8	10000	100 U	100 U	24 J	100 U	100 U	100 U
Sulfate	14808-79-8	250000	98200 D	187000	64100 D	45200	27500	24600
Sulfide	18496-25-8	-	30 U	30 U	30 U	30 U	30 U	30 U
Total Organic Carbon	TOC	-	14300	36900	19200	24900	10600	22200

**Notes:**  
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CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.



TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID Lab ID Sample Date Sample Depth	MW-34D2 MW-34D2_P1054-12 P1054-12 6/10/2015 132 - 132.5 ft	MW-35D2 MW-35D2_P1054-30 P1054-30 6/11/2015 124 - 124.5 ft
Analyte	CAS RN	GWQS			
Chloride	16887-00-6	250000		40500	27600
Ethane	74-84-0	-		5 U	5 U
Ethene	74-85-1	-		5 U	20
HYDROGEN	1333-74-0	-		7 J	2.7 U
Methane	74-82-8	-		2.2 U	2.2 U
Nitrate	14797-55-8	10000		100 U	100 U
Sulfate	14808-79-8	250000		107000	27700
Sulfide	18496-25-8	-		30 U	30 U
Total Organic Carbon	TOC	-		37300	47300

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

Location ID Sample ID  Lab ID Sample Date Sample Depth			MW-4  MW-4_P1054-01  P1054-01 6/10/2015 28 - 28.5 ft	MW-4  MW-4-F_P1054-14  P1054-14 6/10/2015 28 - 28.5 ft	MW-9  MW-9_P1054-02  P1054-02 6/10/2015 30.8 - 31.3 ft	MW-9  MW-9-F_P1054-15  P1054-15 6/10/2015 30.8 - 31.3 ft	MW-12  DUPLICATE_P1054-28  P1054-28 6/11/2015 30 - 30.5 ft	MW-12  MW-12_P1054-26  P1054-26 6/11/2015 30 - 30.5 ft
Analyte	CAS RN	GWQS						
ARSENIC	7440-38-2	3	2 UJ	2 UJ	0.78 J	2 UJ	10 UJ	2 UJ
Iron	7439-89-6	300	39.1 J	22.9 J	33200	32600	3330	2730
Manganese	7439-96-5	50	305	303	187	196	130	105

**Notes:**  
CAS-RN = Chemical Abstract Service Registry Number.  
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A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
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**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID	MW-12 MW-12-F_P1054-33	MW-12D MW-12D_P1054-03	MW-12D MW-12D-F_P1054-16	MW-12-F DUPLICATE- F_P1054-35 P1054-35	MW-13D MW-13D_P1054-04	MW-13D MW-13D-F_P1054-17
			Lab ID Sample Date Sample Depth	P1054-33 6/11/2015 30 - 30.5 ft	P1054-03 6/10/2015 55.3 - 55.8 ft	P1054-16 6/10/2015 55.3 - 55.8 ft	P1054-35 6/11/2015 30 - 30.5 ft	P1054-04 6/10/2015 63 - 63.5 ft	P1054-17 6/10/2015 63 - 63.5 ft
Analyte	CAS RN	GWQS							
ARSENIC	7440-38-2	3		2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ
Iron	7439-89-6	300		<b>2350</b>	<b>2630</b>	<b>2830</b>	<b>2300</b>	173 J	139 J
Manganese	7439-96-5	50		<b>96</b>	<b>246</b>	<b>247</b>	<b>95.3</b>	<b>122</b>	<b>121</b>

**Notes:**  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID	MW-14D MW-14D_P1054-05	MW-14D MW-14D-F_P1054-18	MW-18D MW-18D_P1054-06	MW-18D MW-18D-F_P1054-19	MW-22D MW-22D_P1054-07	MW-22D MW-22D-F_P1054-20
			Lab ID Sample Date Sample Depth	P1054-05 6/10/2015 83.5 - 84 ft	P1054-18 6/10/2015 83.5 - 84 ft	P1054-06 6/10/2015 48.9 - 49.4 ft	P1054-19 6/10/2015 48.9 - 49.4 ft	P1054-07 6/10/2015 87.8 - 88.3 ft	P1054-20 6/10/2015 87.8 - 88.3 ft
Analyte	CAS RN	GWQS							
ARSENIC	7440-38-2	3		1.7 J	1.3 J	2 UJ	2 UJ	2 UJ	2 UJ
Iron	7439-89-6	300		<b>14300</b>	<b>13900</b>	<b>1820</b>	<b>1350</b>	281	87.1 J
Manganese	7439-96-5	50		<b>119</b>	<b>119</b>	<b>347</b>	<b>342</b>	<b>96.6</b>	<b>94.3</b>

**Notes:**  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
J - Indicates that the value was detected and is estimated.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID	MW-22D2 MW-22D2_P1054-10	MW-22D2 MW-22D2-F_P1054-23	MW-27D MW-27D_P1054-27	MW-27D MW-27D-F_P1054-34	MW-29D2 MW 29D2_P1162-03	MW-29D2 MW 29D2-F_P1162-06
			Lab ID Sample Date Sample Depth	P1054-10 6/10/2015 97 - 97.5 ft	P1054-23 6/10/2015 97 - 97.5 ft	P1054-27 6/11/2015 61.8 - 62.3 ft	P1054-34 6/11/2015 61.8 - 62.3 ft	P1162-03 7/9/2015 122 - 122.5 ft	P1162-06 7/9/2015 122 - 122.5 ft
Analyte	CAS RN	GWQS							
ARSENIC	7440-38-2	3		1.4 J	2 UJ	2 UJ	2 UJ	0.26 J	0.39 J
Iron	7439-89-6	300		<b>62600</b>	<b>32400</b>	<b>2850</b>	<b>1320</b>	<b>12000</b>	210
Manganese	7439-96-5	50		<b>665</b>	<b>668</b>	36.4	35.8	<b>170</b>	2.9

**Notes:**  
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GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
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B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID	MW-29D2 MW-29D2_P1054-29	MW-29D2 MW-29D2-F_P1054-36	MW-30D2 MW-30D2_P1105-03	MW-30D2 MW-30D2-F_P1105-05	MW-31D MW-31D_P1054-08	MW-31D MW-31D-F_P1054-21
			Lab ID Sample Date Sample Depth	P1054-29 6/11/2015 122 - 122.5 ft	P1054-36 6/11/2015 122 - 122.5 ft	P1105-03 6/25/2015 122 - 122.5 ft	P1105-05 6/25/2015 122 - 122.5 ft	P1054-08 6/10/2015 76.5 - 77 ft	P1054-21 6/10/2015 76.5 - 77 ft
Analyte	CAS RN	GWQS							
ARSENIC	7440-38-2	3		1.2 J	2 UJ	0.43 B	0.78 B	2.6	2 J
Iron	7439-89-6	300		<b>15500</b>	200 UJ	<b>36400</b>	<b>2820</b>	<b>5980</b>	<b>3880</b>
Manganese	7439-96-5	50		<b>235</b>	2 UJ	<b>549</b>	<b>512</b>	<b>228</b>	<b>239</b>

**Notes:**  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
J - Indicates that the value was detected and is estimated.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID	MW-33D2 MW 33D2_P1162-04	MW-33D2 MW 33D2-F_P1162-07	MW-33D2 MW-33D2_P1054-11	MW-33D2 MW-33D2-F_P1054-24	MW-34D2 MW-34D2_P1054-12	MW-34D2 MW-34D2-F_P1054-25
			Lab ID Sample Date Sample Depth	P1162-04 7/9/2015 126 - 126.5 ft	P1162-07 7/9/2015 126 - 126.5 ft	P1054-11 6/10/2015 126 - 126.5 ft	P1054-24 6/10/2015 126 - 126.5 ft	P1054-12 6/10/2015 132 - 132.5 ft	P1054-25 6/10/2015 132 - 132.5 ft
Analyte	CAS RN	GWQS							
ARSENIC	7440-38-2	3		0.43 J	2 U	0.45 J	0.35 J	0.39 J	0.31 J
Iron	7439-89-6	300		<b>1300</b>	180 J	<b>460</b>	200 UJ	31 J	200 UJ
Manganese	7439-96-5	50		<b>77</b>	4	12.4	1.1 J	2 UJ	2 UJ

**Notes:**  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
J - Indicates that the value was detected and is estimated.  
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TABLE 5  
Comparison of June 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
PI #158269

			Location ID Sample ID	MW-35D2 MW-35D2_P1054-30	MW-35D2 MW-35D2-F_P1054-37
			Lab ID Sample Date Sample Depth	P1054-30 6/11/2015 124 - 124.5 ft	P1054-37 6/11/2015 124 - 124.5 ft
Analyte	CAS RN	GWQS			
ARSENIC	7440-38-2	3		0.89 J	0.52 J
Iron	7439-89-6	300		<b>38900</b>	<b>37200</b>
Manganese	7439-96-5	50		<b>438</b>	<b>426</b>

**Notes:**  
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A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-1 MW-1- 20100525	MW-4 MW- 4(27.5)2010031 2	MW-4 MW- 4(27.5)2010061 1	MW-4 MW- 4(27.5)2010092 4	MW-4 MW- 4_20101220	MW-4 MW- 4(27.5)2011032 3	MW-4 MW- 4_20110629	MW-4 MW- 20111017	MW-4 MW- 4_20111229	MW-4 MW- 4_20120328	MW-4 MW- 20120629	MW-4 MW- 20120926	MW-4 MW- 20121217	MW-4 MW- 4_20130329	MW-4 MW- 4_20130724	MW-4 MW- 4_20131003	MW-4 MW- 20131119
			Lab ID Sample Date Sample Depth	JA47452-2 5/25/2010	JA41788-4 3/12/2010	JA48761-2 6/11/2010 27.5 - 27.5 ft	JA57149-9 9/24/2010 27.5 - 27.5 ft	JA64757-5 12/20/2010	JA71274-12 3/23/2011 27.5 - 27.5 ft	JA79694-13 6/29/2011	JA89408-13 10/17/2011	JA95985-15 12/29/2011	JB2734-10 3/28/2012	JB10139-3 6/29/2012	JB17536-12 9/26/2012	JB24432-17 12/17/2012	JB32809-12 3/29/2013	JB42961-12 7/24/2013	JB49212-10 10/3/2013	JB53775-17 11/19/2013
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	0.73 J	0.96 J	10 U	50 U	20 U	0.56 J	0.69 J	0.45 J	0.55 J	0.29 J	1 U	1 U	1 U	0.28 J	0.26 J	0.2 J
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		1 U	1 U	1 U	10 U	50 U	20 U	1 U	0.18 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		1 U	1.3	2.2	10 U	50 U	20 U	1	1.8	1.3	0.67 J	0.72 J	1	0.74 J	0.99 J	1.5	1	1.2
1,2,3-TRICHLOROBENZENE	87-61-6	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		1 U	0.39 J	0.44 J	10 U	50 U	20 U	1 U	1 U	0.24 J	0.3 J	1 U	1 U	1 U	1 U	1 U	0.35 J	1 U
1,2-Dichloropropane	78-87-5	1		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-		5 U	5 U	5 U	50 U	250 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1		1 U	0.54 J	0.72 J	10 U	50 U	20 U	0.62 J	0.77 J	0.39 J	0.36 J	0.29 J	1 U	1 U	1 U	0.27 J	1 U	0.26 J
CFC-12	75-71-8	1000		2 U	2 U	2 U	20 U	100 U	40 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		1 U	0.87 J	0.79 J	10 U	50 U	20 U	0.59 J	0.76 J	0.48 J	0.68 J	0.48 J	0.4 J	0.25 J	1 U	0.42 J	0.38 J	0.35 J
CHLOROMETHANE	74-87-3	-		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		1 U	0.39 J	0.44 J	10 U	50 U	20 U	1 U	1 U	0.24 J	0.3 J	1 U	1 U	1 U	1 U	1 U	0.35 J	1 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	0.45 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		1 U	149	138	84.4	113	97.2	137	135	96.3	118	99.6	62.2	63.2	145	88.6	78.6	73.1
Trichlorofluoromethane (Freon 11)	75-69-4	2000		4.3	6010	4150	2910	3180	3380	3650	4290	3000	4290	2300	849	1810	23.3	2470	2450	2410
Vinyl chloride	75-01-4	1		1 U	1 U	1 U	10 U	50 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-4 MW-4- 20140414	MW-4 MW-4- 20140616	MW-4 MW-4_N1805- 01	MW-4 MW-4_N1805- 01	MW-4 MW-4_N2307- 11	MW-4 MW-4_N2307- 11	MW-4 MW-4_P0334- 01	MW-4 MW-4_P1054- 01	MW-4 MW-4_P1054- 01	MW-4D MW-4D- 20100526	MW-4D MW- 4D_20110628	MW-4D MW-4D- 20120627	MW-5 MW-5- 20100525	MW-5 MW- 5_20110628	MW-5 MW-5- 20120627	MW-5D MW- 5D(54.5)201003 12	MW-5D MW- 5D(54.5)201006 11
			Lab ID Sample Date Sample Depth	L1408077-04 4/14/2014 15 - 30 ft	L1413296-01 6/16/2014 15 - 30 ft	N1805-01 9/24/2014 28 - 28.5 ft	N1805-01DL 9/24/2014 28 - 28.5 ft	N2307-11 12/3/2014 28 - 28.5 ft	N2307-11DL 12/3/2014 28 - 28.5 ft	P0334-01 3/18/2015 28 - 28.5 ft	P1054-01 6/10/2015 28 - 28.5 ft	P1054-01DL 6/10/2015 28 - 28.5 ft	JA47452-5 5/26/2010	JA79694-10 6/28/2011	JB9914-4 6/27/2012	JA47452-1 5/25/2010	JA79694-5 6/28/2011	JB9914-2 6/27/2012	JA41788-5 3/12/2010	JA48761-3 6/11/2010 54.5 - 54.5 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	4	1.5	0.62 J	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		15 U	7.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1.3	0.62 J	0.41 J	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	0.76 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-		NR	12 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		25 U	NR	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03		20 U	10 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1		10 U	5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		2500 U	1200 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		50 U	25 U	5 U	200 U	5 U	100 U	100 U	5 U	130 U	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-		50 U	25 U	5 U	200 U	5 U	100 U	100 U	5 U	130 U	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000		50 U	25 U	5 U	200 U	5 U	100 U	100 U	5 U	130 U	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3		NR	NR	2 U	NR	2 UJ	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		50 U	25 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		50 U	25 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		65	65	63		77 D	51	44 D	20 U	84	68 D	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		100 U	50 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-		25 U	12 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		20 U	10 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300		50 U	25 U	5 U	200 U	5 U	100 U	100 U	5 U	130 U	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYLOHEXANE	108-87-2	-		100 U	50 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-		25 U	12 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1.7	1.2	1.9	1 U	1 U
TOLUENE	108-88-3	600		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		5 U	2.5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		20 U	10 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		82	72	77	80 D	78	75 D	54	74	79 D	1 U	1 U	1 U	17	14.3	18.5	5.1	3.1
Trichlorofluoromethane (Freon 11)	75-69-4	2000		2600	2200	2900 E	3100 D	2200 E	1900	1900	1700 E	2000 D	2 U	2 U	2 U	71.5	84.2	103	33	56
Vinyl chloride	75-01-4	1		10 U	5 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		25 U	12 U	1 U	40 U	1 U	20 U	20 U	1 U	25 U	NR	NR	NR	NR	NR	NR	NR	NR

Notes:  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

Location ID Sample ID			MW-5D MW- 5D(54.5)201009 24	MW-5D MW- 5D(54.5)201103 23	MW-5D MW- 5D_20110629	MW-5D MW-5D- 20111017	MW-5D MW- 5D_20111229	MW-6D MW-6D- 20100924	MW-6D MW-60D- 20100924	MW-6D MW-6D 20121218	MW-6D MW-6D- 20131121	MW-9 MW- 9(27.5)2010031 2	MW-9 MW- 9(27.5)2010052 0	MW-9 MW- 9(27.5)2010092 4	MW-9 MW- 9_20101220	MW-9 MW- 9(27.5)2011032 3	MW-9 MW- 9_20110629	MW-9 MW-9- 20111017	MW-9 MW- 9_20111229
Lab ID Sample Date Sample Depth			JA57149-8 9/24/2010 54.5 - 54.5 ft	JA71274-9 3/23/2011 54.5 - 54.5 ft	JA79694-14 6/29/2011	JA89408-11 10/17/2011	JA95985-16 12/29/2011	JA57149-11 9/24/2010	JA57149-12 9/24/2010	JB24432-7 12/18/2012	JB53775-1 11/21/2013	JA41788-8 3/12/2010	JA47021-4 5/20/2010 27.5 - 27.5 ft	JA57149-5 9/24/2010 27.5 - 27.5 ft	JA64757-2 12/20/2010	JA71274-14 3/23/2011 27.5 - 27.5 ft	JA79694-15 6/29/2011	JA89408-9 10/17/2011	JA95985-17 12/29/2011
Analyte	CAS RN	GWQS																	
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.24 J	0.22 J
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.58 J	0.61 J	1 U	0.47 J	0.53 J	0.7 J	1	0.66 J
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLOROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	5.6	10.1	3.2	0.73 J	0.29 J	1 U	1 U	1 U	1 U	142	134	23.5	72.9	89.6	106	132	97.1
Trichlorofluoromethane (Freon 11)	75-69-4	2000	90.7	56.4	14.9	4.2	1.1 J	2 U	2 U	2 U	2 U	28.6	36.3	5.5	42.8	30.5	40.1	65.5	50.2
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-9 MW-9_20120328	MW-9 MW-9-20120626	MW-9 MW-9-20120926	MW-9 MW-9-20121217	MW-9 MW-9_20130329	MW-9 MW-9_20130723	MW-9 MW-9_20131003	MW-9 MW-9-20131119	MW-9 MW-9-20140414	MW-9 MW-9-20140616	MW-9 MW-9_N1805-02	MW-9 MW-9_N2307-01	MW-9 MW-9_P0334-02	MW-9 MW-9_P1054-02	MW-9D MW-9D(35.5)20100312	MW-9D MW-9D(35.5)20100520	MW-9D MW-9D(35.5)20100924
			Lab ID Sample Date Sample Depth	JB2734-11 3/28/2012	JB9796-8 6/26/2012	JB17536-11 9/26/2012	JB24432-8 12/17/2012	JB32809-11 3/29/2013	JB42961-6 7/23/2013	JB49212-12 10/3/2013	JB53775-16 11/19/2013	L1408077-03 4/14/2014 14 - 34 ft	L1413296-02 6/16/2014 14 - 34 ft	N1805-02 9/24/2014 30.8 - 31.3 ft	N2307-01 12/2/2014 30.8 - 31.3 ft	P0334-02 3/18/2015 30.8 - 31.3 ft	P1054-02 6/10/2015 30.8 - 31.3 ft	JA41788-9 3/12/2010	JA47021-5 5/20/2010 35.5 - 35.5 ft	JA57149-6 9/24/2010 35.5 - 35.5 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.5 U	15 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	1 U	0.22 J	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	1.1	1.4	1.2	0.79 J	0.57 J	0.45 J	0.5 U	7.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	25 U	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	NR	1 U	1 U	1 U	1 U	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	20 U	1 U	1 U	1 U	1 U	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	250 U	2500 U	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	50 U	5 U	5 U	5 U	5 U	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	50 U	5 U	5 U	5 U	5 U	NR	NR	NR
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	50 U	5 U	5 U	5 U	5 U	NR	NR	NR
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5.3	1.1 J	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	5 U	1 U	1 U	1 U	1 U	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	50 U	1 U	1 U	1 U	1 U	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	0.25 J	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	50 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	7.9	54	3.3	6.6	8.9	6.7	NR	NR	NR
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	0.26 J	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	100 U	1 U	1 U	1 U	1 U	NR	NR	NR
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	20 U	1 U	1 U	1 U	1 U	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	50 U	5 U	5 U	5 U	5 U	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	100 U	1 U	1 U	1 U	1 U	NR	NR	NR
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	28.3	34.2	139	199	68.2	138	101	39.7	160	1200	47	95	170	55	37.1	28	27.7	
Trichlorofluoromethane (Freon 11)	75-69-4	2000	6.7	19.4	18.4	61.8	1720	39.1	29.9	13.6	53	390	25	43	60	30	8.4	4.8	5.5	
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	25 U	1 U	1 U	1 U	1 U	NR	NR	NR

Notes:  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

	Location ID Sample ID	Lab ID Sample Date Sample Depth	MW-9D	MW-9D	MW-9D	MW-9D	MW-10	MW-10	MW-11	MW-11	MW-11	MW-11	MW-11D	MW-11D	MW-11D	MW-11D	MW-12	MW-12	MW-12
			MW-9D_20101220	9D(35.5)20110323	MW-9D_20110629	MW-9D-20111017	MW-10-20100526	MW-10-20100923	MW-11-20100525	MW-11-20100923	MW-11_20110628	MW-11-20120627	11D(60.5)20100611	MW-11D_20110629	MW-11D-20111017	MW-11D-20120629	MW-120-20100526	MW-12-20100526	MW-12-20100923
			JA64757-3 12/20/2010	JA71274-10 3/23/2011 35.5 - 35.5 ft	JA79694-16 6/29/2011	JA89408-10 10/17/2011	JA47452-6 5/26/2010	JA57067-10 9/23/2010	JA47452-3 5/25/2010	JA57067-7 9/23/2010	JA79694-6 6/28/2011	JB9914-1 6/27/2012	JA48761-1 6/11/2010 60.5 - 60.5 ft	JA79694-20 6/29/2011	JA89408-5 10/17/2011	JB10139-2 6/29/2012	JA47452-8 5/26/2010	JA47452-7 5/26/2010	JA57067-6 9/23/2010
Analyte	CAS RN	GWQS																	
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	0.5 J	0.28 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	0.52 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	1 U	1 U	1 U	1 U	0.52 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	1 U	1 U	1 U	1 U	0.95 J	0.47 J	1 U	1 U	1 U	1 U	1 U	1 U	0.99 J	1.1	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	1 U	1 U	1 U	1 U	0.55 J	1 U	1.4	0.42 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.38 J
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	1 U	1 U	0.55 J	1 U	1.4	0.42 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	7.2	2.5	1.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	25.6	21.6	26.6	26.3	10.6	2.2	18.4	8	3.3	0.37 J	1 U	1 U	1 U	0.95 J	164	170	61.2
Trichlorofluoromethane (Freon 11)	75-69-4	2000	5.3	4	4.9	6	332	45.4	8.7	4.1	1.5 J	2 U	2 U	2 U	2 U	2 U	68.7	68.1	26.5
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-12 MW-12S_20110322	MW-12 MW-12_20110628	MW-12 MW-12O_20110628	MW-12 MW-12-20111017	MW-12 MW-12O_20111227	MW-12 MW-12_20111227	MW-12 MW-12_20120326	MW-12 MW-12O_20120326	MW-12 MW-12-20120626	MW-12 MW-12-20120924	MW-12 MW-12O-20121218	MW-12 MW-12-20121218	MW-12 MW-12_20130328	MW-12 MW-12_20130724	MW-12 MW-12O_20130724	MW-12 MW-12O_20131003	MW-12 MW-12_20131003
			Lab ID Sample Date Sample Depth	JA71274-2 3/22/2011	JA79694-8 6/28/2011	JA79694-9 6/28/2011	JA89408-1 10/17/2011	JA95985-3 12/27/2011	JA95985-2 12/27/2011	JB2734-2 3/26/2012	JB2734-3 3/26/2012	JB9796-10 6/26/2012	JB17536-2 9/24/2012	JB24432-15 12/18/2012	JB24432-5 12/18/2012	JB32809-6 3/28/2013	JB42961-14 7/24/2013	JB42961-15 7/24/2013	JB49212-8 10/3/2013	JB49212-6 10/3/2013
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		1 U	1 U	1 U	1 U	1 U	0.22 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		0.76 J	0.86 J	0.87 J	1.2	1.3	1.2	1 U	1 U	1 U	1 U	0.49 J	0.7 J	0.94 J	0.54 J	0.65 J	0.42 J	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		0.18 J	0.41 J	0.46 J	0.3 J	0.28 J	0.2 J	0.92 J	0.67 J	0.88 J	0.32 J	0.23 J	1 U	0.43 J	0.39 J	0.32 J	0.83 J	0.83 J
CHLOROMETHANE	74-87-3	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		<b>137</b>	<b>165</b>	<b>150</b>	<b>187</b>	<b>217</b>	<b>221</b>	<b>48</b>	<b>39</b>	<b>10.5</b>	<b>65.9</b>	<b>92.7</b>	<b>104</b>	<b>150</b>	<b>125</b>	<b>161</b>	<b>32.8</b>	<b>34</b>
Trichlorofluoromethane (Freon 11)	75-69-4	2000		45.8	64.1	42.2	97.4	95.6	101	13.9	10.8	3.4	36.4	87.1	99.7	110	87.7	113	23.7	23.9
Vinyl chloride	75-01-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
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A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-12 MW-12- 20131119	MW-12 MW-12- 20140414	MW-12 MW-12- 20140616	MW-12 MW-12_N1805- 03	DUPLICATE_N 1805-13	MW-12_N2307- 02	DUPLICATE_N 2307-08	MW-12_P0334- 03	DUPLICATE_P 0334-11	MW-12_P1054- 26	DUPLICATE_P 1054-28	MW-12D 12D(55.5)20100 312	MW-12D 12D(55.5)20100 520	MW-12D 12D(27.5)20100 924	MW-12D 12D_20101220	MW-12D 12D_20101221	MW-12D 120D_2010122 1
			Lab ID Sample Date Sample Depth	JB53775-13 11/19/2013	L1408077-01 4/14/2014 18 - 33 ft	L1413296-05 6/16/2014 18 - 33 ft	N1805-03 9/24/2014 30 - 30.5 ft	N1805-13 9/24/2014 30 - 30.5 ft	N2307-02 12/2/2014 30 - 30.5 ft	N2307-08 12/2/2014 30 - 30.5 ft	P0334-03 3/18/2015 30 - 30.5 ft	P0334-11 3/18/2015 30 - 30.5 ft	P1054-26 6/11/2015 30 - 30.5 ft	P1054-28 6/11/2015 30 - 30.5 ft	JA41788-11 3/12/2010	JA47021-6 5/20/2010 55.5 - 55.5 ft	JA57149-10 9/24/2010 27.5 - 27.5 ft	JA64757-1 12/20/2010	JA64757-12 12/21/2010	JA64757-13 12/21/2010
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1.5 U	3 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		0.64 J	0.72	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.58 J	1 U	0.58 J	0.64 J	0.4 J	0.44 J
1,2,3-TRICHLOROBENZENE	87-61-6	-		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		NR	2.5 U	NR	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03		NR	2 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.86 J	0.28 J	0.31 J	0.33 J	1 U	1 U
1,2-Dichloropropane	78-87-5	1		1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	250 U	500 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		NR	5 U	10 U	5 U	5 U	5 U	5 U	10	9.6	5 U	5 U	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-		5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-		NR	5 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000		NR	1.8 J	10 U	5 U	5 U	5 U	5 U	14 J	13 J	5 U	5 U	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3		NR	NR	NR	10 U	10 U	2 UJ	2 UJ	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		NR	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
BROMODICHLOROMETHANE	75-27-4	1		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		NR	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		2 U	5 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		NR	9.7	11	1 U	1 U	5.8	5.8	6.5	7.4	3.1	3.4	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		0.31 J	2.5 U	5 U	1 U	0.62 J	1 U	1 U	1 U	1 U	1 U	1 U	0.2 J	1 U	0.19 J	0.25 J	0.34 J	0.36 J
CHLOROMETHANE	74-87-3	-		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.86 J	0.28 J	0.31 J	0.33 J	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		NR	10 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
DICHLOROMETHANE	75-09-2	3		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		NR	0.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-		NR	2.5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		1 U	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		NR	2 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300		NR	5 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-		NR	10 U	20 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-		NR	2.5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100		1 U	2.5 U	5 U	1 U	1 U	1 U	0.65 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	2 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		63.2	140	160	1.7	8.6	81	82	190	170	23	25	192	165	122	159	88.7	87.3
Trichlorofluoromethane (Freon 11)	75-69-4	2000		47.2	87	97	1.1	5.9	50	53	70	67	18	20	18	17.5	21.9	32.7	31.2	32.6
Vinyl chloride	75-01-4	1		1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		NR	2.5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

Location ID Sample ID			MW-12D MW- 12D(55.5)20110323	MW-12D MW- 12D_20110629	MW-12D MW-12D- 20111017	MW-12D MW- 12D_20111229	MW-12D MW- 12D_20120328	MW-12D MW-120D- 20120926	MW-12D MW-12D- 20120626	MW-12D MW-12D- 20120926	MW-12D MW-12D- 20121217	MW-12D MW-12D 120D_20130329	MW-12D MW- 12D_20130329	MW-12D MW- 12D_20130723	MW-12D MW- 12D_20131003	MW-12D MW-120D- 20131119	MW-12D MW-12D- 20131119	MW-12D MW-12D- 20140414	MW-12D MW-12D- 20140616
Lab ID Sample Date Sample Depth			JA71274-15 3/23/2011 55.5 - 55.5 ft	JA79694-18 6/29/2011	JA89408-7 10/17/2011	JA95985-18 12/29/2011	JB2734-12 3/28/2012	JB17536-10 9/26/2012	JB9796-7 6/26/2012	JB17536-9 9/26/2012	JB24432-4 12/17/2012	JB32809-9 3/29/2013	JB32809-8 3/29/2013	JB42961-11 7/23/2013	JB49212-11 10/3/2013	JB53775-18 11/19/2013	JB53775-15 11/19/2013	L1408077-02 4/14/2014 48 - 58 ft	L1413296-06 6/16/2014 48 - 58 ft
Analyte	CAS RN	GWQS																	
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	0.22 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.5 U	3.8 U
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	0.25 J	0.26 J	1 U	0.34 J	0.25 J	0.3 J	0.23 J	0.27 J	0.25 J	0.31 J	0.32 J	1 U	0.26 J	2.5 U	6.2 U
1,1-DICHLOROETHYLENE	75-35-4	1	1	1.6	1.4	1.1	0.66 J	1.2	1	1.3	1.2	1.2	1.1	0.88 J	0.94 J	1.1	0.88 J	1.3	0.96 J
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	6.2 U
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	5 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
1,2-Dichloroethylene (total)	540-59-0	-	0.42 J	0.46 J	0.99 J	1.3	0.5 J	0.32 J	0.31 J	0.38 J	1 U	0.54 J	0.55 J	1 U	0.57 J	1 U	0.25 J	NR	NR
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	250 U	620 U
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	22	29
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	12 U
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	21	28
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	1.2 U
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1.2 J	12 U
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	12 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	9	8.1
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
CHLOROFORM	67-66-3	70	0.28 J	0.27 J	0.34 J	1 U	1 U	0.34 J	0.24 J	0.3 J	0.28 J	0.23 J	0.24 J	0.28 J	0.22 J	0.22 J	0.21 J	2.5 U	6.2 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
cis-1,2-Dichloroethene	156-59-2	70	0.42 J	0.46 J	0.99 J	1.3	0.5 J	0.32 J	0.31 J	0.38 J	1 U	0.54 J	0.55 J	1 U	0.57 J	1 U	0.25 J	2.5 U	6.2 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	25 U
DICHLOROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	5 U
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	12 U
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	25 U
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	6.2 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	1.2 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	5 U
TRICHLOROETHYLENE	79-01-6	1	156	191	210	131	113	175	163	155	125	108	109	149	145	152	129	80	180
Trichlorofluoromethane (Freon 11)	75-69-4	2000	41.1	51.2	44.8	19.1	9.4	74.3	54.2	66.9	67.1	46.3	47.1	57.6	67.7	63.9	56	87	68
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	6.2 U

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

		Location ID Sample ID	MW-12D MW- 12D_N1805-04	MW-12D MW12D_N230 7-03	MW-12D MW- 12D_P0334-04	MW-12D MW- 12D_P1054-03	MW-13D MW- 13D(64.5)20100 312	MW-13D MW- 13D(64.5)20100 520	MW-13 MW-13- 20100526	MW-13D MW- 13D(64.5)20100 924	MW-13D MW- 13D_20101220	MW-13D MW- 13D(64.5)20110 323	MW-13D MW- 13D_20110629	MW-13D MW-13D- 20111017	MW-13D MW- 13D_20120328	MW-13D MW-13D- 20120629	MW-13D MW-13D- 20120926	MW-13D MW-13D- 20121217	MW-13D MW- 13D_20130329
		Lab ID Sample Date Sample Depth	N1805-04 9/24/2014 55.3 - 55.8 ft	N2307-03 12/2/2014 55.3 - 55.8 ft	P0334-04 3/18/2015 55.3 - 55.8 ft	P1054-03 6/10/2015 55.3 - 55.8 ft	JA41788-7 3/12/2010 64.5 - 64.5 ft	JA47021-7 5/20/2010 64.5 - 64.5 ft	JA47452-9 5/26/2010 64.5 - 64.5 ft	JA57149-7 9/24/2010 64.5 - 64.5 ft	JA64757-6 12/20/2010 64.5 - 64.5 ft	JA71274-13 3/23/2011 64.5 - 64.5 ft	JA79694-19 6/29/2011 64.5 - 64.5 ft	JA89408-6 10/17/2011 64.5 - 64.5 ft	JB2734-9 3/28/2012 64.5 - 64.5 ft	JB10139-1 6/29/2012 64.5 - 64.5 ft	JB17536-13 9/26/2012 64.5 - 64.5 ft	JB24432-3 12/17/2012 64.5 - 64.5 ft	JB32809-10 3/29/2013 64.5 - 64.5 ft
Analyte	CAS RN	GWQS																	
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	0.9 J	0.95 J	1 U	1 U	1 U	1 U	1.1	1.7	0.86 J	0.85 J	0.88 J	0.8 J	0.58 J
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1.2	1.1	1 U	1 U	1 U	1 U	1.2	1.4	0.79 J	0.74 J	1	0.96 J	0.85 J
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	1 U	1 U	1	1.2	1 U	1 U	1 U	1 U	1.6	2.3	1.5	1.6	1.6	1.1	1.1
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1.1	1 U	0.7 J	2.7	3.8	1 U	0.36 J	0.51 J	1 U	3.5	4.7	2.2	2.5	3.2	3.3	2.8
1,2,3-TRICHLOROBENZENE	87-61-6	-	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	NR	NR	NR	NR	2.3	2.3	1 U	1 U	0.26 J	0.26 J	2.4	2.2	1.3	1.1	1.6	1.5	1.9
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	5 U	5 U	11	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000	4.6 J	8	13 J	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3	2 U	0.36 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	1 U	0.57 J	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	8.5	7.3	6.4	6.5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	0.49 J	0.35 J	1 U	1 U	1 U	1 U	0.46 J	0.26 J	1 U	1 U	1 U	0.22 J	0.27 J
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	1 U	1 U	2.3	2.3	1 U	1 U	0.26 J	0.26 J	2.4	2.2	1.3	1.1	1.6	1.5	1.9
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYLOHEXANE	108-87-2	-	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	2.7	3.5	1 U	0.56 J	1.6	0.84 J	2.5	5.6	1.7	1.7	0.86 J	1.4	0.98 J
TOLUENE	108-88-3	600	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	140	180	180	110	58.3	66.4	1 U	12.1	19.7	15.7	63.5	70.6	44	38	40.1	45	38.2
Trichlorofluoromethane (Freon 11)	75-69-4	2000	80	68	70	50	4.4	5	2 U	0.39 J	0.76 J	0.37 J	5.4	5.4	1.3 J	2.1	2.8	3.6	2.8
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-13D MW-13D_20130724	MW-13D MW-13D_20131003	MW-13D MW-13D-20131119	MW-13D MW-13D-20140415	MW-13D MW-13D-20140616	MW-13D MW-13D_N1805-05	MW-13D MW-13D_N2307-04	MW-13D MW-13D_P0334-05	MW-13D MW-13D_P1054-04	MW-14D MW-14D_20100310	MW-14D MW-14D-20100520	MW-14D MW-14D-20100625	MW-14D MW-14D-20100922	MW-14D MW-14D_20101221	MW-14D MW-14D_20110322	MW-14D MW-14D_20110628	MW-14D MW-14D-20111018
			Lab ID Sample Date Sample Depth	JB42961-16 7/24/2013	JB49212-9 10/3/2013	JB53775-14 11/19/2013	L1408077-12 4/15/2014 57 - 67 ft	L1413296-07 6/16/2014 57 - 67 ft	N1805-05 9/24/2014 63 - 63.5 ft	N2307-04 12/2/2014 63 - 63.5 ft	P0334-05 3/18/2015 63 - 63.5 ft	P1054-04 6/10/2015 63 - 63.5 ft	JA41559-1 3/10/2010	JA47021-10 5/20/2010	JA49993-1 6/25/2010	JA57067-3 9/22/2010	JA64757-11 12/21/2010	JA71274-3 3/22/2011	JA79694-4 6/28/2011	JA89408-17 10/18/2011
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		0.65 J	0.81 J	0.95 J	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		0.96 J	0.92 J	1.1	0.51 J	1.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		1.3	1.6	1.6	1.1 J	2.5 U	0.82 J	0.73 J	1 U	1 U	0.32 J	0.36 J	0.46 J	1 U	0.32 J	0.3 J	1 U	0.3 J
1,1-DICHLOROETHYLENE	75-35-4	1		2.1	2.8	3.1	1.4	0.5 U	1 U	1.1	1.3	1 U	0.88 J	1.5	1.9	0.38 J	0.77 J	0.57 J	0.46 J	0.91 J
1,2,3-TRICHLOROBENZENE	87-61-6	-		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	NR	NR	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		NR	NR	NR	2.5 U	NR	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03		NR	NR	NR	2 U	2 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		1.6	1.8	1.4	NR	NR	NR	NR	NR	NR	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-		5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-		NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000		NR	NR	NR	5 U	2 J	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3		NR	NR	NR	NR	NR	2 U	2 UJ	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		NR	NR	NR	0.5 U	0.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1		1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		NR	NR	NR	5 U	5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1		1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		2 U	2 U	2 U	5 U	5 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		NR	NR	NR	24	2.5 U	20	17	15	1 U	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		0.38 J	0.23 J	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.17 J
CHLOROMETHANE	74-87-3	-		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		1.6	1.8	1.4	0.74 J	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		NR	NR	NR	10 U	10 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	0.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-		NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		NR	NR	NR	2 U	2 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300		NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70		NR	NR	NR	82	2.5 U	46	42	43	1 U	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYLOHEXANE	108-87-2	-		NR	NR	NR	10 U	10 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-		NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1		1.5	2.2	2.2	3.5	0.79	2.2	3.2	1.9	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		39.7	49.3	60.4	28	8.9	18	20	23	3.5	31.3	72.2	67.1	5.2	48.4	31.7	13.4	21.6
Trichlorofluoromethane (Freon 11)	75-69-4	2000		4.3	4	4	1.5 J	2.5 U	1.6	1.1	1	1 U	2 U	2 U	0.43 J	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	75-01-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-14D MW- 14D_20111229	MW-14D MW- 14D_20120327	MW-14D MW-14D- 20120625	MW-14D MW-14D- 20120925	MW-14D MW-14D 20121217	MW-14D MW- 14D_20130328	MW-14D MW- 14D_20130723	MW-14D MW- 14D_20131003	MW-14D MW-14D- 20131120	MW-14D MW-14D- 20140415	MW-14D MW-14D- 20140415-DUP	MW-14D MW-14D- 20140616	MW-14D MW-14D- 20140616-DUP	MW-14D MW- 14D_N1805-06	MW-14D MW- 14D_N2307-05	MW-14D MW- 14D_P0334-06	MW-14D MW- 14D_P1054-05
			Lab ID Sample Date Sample Depth	JA95985-14 12/29/2011	JB2734-7 3/27/2012	JB9796-2 6/25/2012	JB17536-4 9/25/2012	JB24432-10 12/17/2012	JB32809-1 3/28/2013	JB42961-7 7/23/2013	JB49212-5 10/3/2013	JB53775-8 11/20/2013	L1408077-13 4/15/2014 65 - 75 ft	L1408077-17 4/15/2014 65 - 75 ft	L1413296-08 6/16/2014 65 - 75 ft	L1413296-15 6/16/2014 65 - 75 ft	N1805-06 9/24/2014 83.5 - 84 ft	N2307-05 12/2/2014 83.5 - 84 ft	P0334-06 3/18/2015 83.5 - 84 ft	P1054-05 6/10/2015 83.5 - 84 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.26 J	0.32 J	1.5 U	1.5 U	1.5 U	1.5 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	0.34 J	0.36 J	0.42 J	0.51 J	0.35 J	0.39 J	0.43 J	0.54 J	0.53 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	0.54 J
1,1-DICHLOROETHYLENE	75-35-4	1	1.4	0.95 J	1	1	0.9 J	0.93 J	0.72 J	0.86 J	1.3	0.85	0.98	0.47 J	0.52	1 U	0.84 J	1 U	1 U	0.97 J
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	0.35 J	0.27 J	0.23 J	1 U	1 U	1 U	0.25 J	1 U	0.59 J	0.67 J	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	0.87 J	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	9.8	11	6	6.1	12	13	12	22
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	0.44 J	0.45 J	0.31 J	1 U	1 U	1 U	1 U	1 U	0.24 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	0.35 J	0.27 J	0.23 J	1 U	1 U	1 U	0.25 J	1 U	0.59 J	0.67 J	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	10 U	10 U	10 U	1 U	1 U	1 U	1 U
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	0.5 U	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.1 J	2.1 J	1.9 J	1.9 J	2.7	3.4	4.4	6
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	10 U	10 U	10 U	1 U	1 U	1 U	1 U
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	48.7	34.6	30.3	12.7	14.6	14.5	11.7	15	33.3	12	13	11	11	11	13	15	16	14
Trichlorofluoromethane (Freon 11)	75-69-4	2000	0.72 J	2 U	0.6 J	0.77 J	0.75 J	0.69 J	2 U	0.92 J	1.3 J	0.96 J	1 J	2.5 U	2.5 U	1.5	1.2	1 U	1 U	1.3
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

		Location ID Sample ID	MW-18D MW- 18D(43.5)20100 312	MW-18D MW- 18D(38.5)20100 520	MW-18D MW- 18D(43.5)20100 520	MW-18D MW- 18D(48.5)20100 520	MW-18D MW- 18D(38.5)20100 924	MW-18D MW- 18D(43.5)20100 924	MW-18D MW- 18D_20101220	MW-18D MW- 18D_20110322	MW-18D MW- 18OD_2011032 2	MW-18D MW- 18D_20110629	MW-18D MW-180D- 20111017	MW-18D MW-18D- 20111017	MW-18D MW- 18D_20111228	MW-18D MW- 18D_20120327	MW-18D DUP-01- 20120627	MW-18D MW-18D- 20120627	MW-18D MW-18D- 20120925
		Lab ID Sample Date Sample Depth	JA41788-6 3/12/2010	JA47021-1 5/20/2010 38.5 - 38.5 ft	JA47021-2 5/20/2010 43.5 - 43.5 ft	JA47021-3 5/20/2010 48.5 - 48.5 ft	JA57149-2 9/24/2010 38.5 - 38.5 ft	JA57149-3 9/24/2010 43.5 - 43.5 ft	JA64757-10 12/20/2010	JA71274-6 3/22/2011	JA71274-7 3/22/2011	JA79694-12 6/29/2011	JA89408-12 10/17/2011	JA89408-3 10/17/2011	JA95985-7 12/28/2011	JB2734-5 3/27/2012	JB9914-7 6/27/2012	JB9914-3 6/27/2012	JB17536-5 9/25/2012
Analyte	CAS RN	GWQS																	
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	0.39 J	0.28 J	1 U	1 U	0.45 J	0.42 J	0.45 J	1 U	1 U	0.58 J	0.56 J	0.57 J	0.46 J	0.26 J	0.23 J	0.23 J	0.31 J
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	0.4 J	0.52 J	0.41 J	0.43 J	1 U	1 U	1 U	0.39 J	1 U	0.34 J	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	26.4	13.4	10.2	3	20.3	20.1	18.1	5.3	5.3	26.7	23.1	22.5	15.3	10.1	1.8	2	2.2
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	26.4	13.4	10.2	3	20.3	20.1	18.1	5.3	5.3	26.4	23.1	22.5	15.3	10.1	1.8	2	2.2
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	<b>146</b>	<b>77.3</b>	<b>65.1</b>	<b>18.9</b>	<b>123</b>	<b>123</b>	<b>118</b>	<b>22.9</b>	<b>22.7</b>	<b>163</b>	<b>135</b>	<b>133</b>	<b>92.8</b>	<b>54.3</b>	<b>20.2</b>	<b>21</b>	<b>22.7</b>
Trichlorofluoromethane (Freon 11)	75-69-4	2000	29.4	37.7	38.5	45.2	59.8	61.2	32.9	6.7	7	36.4	44	44.3	34	8.5	34.1	36.3	32.2
Vinyl chloride	75-01-4	1	<b>2.9</b>	<b>1.5</b>	<b>1.1</b>	0.52 J	<b>5.1</b>	<b>5.1</b>	<b>4.1</b>	0.83 J	0.84 J	<b>4.6</b>	<b>4.4</b>	<b>4.2</b>	<b>4.1</b>	1	1 U	1 U	0.49 J
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-18D MW-18D 20121218	MW-18D MW- 18D_20130328	MW-18D MW- 18D_20130723	MW-18D MW- 18D_20131003	MW-18D MW-18D- 20131120	MW-18D MW-18D- 20140414	MW-18D MW-18D- 20140616	MW-18D MW- 18D_N1805-07	MW-18D MW- 18D_N2307-12	MW-18D MW- 18D_P0334-07	MW-18D MW- 18D_P1054-06	MW-20D MW- 20D(42.5)20100 312	MW-20D MW- 20D(42.5)20100 611	MW-20D MW- 20D(42.5)20100 924	MW-20D MW- 20D_20101220	MW-20D MW- 20D(42.5)20110 323	MW-20D MW- 20D_20110629
			Lab ID Sample Date Sample Depth	JB24432-2 12/18/2012	JB32809-3 3/28/2013	JB42961-9 7/23/2013	JB49212-13 10/3/2013	JB53775-10 11/20/2013	L1408077-07 4/14/2014 36 - 51 ft	L1413296-03 6/16/2014 36 - 51 ft	N1805-07 9/24/2014 48.9 - 49.4 ft	N2307-12 12/3/2014 48.9 - 49.4 ft	P0334-07 3/18/2015 48.9 - 49.4 ft	P1054-06 6/10/2015 48.9 - 49.4 ft	JA41788-10 3/12/2010 42.5 - 42.5 ft	JA48761-4 6/11/2010 42.5 - 42.5 ft	JA57149-4 9/24/2010 42.5 - 42.5 ft	JA64757-4 12/20/2010	JA71274-11 3/23/2011 42.5 - 42.5 ft	JA79694-17 6/29/2011
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1 U	1 U	1 U	1 U	1.5 U	1.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		1 U	0.55 J	0.28 J	0.39 J	0.36 J	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	NR	NR	NR	NR	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		NR	NR	NR	NR	NR	2.5 U	NR	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03		NR	NR	NR	NR	NR	2 U	2 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		1.2	0.76 J	0.67 J	0.75 J	0.56 J	NR	NR	NR	NR	NR	NR	0.42 J	0.6 J	0.47 J	0.49 J	0.28 J	0.52 J
1,2-Dichloropropane	78-87-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-		5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-		NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000		NR	NR	NR	NR	NR	5 U	1.1 J	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3		NR	NR	NR	NR	NR	NR	NR	2 UJ	2 UJ	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		NR	NR	NR	NR	NR	0.5 U	0.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		NR	NR	NR	NR	NR	5 U	5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		2 U	2 U	2 U	2 U	2 U	5 U	5 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		NR	NR	NR	NR	NR	1.6 J	1.4 J	1.9	0.93 J	1 U	2.1	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		1.2	0.76 J	0.67 J	0.75 J	0.56 J	1.1 J	1.5 J	0.78 J	1 U	3.7	1.1	0.42 J	0.6 J	0.47 J	0.49 J	0.28 J	0.52 J
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		NR	NR	NR	NR	NR	10 U	10 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	NR	NR	0.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-		NR	NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		NR	NR	NR	NR	NR	2 U	2 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300		NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-		NR	NR	NR	NR	NR	10 U	10 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-		NR	NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		15.8	11.2	11.6	11.1	8.8	11	15	12	12	36	15	20.9	17	20.7	13.5	13.5	17.1
Trichlorofluoromethane (Freon 11)	75-69-4	2000		28.4	16.9	30.7	35.4	30.3	32	28	62	23	22	41	5.3	5.1	14.6	9.3	4.2	7.6
Vinyl chloride	75-01-4	1		0.23 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
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J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

Location ID Sample ID  Lab ID Sample Date Sample Depth			MW-20D MW-20D- 20111017	MW-20D MW-20D- 20120627	MW-21D MW- 210D_2010031 1	MW-21D MW- 21D_20100311	MW-21D MW-210D- 20100520	MW-21D MW-21D- 20100520	MW-21D MW-21D- 20100923	MW-21D MW-21- D20101222	MW-21D MW- 21D_20110322	MW-21D MW- 21D_20110627	MW-21D MW-21D- 20111017	MW-22D MW- 22D_20100310	MW-22D MW-22D- 20100520	MW-22D MW-22D- 20100922	MW-22D MW- 22D_20101221	MW-22D MW- 22D_20110322	MW-22D MW- 22D_20110628
Analyte	CAS RN	GWQS																	
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.4	3.5	1 U	2.8	1.6	2.2
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	15.7	14.3	1 U	14.3	14.6	14.4
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.73 J	0.58 J	1 U	0.59 J	0.53 J	0.6 J
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	0.86 J	0.84 J	0.56 J	0.77 J	0.9 J	0.56 J	1 U	1 U	1.1	4.4	4.4	1 U	3.8	1.7	2.4
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	1	0.29 J	1.1	1.2	0.63 J	0.61 J	0.78 J	0.75 J	0.55 J	0.4 J	1.5	0.99 J	0.75 J	1.6	0.76 J	0.74 J	0.8 J
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.43 J	0.39 J	1 U	0.37 J	0.46 J	0.51 J
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1	0.29 J	1.1	1.2	0.63 J	0.61 J	0.78 J	0.75 J	0.55 J	0.4 J	1.5	0.99 J	0.75 J	1.6	0.76 J	0.74 J	0.8 J
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.24 J	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	23.4	11.7	80.9	83.2	63.2	62.9	66.3	53.2	23.3	29.7	75	77.9	78.4	13.3	66.4	46.4	58.4
Trichlorofluoromethane (Freon 11)	75-69-4	2000	18.9	10.2	325	327	195	184	339	201	84.4	102	293	1.8 J	2.2	7	2	0.35 J	0.74 J
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

**Notes:**  
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A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
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Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-22D MW-22D- 20111018	MW-22D MW- 22D_20111229	MW-22D MW- 22D_20120327	MW-22D MW-22D- 20120625	MW-22D MW-22D- 20120925	MW-22D MW-22D 20121218	MW-22D MW- 22D_20130328	MW-22D MW- 22D_20130723	MW-22D MW- 22D_20131003	MW-22D MW-22D- 20131120	MW-22D MW-22D- 20140414	MW-22D MW-22D- 20140617	MW-22D MW- 22D_N1805-08	MW-22D MW- 22D_N2307-06	MW-22D MW- 22D_P0334-08	MW-22D MW- 22D_P1054-07	MW-22D2 MW- 22D2_P1054-10
			Lab ID Sample Date Sample Depth	JA89408-16 10/18/2011	JA95985-13 12/29/2011	JB2734-6 3/27/2012	JB9796-1 6/25/2012	JB17536-7 9/25/2012	JB24432-11 12/18/2012	JB32809-4 3/28/2013	JB42961-8 7/23/2013	JB49212-4 10/3/2013	JB53775-5 11/20/2013	L1408077-05 4/14/2014 78 - 88 ft	L1413296-09 6/17/2014 78 - 88 ft	N1805-08 9/24/2014 87.8 - 88.3 ft	N2307-06 12/2/2014 87.8 - 88.3 ft	P0334-08 3/18/2015 87.8 - 88.3 ft	P1054-07 6/10/2015 87.8 - 88.3 ft	P1054-10 6/10/2015 97 - 97.5 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30	3.6	2.6	2	2	2.9	2.3	2.4	2.5	2.3	2.2	2.2 J	1.5 J	1.6	1.5	1.3	1.3	1.3	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	19.2	16	15	17.8	18.8	14	15.7	1 U	15.9	18.6	12	14	1 U	16	15	13	13	1 U
1,1-DICHLOROETHANE	75-34-3	50	0.76 J	0.58 J	0.51 J	0.59 J	0.86 J	0.49 J	0.58 J	0.63 J	0.71 J	0.62 J	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1	5.3	4.2	2.8	2.7	4.8	3.7	4	3.5	3.5	3.4	3.3	2.6	1 U	2.6	2.6	2.4	2.4	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	NR	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	2 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	1.1	0.92 J	0.75 J	0.83 J	0.87 J	0.79 J	0.87 J	0.66 J	1.1	0.88 J	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	18
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	0.24 J	NR	NR	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	1 U	1 U	1 U	1 U	5.2
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	5 U	1 U	1 U	1 U	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	52	34	39	35	27	45	1 U
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	0.8 J	0.49 J	0.44 J	0.46 J	0.62 J	0.49 J	0.56 J	0.78 J	0.68 J	0.78 J	0.97 J	0.72 J	0.85 J	0.91 J	1 U	0.85 J	1 U	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1.1	0.92 J	0.75 J	0.83 J	0.87 J	0.79 J	0.87 J	0.66 J	1.1	0.88 J	0.84 J	2.5 U	2.5 U	0.61 J	0.51 J	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	10 U	1 U	1 U	1 U	1 U	1 U
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1.2
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	2 U	1 U	1 U	1 U	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	15	11	11	12	11	14	1.6
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	10 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1	1 U	0.35 J	0.23 J	1 U	0.39 J	0.38 J	0.37 J	0.28 J	0.39 J	0.53 J	0.38 J	0.39 J	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.2
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	83.6	70.7	61.1	63	78.3	66	73.8	72.5	72.6	79.6	77	60	57	62	67	52	2.3	2.3
Trichlorofluoromethane (Freon 11)	75-69-4	2000	3.7	2.3	1.1 J	1.5 J	2.4	2.3	2.1	2.6	2.8	3	3.5	2.2 J	3.7	3	3.1	3.3	3	1
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U	1 U	1 U	1 U	1 U	1 U

Notes:  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-24D MW- 24D_20101220	MW-24D MW- 24D_20111228	MW-24D MW-24D- 20120626	MW-24D MW-24D 20121219	MW-24D MW-24D- 20131120	MW-24D MW- 24D_N2307-13	MW-25D MW- 25D_20101220	MW-25D MW- 25D_20111228	MW-25D MW-25D 20121219	MW-25D MW-25D- 20131120	MW-25D MW- 25D_N2307-14	MW-26D MW-26D- 20100923	MW-26D MW- 26D_20111228	MW-26D MW-26D 20121218	MW-26D MW-26D- 20131120	MW-26D MW- 26D_N2307-15	MW-27D MW-27D- 20100923
			Lab ID Sample Date Sample Depth	JA64757-8 12/20/2010	JA95985-9 12/28/2011	JB9796-4 6/26/2012	JB24432-18 12/19/2012	JB53775-6 11/20/2013	N2307-13 12/3/2014 39.5 - 40 ft	JA64757-7 12/20/2010	JA95985-11 12/28/2011	JB24432-19 12/19/2012	JB53775-7 11/20/2013	N2307-14 12/3/2014 49.5 - 50 ft	JA57149-1 9/23/2010	JA95985-5 12/28/2011	JB24432-12 12/18/2012	JB53775-9 11/20/2013	N2307-15 12/3/2014 39.5 - 40 ft	JA57067-9 9/23/2010
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3.8
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	16.5
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.71 J
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5.4
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
1,2-Dibromoethane	106-93-4	0.03	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	1 U	1 U	1 U	1 U	1 U	1 U	NR	1 U	1 U	1 U	1 U	NR	1 U	1 U	1 U	1 U	NR	0.87 J
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	5 U	5 U	5 U	NR	5 U	5 U	5 U	5 U	5 U	NR	5 U	5 U	5 U	5 U	NR	5 U
4-Methyl-2-pentanone	108-10-1	-	NR	NR	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR
ACETONE	67-64-1	6000	NR	NR	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	0.36 J	NR	NR	NR	NR	0.73 J	NR	NR	NR	NR	1.9 J	NR
BENZENE	71-43-2	1	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	1 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.47 J
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.87 J
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
Isopropylbenzene	98-82-8	700	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	5 U	NR
Methyl tert-butyl ether	1634-04-4	70	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	84.1
Trichlorofluoromethane (Freon 11)	75-69-4	2000	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	1 U	3.4
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	NR	NR	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	1 U	NR

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
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E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-27D MW27-D- 102010	MW-27D MW- 27D_20101221	MW-27D MW- 27D_20110322	MW-27D MW- 27D_20110627	MW-27D MW-27D- 20111017	MW-27D MW- 27D_20111227	MW-27D MW- 27D_20120326	MW-27D MW-27D- 20120626	MW-27D MW-27D- 20120925	MW-27D MW-27D- 111612	MW-27D MW-27D 20121218	MW-27D MW- 27D_20130328	MW-27D MW- 27D_20130724	MW-27D MW- 27D_20131003	MW-27D MW-27D- 20131119	MW-27D MW-27D- 20140414	MW-27D MW-27D- 20140616
			Lab ID Sample Date Sample Depth	JA59224-3 10/20/2010	JA64757-15 12/21/2010	JA71274-1 3/22/2011	JA79694-1 6/27/2011	JA89408-4 10/17/2011	JA95985-1 12/27/2011	JB2734-1 3/26/2012	JB9796-6 6/26/2012	JB17536-6 9/25/2012	JB21504-1 11/16/2012	JB24432-9 12/18/2012	JB32809-2 3/28/2013	JB42961-13 7/24/2013	JB49212-7 10/3/2013	JB53775-12 11/19/2013	L1408077-08 4/14/2014 51 - 61 ft	L1413296-04 6/16/2014 51 - 61 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.5 U	1.5 U
1,1-DICHLOROETHANE	75-34-3	50		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.21 J	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
1,1-DICHLOROETHYLENE	75-35-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.42 J	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U
1,2,4-TRICHLOROBENZENE	120-82-1	9		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	NR
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
1,2-Dibromoethane	106-93-4	0.03		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	2 U
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
1,2-Dichloroethylene (total)	540-59-0	-	1.2	0.78 J	0.51 J	0.32 J	0.26 J	0.26 J	0.46 J	0.23 J	0.56 J	2.4	1.4	0.97 J	0.59 J	1 U	0.74 J	0.43 J	NR	NR
1,2-Dichloropropane	78-87-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	250 U	250 U
2-Butanone	78-93-3	300		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U
2-Chloroethylvinylether	110-75-8	-		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR
4-Methyl-2-pentanone	108-10-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U
ACETONE	67-64-1	6000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U
ARSENIC	7440-38-2	3		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	0.5 U
BROMODICHLROMETHANE	75-27-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
BROMOMETHANE	74-83-9	10		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
CARBON DISULFIDE	75-15-0	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U
CARBON TETRACHLORIDE	56-23-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
CFC-12	75-71-8	1000		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	5 U	5 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
CHLOROBENZENE	108-90-7	50		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
CHLOROETHANE	75-00-3	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
CHLOROFORM	67-66-3	70		0.4 J	0.51 J	0.31 J	0.71 J	1 U	1 U	0.96 J	2.7	1 U	0.3 J	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
CHLOROMETHANE	74-87-3	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
cis-1,2-Dichloroethene	156-59-2	70		1.2	0.78 J	0.51 J	0.32 J	0.26 J	0.46 J	0.23 J	0.56 J	2.4	1.4	0.97 J	0.59 J	1 U	0.74 J	0.43 J	2.5 U	2.5 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
CYCLOHEXANE	110-82-7	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	10 U
DICHLROMETHANE	75-09-2	3		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.5 U	NR
ETHYLBENZENE	100-41-4	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
Isopropylbenzene	98-82-8	700		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
m,p-Xylene	MPXYLENE	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
METHYL ACETATE	79-20-9	7000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U	2 U
METHYL N-BUTYL KETONE	591-78-6	300		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
METHYLCYCLOHEXANE	108-87-2	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	10 U
o-Xylene	95-47-6	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
STYRENE (MONOMER)	100-42-5	100		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
Tetrachloroethene	127-18-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
TOLUENE	108-88-3	600		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U	2 U
TRICHLOROETHYLENE	79-01-6	1		5.5	3.6	2.7	2.7	2.8	4.5	2.2	6.7	54.7	18.3	14.2	5.5	3.2	5.7	4.4	1.8	1.4
Trichlorofluoromethane (Freon 11)	75-69-4	2000		2.1	1.8 J	1.6 J	1.6 J	3.2	3	0.85 J	2.7	16.5	4.8	5.1	2	1.9 J	4	2.6	1 J	1.1 J
Vinyl chloride	75-01-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	2.5 U

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-27D MW- 27D_N1805-09	MW-27D MW- 27D_N2307-16	MW-27D MW- 27D_P0334-09	MW-27D MW- 27D_P1054-27	MW-28D MW-28D- 20100922	MW-28D MW- 28D_20111228	MW-28D MW-28D- 20121218	MW-28D MW-28D- 20131121	MW-28D MW- 28D_N2307-07	MW-29D MW-29D- 20100922	MW-29D MW- 29D_20111228	MW-29D MW-29D- 20120626	MW-29D MW-29D- 20121218	MW-29D MW-29D- 20131120	MW-29D MW- 29D_N2307-17	MW-29D2 MW- 29D2_P1054-29	MW-29D2 MW 29D2_P1162-03
			Lab ID Sample Date Sample Depth	N1805-09 9/24/2014 61.8 - 62.3 ft	N2307-16 12/3/2014 61.8 - 62.3 ft	P0334-09 3/18/2015 61.8 - 62.3 ft	P1054-27 6/11/2015 61.8 - 62.3 ft	JA57067-4 9/22/2010	JA95985-6 12/28/2011	JB24432-21 12/18/2012	JB53775-2 11/21/2013	N2307-07 12/2/2014 76.5 - 77 ft	JA57067-1 9/22/2010	JA95985-8 12/28/2011	JB9796-5 6/26/2012	JB24432-14 12/18/2012	JB53775-11 11/20/2013	N2307-17 12/3/2014 90.5 - 91 ft	P1054-29 6/11/2015 122 - 122.5 ft	P1162-03 7/9/2015 122 - 122.5 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
1,2-Dibromoethane	106-93-4	0.03		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		NR	NR	NR	NR	1 U	1 U	1 U	1 U	NR	1 U	1 U	1 U	1 U	1 U	NR	NR	NR
1,2-Dichloropropane	78-87-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		5 U	5 U	5 U	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	NR	NR	5 U	5 U
2-Chloroethylvinylether	110-75-8	-		NR	NR	NR	NR	5 U	5 U	5 U	5 U	NR	5 U	5 U	5 U	5 U	5 U	NR	NR	NR
4-Methyl-2-pentanone	108-10-1	-		5 U	5 U	5 U	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	NR	NR	5 U	5 U
ACETONE	67-64-1	6000		5 U	5 U	5 U	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	NR	NR	5 U	11
ARSENIC	7440-38-2	3		2 U	2 UJ	NR	NR	NR	NR	NR	NR	0.48 J	NR	NR	NR	NR	NR	NR	0.75 J	NR
BENZENE	71-43-2	1		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	1 U	1 U	1 U
BROMODICHLROMETHANE	75-27-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	1 U	2.4	1.1
CARBON TETRACHLORIDE	56-23-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
CHLOROBENZENE	108-90-7	50		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
DICHLROMETHANE	75-09-2	3		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
Isopropylbenzene	98-82-8	700		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
m,p-Xylene	MPXYLENE	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300		5 U	5 U	5 U	5 U	NR	NR	NR	NR	5 U	NR	NR	NR	NR	NR	NR	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
METHYLCYCLOHEXANE	108-87-2	-		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
o-Xylene	95-47-6	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1 U
Tetrachloroethene	127-18-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	1 U	1.9
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		4.6	2.4	2.8	4.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane (Freon 11)	75-69-4	2000		3.7	1.7	2	3.3	2 U	2 U	2 U	2 U	1 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U
Vinyl chloride	75-01-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		1 U	1 U	1 U	1 U	NR	NR	NR	NR	1 U	NR	NR	NR	NR	NR	1 U	1 U	1 U

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
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A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

Location ID Sample ID			MW-30D MW-30D- 20111019	MW-30D MW-30D 20121218	MW-30D MW-30D- 20140617	MW-30D2 MW- 30D2_P1105-03	MW-31D MW-31D- 20111019	MW-31D MW-31D- 20111111	MW-31D MW- 31D_20111228	MW-31D MW-31D- 20120626	MW-31D MW-31D- 20120924	MW-31D MW-31D- 20121218	MW-31D MW- 31D_20130328	MW-31D MW- 31D_20130722	MW-31D MW- 31D_20131002	MW-31D MW-31D- 20131121	MW-31D MW-31D- 20140414	MW-31D MW-31D- 20140617	MW-31D MW- 31D_N1805-10
Lab ID Sample Date Sample Depth			JA89514-1 10/19/2011	JB24432-13 12/18/2012	L1413296-10 6/17/2014 83 - 93 ft	P1105-03 6/25/2015 122 - 122.5 ft	JA89514-2 10/19/2011	JA91790-2 11/11/2011	JA95985-10 12/28/2011	JB9796-3 6/26/2012	JB17536-1 9/24/2012	JB24432-16 12/18/2012	JB32809-5 3/28/2013	JB42961-1 7/22/2013	JB49212-2 10/2/2013	JB53775-4 11/21/2013	L1408077-09 4/14/2014 69.5 - 79.5 ft	L1413296-11 6/17/2014 69.5 - 79.5 ft	N1805-10 9/24/2014 76.5 - 77 ft
Analyte	CAS RN	GWQS																	
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1.5 U	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	7.5 U	1.5 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	2.5 U	1 U	0.51 J	1 U	0.45 J	0.33 J	0.41 J	1 U	1 U	1 U	0.57 J	0.45 J	12 U	2.5 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	0.5 U	1 U	1.1	1 U	0.69 J	0.77 J	1 U	1 U	1 U	1 U	1.2	1.1	2.5 U	0.5 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	NR	NR	2.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	1 U
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	NR	NR	NR	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	NR	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	NR	NR	2.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	1 U
1,2-Dibromoethane	106-93-4	0.03	NR	NR	2 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	2 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	1 U	1 U	NR	NR	1 U	1 U	0.2 J	1 U	0.4 J	1 U	1 U	1 U	0.72 J	0.82 J	NR	NR	NR
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	NR	NR	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	25 U	5 U	5 U
2-Chloroethylvinylether	110-75-8	-	5 U	5 U	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR	NR	NR
4-Methyl-2-pentanone	108-10-1	-	NR	NR	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	25 U	5 U	5 U
ACETONE	67-64-1	6000	NR	NR	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	25 U	1.9 J	5 U
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	4.4
BENZENE	71-43-2	1	NR	NR	0.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	0.5 U	1 U
BROMODICHLROMETHANE	75-27-4	1	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
CARBON DISULFIDE	75-15-0	700	NR	NR	5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	25 U	5 U	1 U
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	5 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	25 U	5 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	NR	NR	2.5 U	2.6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	2.8
CHLOROBENZENE	108-90-7	50	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	NR	NR	2.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
CHLOROFORM	67-66-3	70	1 U	1 U	2.5 U	0.99 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	2.5 U	1 U	1 U	1 U	0.2 J	1 U	0.4 J	1 U	1 U	1 U	0.72 J	0.82 J	12 U	2.5 U	0.6 J
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
CYCLOHEXANE	110-82-7	-	NR	NR	10 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	50 U	10 U	1 U
DICHLROMETHANE	75-09-2	3	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.5 U	NR	NR
ETHYLBENZENE	100-41-4	700	NR	NR	2.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	1 U
Isopropylbenzene	98-82-8	700	NR	NR	2.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	1 U
m,p-Xylene	MPXYLENE	-	NR	NR	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	NR
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
METHYL ACETATE	79-20-9	7000	NR	NR	2 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10 U	2 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300	NR	NR	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	25 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70	NR	NR	2.5 U	5.5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	0.53 J
METHYLCYCLOHEXANE	108-87-2	-	NR	NR	10 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	50 U	10 U	1 U
o-Xylene	95-47-6	-	NR	NR	2.5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	NR
STYRENE (MONOMER)	100-42-5	100	NR	NR	2.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	1 U
Tetrachloroethene	127-18-4	1	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
TOLUENE	108-88-3	600	NR	NR	2.5 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	12 U	2.5 U	1.8
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	12 U	2.5 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	0.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U	0.5 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	2 U	1 U
TRICHLOROETHYLENE	79-01-6	1	1 U	1 U	0.5 U	6.4	25.8	5.5	24.8	20.6	20.5	1 U	1 U	7	24.5	20.5	2.5 U	0.5 U	8.9
Trichlorofluoromethane (Freon 11)	75-69-4	2000	2 U	2 U	2.5 U	2.4	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	12 U	2.5 U	1 U
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5		

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-31D MW- 31D_N2307-18	MW-31D MW- 31D_P0334-10	MW-31D MW- 31D_P1054-08	MW-31S MW- 31S_20130722	MW-31S MW-31S-- 20140415	MW-31S MW-31S- 20140617	MW-32D MW- 32D_20130722	MW-32S MW- 32_20130723	MW-32D MW- 32D_20131002	MW-32D MW-32D- 20131121	MW-32S MW-32S- 20140414	MW-32S MW-32S- 20140617	MW-32D MW-32D- 20140414	MW-32D MW-32D- 20140617	MW-32D MW- 32D_N2307-19	MW-33D2 33D2_P1054-11	MW-33D2 MW 33D2_P1162-04
			Lab ID Sample Date Sample Depth	N2307-18 12/3/2014 76.5 - 77 ft	P0334-10 3/18/2015 76.5 - 77 ft	P1054-08 6/10/2015 76.5 - 77 ft	JB42961-2 7/22/2013	L1408077-14 4/15/2014 22 - 32 ft	L1413296-12 6/17/2014 22 - 32 ft	JB42961-3 7/22/2013	JB42961-5 7/23/2013	JB49212-1 10/2/2013	JB53775-3 11/21/2013	L1408077-10 4/14/2014 20 - 30 ft	L1413296-14 6/17/2014 20 - 30 ft	L1408077-11 4/14/2014 78 - 88 ft	L1413296-13 6/17/2014 78 - 88 ft	N2307-19 12/3/2014 85.5 - 86 ft	P1054-11 6/10/2015 126 - 126.5 ft	P1162-04 7/9/2015 126 - 126.5 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1 U	1 U	1 U	1.5 U	1.5 U	1 U	1 U	1 U	1 U	1.5 U	1.5 U	1.5 U	1.5 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	0.73 J	0.97 J
1,1-DICHLOROETHYLENE	75-35-4	1		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	NR	NR	NR	2.5 U	NR	NR	NR	NR	NR	2.5 U	NR	2.5 U	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		1 U	1 U	1 U	NR	2.5 U	NR	NR	NR	NR	NR	2.5 U	NR	2.5 U	NR	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
1,2-Dibromoethane	106-93-4	0.03		1 U	1 U	1 U	NR	2 U	2 U	NR	NR	NR	NR	2 U	2 U	2 U	2 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		NR	NR	NR	1 U	NR	NR	1 U	1 U	1 U	1 U	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloropropane	78-87-5	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chloroethylvinylether	110-75-8	-		NR	NR	NR	5 U	NR	NR	5 U	5 U	5 U	5 U	NR	NR	NR	NR	NR	NR	NR
4-Methyl-2-pentanone	108-10-1	-		5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000		5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR	NR	5 U	5 U	5 U	1.6 J	5 U	17	11
ARSENIC	7440-38-2	3		4.2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.7	NR	NR
BENZENE	71-43-2	1		1 U	1 U	1 U	NR	0.5 U	0.5 U	NR	NR	NR	NR	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.3	1 U
BROMODICHLROMETHANE	75-27-4	1		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		1 U	1 U	1 U	NR	5 U	5 U	NR	NR	NR	NR	5 U	5 U	5 U	5 U	1 U	2.8	1 U
CARBON TETRACHLORIDE	56-23-5	1		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		1 U	1 U	1 U	2 U	5 U	5 U	2 U	2 U	2 U	2 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
CHLOROBENZENE	108-90-7	50		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	0.73 J
CHLOROMETHANE	74-87-3	-		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	0.37 J	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1.2	1 U
cis-1,2-Dichloroethene	156-59-2	70		1 U	1 U	1.2	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		1 U	1 U	1 U	NR	10 U	10 U	NR	NR	NR	NR	10 U	10 U	10 U	10 U	1 U	1 U	1 U
DICHLROMETHANE	75-09-2	3		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	NR	0.5 U	NR	NR	NR	NR	NR	0.5 U	NR	0.5 U	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
m,p-Xylene	MPXYLENE	-		NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	NR	NR	NR
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		1 U	1 U	1 U	NR	2 U	2 U	NR	NR	NR	NR	2 U	2 U	2 U	2 U	1 U	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300		5 U	5 U	5 U	NR	5 U	5 U	NR	NR	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1.3	1.4
METHYLCYLOHEXANE	108-87-2	-		1 U	1 U	1 U	NR	10 U	10 U	NR	NR	NR	NR	10 U	10 U	10 U	10 U	1 U	1 U	1 U
o-Xylene	95-47-6	-		NR	NR	NR	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	NR	NR	NR
STYRENE (MONOMER)	100-42-5	100		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1.4	1.4
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	1 U	1 U	2.5 U	2.5 U	1 U	1 U	1 U	1 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	1 U	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		1 U	3.6	4.5	1 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1.9	2.3
Trichlorofluoromethane (Freon 11)	75-69-4	2000		1 U	1 U	1 U	2 U	2.5 U	2.5 U	2 U	2 U	2 U	2 U	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U
Vinyl chloride	75-01-4	1		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		1 U	1 U	1 U	NR	2.5 U	2.5 U	NR	NR	NR	NR	2.5 U	2.5 U	2.5 U	2.5 U	1 U	1 U	1 U

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.  
D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-34D2 MW- 34D2_P1054-12	MW-35D2 MW- 35D2_P1054-30	RW-1 RW-1(23.75)- 20100215	RW-1 RW-1(32.75)- 20100215	RW-1 RW-1(41.75)- 20100215	RW-1 RW-1(51.75)- 20100215	RW-2 RW-2(32.75)- 20100215	RW-2 RW-2(42.75)- 20100215	RW-2 RW-2(52.75)- 20100215	RW-2 RW-2(61.75)- 20100215	RW-3 RW-3(32.00)- 20100215	RW-3 RW-3(42.00)- 20100215	RW-3 RW-3(52.00)- 20100215	RW-3 RW- 3(57.5)2010031 2	RW-3 RW- 3(62.5)2010031 2	RW-3 RW- 3(67.5)2010031 2	VPB-1 VPB-1(93- 95)031915
			Lab ID Sample Date Sample Depth	P1054-12 6/10/2015 132 - 132.5 ft	P1054-30 6/11/2015 124 - 124.5 ft	JA39878-7 2/15/2010	JA39878-5 2/15/2010	JA39878-6 2/15/2010	JA39878-8 2/15/2010	JA39878-4 2/15/2010	JA39878-3 2/15/2010	JA39878-2 2/15/2010	JA39878-1 2/15/2010	JA39878-9 2/15/2010	JA39878-10 2/15/2010	JA39878-11 2/15/2010	JA41788-1 3/12/2010	JA41788-2 3/12/2010	JA41788-3 3/12/2010	JB90383-1 3/19/2015 93 - 95 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.2
1,1-DICHLOROETHANE	75-34-3	50	0.84 J	0.65 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	0.98 J	1.3	1.4	1.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 U
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 U
1,2-Dibromoethane	106-93-4	0.03	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	NR	NR	5.9	7	9.2	14.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NR
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	19.9
2-Chloroethylvinylether	110-75-8	-	NR	NR	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NR
4-Methyl-2-pentanone	108-10-1	-	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U
ACETONE	67-64-1	6000	16	5 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	101
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	167
BROMODICHLOROMETHANE	75-27-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
CARBON DISULFIDE	75-15-0	700	7.4	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	4.5
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	1 U	1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	1.9	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.1 J
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	1 U	0.6 J	0.31 J	0.31 J	0.3 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.6
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.6
cis-1,2-Dichloroethene	156-59-2	70	0.76 J	1 U	5.9	7	9.2	14.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U
DICHLROMETHANE	75-09-2	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2.9
Isopropylbenzene	98-82-8	700	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 U
m,p-Xylene	MPXYLENE	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	9
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U
METHYL N-BUTYL KETONE	591-78-6	300	5 U	5 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U
Methyl tert-butyl ether	1634-04-4	70	17	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1.7
METHYLCYCLOHEXANE	108-87-2	-	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 U
o-Xylene	95-47-6	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	5.7
STYRENE (MONOMER)	100-42-5	100	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1 U
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.35 J
TOLUENE	108-88-3	600	1.6	1.6	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	43.8
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	6.5	3.2	188	195	226	188	83.4	73.2	80	95.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5.1
Trichlorofluoromethane (Freon 11)	75-69-4	2000	0.81 J	1 U	125	127	124	50.2	376	375	301	360	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3.2
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	1 U	1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	14.7

**Notes:**  
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**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
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J - Indicates that the value was detected and is estimated.  
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D - Indicates the compound concentration was obtained from a secondary dilution analysis.  
E - Indicates the concentration exceeded the Calibration Range.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	VPB-1 VPB-1(93-95)R	VPB-1 VPB-1 (109-111)	VPB-1 VPB-1 (125-127)	VPB-1 VPB-1 (141-143)	VPB-2 VPB-2 (120-122)	VPB-2 VPB-2 (131-133)	VPB-2 VPB-2 (142-144)	VPB-2 VPB-2 (153-155)	VPB-3 VPB-3(120-122)	VPB-3 VPB-3 (131-133)	VPB-3 VPB-3 (142-144)	VPB-3 VPB-3 (153-155)	VPB-4 VPB4 (122-124)	VPB-4 VPB-4(132-134)	VPB-4 VPB4(140-142)	VPB-5 VPB-5(121-123)	VPB-5 VPB-5(130-132)
			Lab ID Sample Date Sample Depth	JB92275-1 4/13/2015 93 - 95 ft	JB92317-1 4/14/2015 109 - 111 ft	JB92440-1 4/15/2015 125 - 127 ft	JB92584-1 4/16/2015 141 - 143 ft	JB95905-1 6/1/2015 120 - 122 ft	JB95984-1 6/2/2015 131 - 133 ft	JB96131-1 6/3/2015 142 - 144 ft	JB96131-4 6/3/2015 153 - 155 ft	JB94935-1 5/18/2015 120 - 122 ft	JB95002-1 5/19/2015 131 - 133 ft	JB95002-4 5/19/2015 142 - 144 ft	JB95130-1 5/20/2015 153 - 155 ft	JB93920-1 5/5/2015 122 - 124 ft	JB94058-1 5/6/2015 132 - 134 ft	JB94185-1 5/5/2015 140 - 142 ft	JB93451-1 4/28/2015 121 - 123 ft	JB93256-1 4/24/2015 130 - 132 ft
Analyte	CAS RN	GWQS																		
1,1,1-Trichloroethane	71-55-6	30		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		1 U	1 U	2.5 U	5 U	1.9	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		0.36 J	1 U	2.5 U	5 U	0.29	1	1	1	1	1	1	1	0.45	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	0120-82-1	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		2 U	2 U	5 U	10 U	2	2	2	2	2	2	2	2	2 U	2 U	2 U	2 U	2 U
1,2-Dibromoethane	106-93-4	0.03		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		1 U	1 U	2.5 U	5 U	0.22	1	1	1	1	1	1	1	0.26	1 U	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloropropane	78-87-5	1		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300		10 U	10 U	25 U	50 U	10	10	10	10	10	10	10	10	10 U	10 U	10 U	10 U	10 U
2-Chloroethylvinylether	110-75-8	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
4-Methyl-2-pentanone	108-10-1	-		5 U	5 U	13 U	25 U	5	5	5	5	5	5	5	5	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000		13	8.5 J	25 U	50 U	10	10	9.6	13.7	9	9.2	5.6	10	10 U	10 U	6.3	5.5 J	9.1 J
ARSENIC	7440-38-2	3		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1		0.54	0.5 U	1.3 U	2.5 U	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	75-27-4	1		1 U	1 U	2.5 U	5 U	1	1.2	0.52	1	0.57	1.4	1.2	1.6	0.44	1.3	1 U	0.48 J	1 U
BROMOMETHANE	74-83-9	10		2 U	2 U	5 U	10 U	2	2	2	2	2	2	2	2	2 U	2 U	2 U	2 U	2 U
CARBON DISULFIDE	75-15-0	700		2 U	2 U	5 U	10 U	0.41	2	2	2	2	2	2	2	0.59	2 U	2 U	2 U	0.42 J
CARBON TETRACHLORIDE	56-23-5	1		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		2 U	2 U	5 U	10 U	2	2	2	2	2	2	2	2	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		2.8 J	5 U	13 U	25 U	2.4	5	5	5	5	5	5	5	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	108-90-7	50		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1		1 U	1 U	2.5 U	5 U	1	2.1	0.96	1	0.98	2.2	2.1	2.5	0.36	1.5	1 U	0.45 J	1 U
CHLOROETHANE	75-00-3	5		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		2.3	0.81 J	2.5 U	5 U	1.2	0.78	0.53	1	0.44	0.85	0.63	0.9	1.1	1	0.73	0.79 J	0.44 J
CHLOROMETHANE	74-87-3	-		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		5 U	5 U	13 U	25 U	5	5	5	5	5	5	5	5	5 U	5 U	5 U	5 U	5 U
DICHLOROMETHANE	75-09-2	3		2 U	2 U	5 U	10 U	2	2	2	2	2	2	2	2	2 U	2 U	2 U	2 U	2 U
Dichloropropene, 1,3-	542-75-6	1		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	MPXYLENE	-		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
M-DICHLOROBENZENE	541-73-1	600		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		5 U	5 U	13 U	25 U	5	5	5	5	5	5	5	5	5 U	5 U	5 U	5 U	5 U
METHYL N-BUTYL KETONE	591-78-6	300		5 U	5 U	13 U	25 U	5	5	5	5	5	5	5	5	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70		2.4	1 U	2.5 U	5 U	7.9	1	1	1	1	1	1	1	0.78	1 U	1 U	1 U	1.2
METHYLCYCLOHEXANE	108-87-2	-		5 U	5 U	13 U	25 U	5	5	5	5	5	5	5	5	5 U	5 U	5 U	5 U	5 U
o-Xylene	95-47-6	-		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
STYRENE (MONOMER)	100-42-5	100		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1		0.9 J	1 U	0.5 U	1 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		0.66 J	1.2	2.5 U	5 U	0.22	0.3	0.2	1	1	0.16	1	2	0.22	0.33	2.5	1.4	0.42 J
trans-1,2-Dichloroethene	156-60-5	100		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		1 U	1 U	2.5 U	5 U	1	1.7	0.73	1	0.58	1.7	1.9	1.8	1 U	0.44	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		7.6	0.3 J	0.5 U	1 U	8.7	0.61	1	1	1	1	1	1	1.8	1 U	1 U	1 U	1.9
Trichlorofluoromethane (Freon 11)	75-69-4	2000		6.3	0.97 J	5 U	10 U	1.7	1.5	0.87	2	2	2	2	2	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	75-01-4	1		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		1 U	1 U	2.5 U	5 U	1	1	1	1	1	1	1	1	1 U	1 U	1 U	1 U	1 U

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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	VPB-5 VPB-5(142-144)	VPB-5 VPB-5(146-148)	VPB-6 VPB-6 (109-111)	VPB-6 VPB-6(120-122)	VPB-6 VPB-6(136-138)	VPB-6 VPB-6(152-154)
			Lab ID Sample Date Sample Depth	JB93256-4 4/24/2015 142 - 144 ft	JB93382-1 4/27/2015 146 - 148 ft	JB91216-1 3/31/2015 109 - 111 ft	JB91455-1 4/2/2015 120 - 122 ft	JB91708-1 4/7/2015 136 - 138 ft	JB91854-1 4/8/2015 152 - 154 ft
Analyte	CAS RN	GWQS							
1,1,1-Trichloroethane	71-55-6	30	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3	1 U	1 U	0.36 J	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50	1 U	1 U	0.83 J	0.58 J	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1	1 U	1 U	1.2	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	0120-82-1	-	NR	NR	NR	NR	NR	NR	NR
1,2,4-TRICHLOROBENZENE	120-82-1	9	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dibromoethane	106-93-4	0.03	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2	1 U	1 U	0.97 J	0.64 J	1 U	1 U	1 U
1,2-Dichloroethylene (total)	540-59-0	-	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloropropane	78-87-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane	123-91-1	10	NR	NR	NR	NR	NR	NR	NR
2-Butanone	78-93-3	300	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chloroethylvinylether	110-75-8	-	NR	NR	NR	NR	NR	NR	NR
4-Methyl-2-pentanone	108-10-1	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000	14.6	10 U	10 U	16.5	10 U	10 U	10 U
ARSENIC	7440-38-2	3	NR	NR	NR	NR	NR	NR	NR
BENZENE	71-43-2	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	75-27-4	1	1.2	0.75 J	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CARBON DISULFIDE	75-15-0	700	2 U	2 U	2 U	1.2 J	3.3	2 U	2 U
CARBON TETRACHLORIDE	56-23-5	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-	5 U	5 U	5.2	0.47 J	5 U	5 U	5 U
CHLOROBENZENE	108-90-7	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1	1.1	0.78 J	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70	0.96 J	0.81 J	3.1	0.47 J	0.31 J	1 U	1 U
CHLOROMETHANE	74-87-3	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DICHLOROMETHANE	75-09-2	3	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dichloropropene, 1,3-	542-75-6	1	NR	NR	NR	NR	NR	NR	NR
ETHYLBENZENE	100-41-4	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	MPXYLENE	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U
M-DICHLOROBENZENE	541-73-1	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000	5 U	5 U	5 U	5 U	5 U	5 U	5 U
METHYL N-BUTYL KETONE	591-78-6	300	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70	1 U	1 U	13.7	1.6	0.99 J	1 U	1 U
METHYLCYCLOHEXANE	108-87-2	-	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	95-47-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U
STYRENE (MONOMER)	100-42-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600	1 U	1.3	0.27 J	1 U	0.66 J	0.36 J	0.36 J
trans-1,2-Dichloroethene	156-60-5	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4	0.36 J	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1	1 U	1 U	27.3	2.5	1 U	1 U	1 U
Trichlorofluoromethane (Freon 11)	75-69-4	2000	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Vinyl chloride	75-01-4	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U

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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-4 MW-4_N1805-01	MW-4 MW-4_N1805-01	MW-4 MW-4_N2307-11	MW-4 MW-4_P0334-01	MW-4 MW-4_P1054-01	MW-9 MW-9_N1805-02	MW-9 MW-9_N1805-02	MW-9 MW-9_N2307-01	MW-9 MW-9_P0334-02	MW-9 MW-9_P1054-02	MW-12 MW-12_N1805-03	MW-12 DUPLICATE_N1805-13	MW-12 MW-12_N1805-03	MW-12 DUPLICATE_N1805-13	MW-12 MW-12_N2307-02	MW-12 DUPLICATE_N2307-08
			Lab ID	N1805-01	N1805-01RE	N2307-11	P0334-01	P1054-01	N1805-02	N1805-02RE	N2307-01	P0334-02	P1054-02	N1805-03	N1805-13	N1805-03RE	N1805-13RE	N2307-02	N2307-08
			Sample Date	9/24/2014	9/24/2014	12/3/2014	3/18/2015	6/10/2015	9/24/2014	9/24/2014	12/2/2014	3/18/2015	6/10/2015	9/24/2014	9/24/2014	9/24/2014	9/24/2014	12/2/2014	12/2/2014
			Sample Depth	28 - 28.5 ft	28 - 28.5 ft	28 - 28.5 ft	28 - 28.5 ft	28 - 28.5 ft	30.8 - 31.3 ft	30.8 - 31.3 ft	30.8 - 31.3 ft	30.8 - 31.3 ft	30.8 - 31.3 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft
Analyte	CAS RN	ISC																	
1,4-Dioxane	123-91-1	10		0.1 U	0.1 UJ	0.41	0.1 U	0.1 U	0.1 U	0.45 J	1.3	0.33	0.21	0.1 U	0.1 U	0.43 J	0.19 J	0.74 J	0.3 J

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ISC = NJDEP Interim Specific Groundwater Quality Criterion recommendation for 1,4-Dioxane.  
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			Location ID Sample ID	MW-12 MW-12_P0334-03	MW-12 DUPLICATE_P0334-11	MW-12 MW-12_P1054-26	MW-12 DUPLICATE_P1054-28	MW-12D MW-12D_N1805-04	MW-12D MW-12D_N1805-04	MW-12D MW12D_N2307-03	MW-12D MW-12D_P0334-04	MW-12D MW-12D_P1054-03	MW-13D MW-13D-20140415	MW-13D MW-13D-20140616	MW-13D MW-13D_N1805-05	MW-13D MW-13D_N1805-05	MW-13D MW-13D_N2307-04	MW-13D MW-13D_P0334-05	MW-13D MW-13D_P1054-04
			Lab ID	P0334-03	P0334-11	P1054-26	P1054-28	N1805-04	N1805-04RE	N2307-03	P0334-04	P1054-03	L1408077-12	L1413296-07	N1805-05	N1805-05RE	N2307-04	P0334-05	P1054-04
			Sample Date	3/18/2015	3/18/2015	6/11/2015	6/11/2015	9/24/2014	9/24/2014	12/2/2014	3/18/2015	6/10/2015	4/15/2014	6/16/2014	9/24/2014	9/24/2014	12/2/2014	3/18/2015	6/10/2015
			Sample Depth	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	57 - 67 ft	57 - 67 ft	63 - 63.5 ft	63 - 63.5 ft	63 - 63.5 ft	63 - 63.5 ft	63 - 63.5 ft
Analyte	CAS RN	ISC																	
1,4-Dioxane	123-91-1	10		0.8	0.63	0.27	0.25	0.1 U	0.63 J	1.2	0.36	0.75	2.6 J	3 U	1.1	1.3 J	1	0.48	0.83

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			Location ID Sample ID	MW-14D MW-14D- 20140415	MW-14D MW-14D- 20140415-DUP	MW-14D MW-14D- 20140616	MW-14D MW-14D- 20140616-DUP	MW-14D MW- 14D_N1805-06	MW-14D MW- 14D_N1805-06	MW-14D MW- 14D_N2307-05	MW-14D MW- 14D_P0334-06	MW-14D MW- 14D_P1054-05	MW-18D MW-18D- 20140414	MW-18D MW-18D- 20140616	MW-18D MW- 18D_N1805-07	MW-18D MW- 18D_N1805-07	MW-18D MW- 18D_N2307-12	MW-18D MW- 18D_P0334-07	MW-18D MW- 18D_P1054-06
			Lab ID	L1408077-13	L1408077-17	L1413296-08	L1413296-15	N1805-06	N1805-06RE	N2307-05	P0334-06	P1054-05	L1408077-07	L1413296-03	N1805-07	N1805-07RE	N2307-12	P0334-07	P1054-06
			Sample Date	4/15/2014	4/15/2014	6/16/2014	6/16/2014	9/24/2014	9/24/2014	12/2/2014	3/18/2015	6/10/2015	4/14/2014	6/16/2014	9/24/2014	9/24/2014	12/3/2014	3/18/2015	6/10/2015
			Sample Depth	65 - 75 ft	65 - 75 ft	65 - 75 ft	65 - 75 ft	83.5 - 84 ft	83.5 - 84 ft	83.5 - 84 ft	83.5 - 84 ft	83.5 - 84 ft	36 - 51 ft	36 - 51 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft
Analyte		CAS RN	ISC																
1,4-Dioxane		123-91-1	10	19	19	15	15	6.1	11 J	8.1	8.9	10	3 U	3 U	0.1 U	0.47 J	0.92	0.21	0.32

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			Location ID Sample ID	MW-22D MW-22D- 20140414	MW-22D MW-22D- 20140617	MW-22D MW- 22D_N1805-08	MW-22D MW- 22D_N1805-08	MW-22D MW- 22D_N2307-06	MW-22D MW- 22D_P0334-08	MW-22D MW- 22D_P1054-07	MW-22D2 MW- 22D2_P1054-10	MW-24D MW- 24D_N2307-13	MW-25D MW- 25D_N2307-14	MW-26D MW- 26D_N2307-15	MW-27D MW- 27D_N1805-09	MW-27D MW- 27D_N1805-09	MW-27D MW- 27D_N2307-16	MW-27D MW- 27D_P0334-09	MW-27D MW- 27D_P1054-27
			Lab ID	L1408077-05	L1413296-09	N1805-08	N1805-08RE	N2307-06	P0334-08	P1054-07	P1054-10	N2307-13	N2307-14	N2307-15	N1805-09	N1805-09RE	N2307-16	P0334-09	P1054-27
			Sample Date	4/14/2014	6/17/2014	9/24/2014	9/24/2014	12/2/2014	3/18/2015	6/10/2015	6/10/2015	12/3/2014	12/3/2014	12/3/2014	9/24/2014	9/24/2014	12/3/2014	3/18/2015	6/11/2015
			Sample Depth	78 - 88 ft	78 - 88 ft	87.8 - 88.3 ft	87.8 - 88.3 ft	87.8 - 88.3 ft	87.8 - 88.3 ft	87.8 - 88.3 ft	97 - 97.5 ft	39.5 - 40 ft	49.5 - 50 ft	39.5 - 40 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft
Analyte	CAS RN	ISC																	
1,4-Dioxane	123-91-1	10		3.7	5.1	2.4	2.5 J	1.7	1.5	1.4	0.1 U	0.1 U	0.23	0.1 U	0.1 U	0.28 J	0.22	0.1 U	0.1 U

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ISC = NJDEP Interim Specific Groundwater Quality Criterion recommendation for 1,4-Dioxane.  
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East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-28D MW- 28D_N2307-07	MW-29D MW- 29D_N2307-17	MW-29D2 MW- 29D2_P1054-29	MW-29D2 MW 29D2_P1162-03	MW-30D MW-30D- 20140617	MW-30D2 MW- 30D2_P1105-03	MW-31D MW-31D- 20140414	MW-31D MW-31D- 20140617	MW-31D MW- 31D_N1805-10	MW-31D MW- 31D_N1805-10	MW-31D MW- 31D_N2307-18	MW-31D MW- 31D_P0334-10	MW-31D MW- 31D_P1054-08	MW-31S MW-31S-- 20140415	MW-31S MW-31S- 20140617	MW-32D MW-32D- 20140414
			Lab ID	N2307-07	N2307-17	P1054-29	P1162-03	L1413296-10	P1105-03	L1408077-09	L1413296-11	N1805-10	N1805-10RE	N2307-18	P0334-10	P1054-08	L1408077-14	L1413296-12	L1408077-11
			Sample Date	12/2/2014	12/3/2014	6/11/2015	7/9/2015	6/17/2014	6/25/2015	4/14/2014	6/17/2014	9/24/2014	9/24/2014	12/3/2014	3/18/2015	6/10/2015	4/15/2014	6/17/2014	4/14/2014
			Sample Depth	76.5 - 77 ft	90.5 - 91 ft	122 - 122.5 ft	122 - 122.5 ft	83 - 93 ft	122 - 122.5 ft	69.5 - 79.5 ft	69.5 - 79.5 ft	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	22 - 32 ft	22 - 32 ft	78 - 88 ft
Analyte	CAS RN	ISC																	
1,4-Dioxane	123-91-1	10		0.22	0.17	0.21	0.22	3 U	0.57	14 J	3 U	4.5	7.9 J	0.31	2.7	4.2	2.9 J	3 U	3 U

Notes:  
All results are presented in µg/l.  
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			Location ID Sample ID	MW-32D MW-32D- 20140617	MW-32D MW- 32D_N2307-19	MW-32S MW-32S- 20140414	MW-32S MW-32S- 20140617	MW-33D2 MW 33D2_P1162-04	MW-33D2 MW- 33D2_P1054-11	MW-34D2 MW- 34D2_P1054-12	MW-35D2 MW- 35D2_P1054-30
			Lab ID	L1413296-13	N2307-19	L1408077-10	L1413296-14	P1162-04	P1054-11	P1054-12	P1054-30
			Sample Date	6/17/2014	12/3/2014	4/14/2014	6/17/2014	7/9/2015	6/10/2015	6/10/2015	6/11/2015
			Sample Depth	78 - 88 ft	85.5 - 86 ft	20 - 30 ft	20 - 30 ft	126 - 126.5 ft	126 - 126.5 ft	132 - 132.5 ft	124 - 124.5 ft
Analyte	CAS RN	ISC									
1,4-Dioxane	123-91-1	10		3 U	0.3	3 U	3 U	0.22	0.1 U	0.51	0.22

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				Location ID Sample ID	MW-4 MW-4_N1805-01	MW-4 MW-4_N2307-11	MW-4 MW-4_P0334-01	MW-4 MW-4_P1054-01	MW-4 MW-4_P1054-01	MW-4 MW-4-20140414	MW-4 MW-4-20140616	MW-4D MW-4D-20120627	MW-5 MW-5-20120627	MW-9 MW-9-20140414	MW-9 MW-9-20140616	MW-9 MW-9_N1805-02	MW-9 MW-9_N2307-01	MW-9 MW-9_P0334-02	MW-9 MW-9_P1054-02
				Lab ID Sample Date Sample Depth	N1805-01 9/24/2014 28 - 28.5 ft	N2307-11 12/3/2014 28 - 28.5 ft	P0334-01 3/18/2015 28 - 28.5 ft	P1054-01 6/10/2015 28 - 28.5 ft	P1054-01RE 6/10/2015 28 - 28.5 ft	MW-4 4/14/2014 15 - 30 ft	MW-4 6/16/2014 15 - 30 ft	JB9914-4 6/27/2012	JB9914-2 6/27/2012	MW-9 4/14/2014 14 - 34 ft	MW-9 6/16/2014 14 - 34 ft	N1805-02 9/24/2014 30.8 - 31.3 ft	N2307-01 12/2/2014 30.8 - 31.3 ft	P0334-02 3/18/2015 30.8 - 31.3 ft	P1054-02 6/10/2015 30.8 - 31.3 ft
Analyte	CAS RN	Unit	GWQS																
Chloride	16887-00-6	mg/l	250		63	85	88	NR	65.3 D	NR	NR	NR	NR	NR	NR	210	142	49.2	216 D
Dissolved Oxygen	DISS_OXYGEN	mg/l	-		NR	NR	NR	NR	NR	4.47	2.71	NR	NR	1.81	1.29	NR	NR	NR	NR
Ethane	74-84-0	µg/l	-		1.2 U	1.3 U	1.3 U	5 U	NR	NR	NR	NR	NR	NR	NR	1.2 U	1.3 U	1.2 U	27
Ethene	74-85-1	µg/l	-		1.5 U	1.6 U	1.6 U	5 U	NR	NR	NR	NR	NR	NR	NR	1.5 U	1.6 U	1.5 U	5 U
HYDROGEN	1333-74-0	µg/l	-		7.6 J	2.7 U	2.7 U	6	NR	NR	NR	NR	NR	NR	NR	5.8 J	7	8 J	2.7 U
Methane	74-82-8	µg/l	-		2.7 J	1.1	0.61 U	2.2 U	NR	NR	NR	NR	NR	NR	NR	1.5 J	1.6 J	0.6 U	2.2 U
Nitrate	14797-55-8	mg/l	10		1.1	0.895	0.938 J	0.723	NR	NR	NR	NR	2.5	2.7	NR	0.18	1.72	1.93	0.66
Nitrite as N	14797-65-0	mg/l	1		NR	NR	NR	NR	NR	NR	NR	0.01 U	0.01 U	NR	NR	NR	NR	NR	NR
Nitrogen, Nitrate-Nitrite	NO3NO2N	mg/l	-		NR	NR	NR	NR	NR	NR	NR	2.5	2.7	NR	NR	NR	NR	NR	NR
OXIDATION REDUCTION POTENTIAL	ORP	mg/l	-		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
pH	PH	pH units	-		NR	NR	NR	NR	NR	4.02	3.13	NR	NR	3.19	2.1	NR	NR	NR	NR
Specific Conductance	SC	ms/cm	-		NR	NR	NR	NR	NR	539	457	NR	NR	652	493	NR	NR	NR	NR
Sulfate	14808-79-8	mg/l	250		130	168	130	NR	115 D	NR	NR	NR	76.8	NR	NR	200	224	153	434 D
Sulfide	18496-25-8	mg/l	-		0.03 U	0.03 U	0.03 U	0.03 U	NR	NR	NR	2 U	2 U	NR	NR	0.03 U	0.03 U	0.03 U	0.03 U
Temperature	TEMP	deg C	-		NR	NR	NR	NR	NR	14.67	17.39	NR	NR	17.81	19.54	NR	NR	NR	NR
Total Organic Carbon	TOC	mg/l	-		10 U	10 U	3.4 J	2.03	NR	NR	NR	NR	NR	NR	NR	10 U	10 U	10 U	2.12
Turbidity	TURB	ntu	-		NR	NR	NR	NR	NR	4.29	2.24	NR	NR	31.5	19.1	NR	NR	NR	NR

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Location ID Sample ID  Lab ID Sample Date Sample Depth				MW-9D MW-9D- 20120626 JB9796-9 6/26/2012	MW-11 MW-11- 20120627 JB9914-1 6/27/2012	MW-11D MW-11D- 20120629 JB10139-2 6/29/2012	MW-12 MW-12- 20140414 MW-12 4/14/2014 18 - 33 ft	MW-12 MW-12- 20140616 MW-12 6/16/2014 18 - 33 ft	MW-12 DUPLICATE_N 1805-13 N1805-13 9/24/2014 30 - 30.5 ft	MW-12 MW-12_N1805- 03 N1805-03 9/24/2014 30 - 30.5 ft	MW-12 MW-12_N2307- 02 N2307-02 12/2/2014 30 - 30.5 ft	MW-12 DUPLICATE_N 2307-08 N2307-08 12/2/2014 30 - 30.5 ft	MW-12 DUPLICATE_P 0334-11 P0334-11 3/18/2015 30 - 30.5 ft	MW-12 MW-12_P0334- 03 P0334-03 3/18/2015 30 - 30.5 ft	MW-12 MW-12_P1054- 26 P1054-26 6/11/2015 30 - 30.5 ft	MW-12 DUPLICATE_P 1054-28 P1054-28 6/11/2015 30 - 30.5 ft	MW-12D MW-12D- 20120626 JB9796-7 6/26/2012	MW-12D MW-12D- 20140414 MW-12D 4/14/2014 48 - 58 ft
Analyte	CAS RN	Unit	GWQS															
Chloride	16887-00-6	mg/l	250	NR	NR	NR	NR	NR	63	52	74.3	80.7	44.6	43.9	64.3 D	74.1 D	NR	NR
Dissolved Oxygen	DISS_OXYGEN	mg/l	-	NR	NR	NR	0.51	0.58	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.51
Ethane	74-84-0	µg/l	-	NR	NR	NR	NR	NR	1.2 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	5 U	NR	NR
Ethene	74-85-1	µg/l	-	NR	NR	NR	NR	NR	1.5 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	27	20	NR	NR
HYDROGEN	1333-74-0	µg/l	-	NR	NR	NR	NR	NR	9.6 J	6.4 J	2.7 UJ	6 J	2.7 U	2.7 U	2.7 U	2.7 U	NR	NR
Methane	74-82-8	µg/l	-	NR	NR	NR	NR	NR	0.62 J	1.4 J	0.93 J	0.84 J	580	450	2.2 U	2.2 U	NR	NR
Nitrate	14797-55-8	mg/l	10	0.35	4.6	0.48	NR	NR	0.13 UJ	0.13 UJ	0.213	0.228	0.669 J	0.621 J	0.041 J	0.059 J	0.29	NR
Nitrite as N	14797-65-0	mg/l	1	0.01 U	0.01 U	0.01 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nitrogen, Nitrate-Nitrite	NO3NO2N	mg/l	-	0.35	4.6	0.48	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.29	NR
OXIDATION REDUCTION POTENTIAL	ORP	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
pH	PH	pH units	-	NR	NR	NR	3.24	3.36	NR	NR	NR	NR	NR	NR	NR	NR	NR	4.75
Specific Conductance	SC	ms/cm	-	NR	NR	NR	532	434	NR	NR	NR	NR	NR	NR	NR	NR	NR	446
Sulfate	14808-79-8	mg/l	250	10 U	47.6	14.5	NR	NR	250	240	200	217	107 J	149 J	<b>295 D</b>	<b>255 D</b>	70.4	NR
Sulfide	18496-25-8	mg/l	-	2 U	2 U	2 U	NR	NR	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	NR	NR
Temperature	TEMP	deg C	-	NR	NR	NR	16.85	15.45	NR	NR	NR	NR	NR	NR	NR	NR	NR	17.05
Total Organic Carbon	TOC	mg/l	-	NR	NR	NR	NR	NR	10 U	10 U	10 U	10 U	33	31	2.04	1.93	NR	NR
Turbidity	TURB	ntu	-	NR	NR	NR	2.73	2.2	NR	NR	NR	NR	NR	NR	NR	NR	NR	3.41

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Location ID Sample ID  Lab ID Sample Date Sample Depth				MW-12D MW-12D- 20140616	MW-12D MW- 12D_N1805-04	MW-12D MW12D_N230 7-03	MW-12D MW- 12D_P0334-04	MW-12D MW- 12D_P1054-03	MW-13D MW-13D- 20120629	MW-13D MW-13D- 20140415	MW-13D MW-13D- 20140616	MW-13D MW- 13D_N1805-05	MW-13D MW- 13D_N2307-04	MW-13D MW- 13D_P0334-05	MW-13D MW- 13D_P1054-04	MW-14D MW-14D- 20120625	MW-14D MW-14D- 20140415	MW-14D MW-14D- 20140616
				MW-12D 6/16/2014 48 - 58 ft	MW-12D 9/24/2014 55.3 - 55.8 ft	MW-12D 12/2/2014 55.3 - 55.8 ft	MW-12D 3/18/2015 55.3 - 55.8 ft	MW-12D 6/10/2015 55.3 - 55.8 ft	MW-13D 6/29/2012	MW-13D 4/15/2014 57 - 67 ft	MW-13D 6/16/2014 57 - 67 ft	MW-13D 9/24/2014 63 - 63.5 ft	MW-13D 12/2/2014 63 - 63.5 ft	MW-13D 3/18/2015 63 - 63.5 ft	MW-13D 6/10/2015 63 - 63.5 ft	MW-14D 6/25/2012	MW-14D 4/15/2014 65 - 75 ft	MW-14D 6/16/2014 65 - 75 ft
Analyte	CAS RN	Unit	GWQS															
Chloride	16887-00-6	mg/l	250	NR	31	41.2	43.4	45.4	NR	NR	NR	350	354	329	294 D	NR	NR	NR
Dissolved Oxygen	DISS_OXYGEN	mg/l	-	0.23	NR	NR	NR	NR	NR	1.53	3.88	NR	NR	NR	NR	NR	1.18	3.11
Ethane	74-84-0	µg/l	-	NR	1.2 U	1.2 U	1.3 U	5 U	NR	NR	NR	1.2 U	1.6	1.3 U	14	NR	NR	NR
Ethene	74-85-1	µg/l	-	NR	1.5 U	1.5 U	1.6 U	5 U	NR	NR	NR	1.5 U	1.9	1.6 U	5 U	NR	NR	NR
HYDROGEN	1333-74-0	µg/l	-	NR	5.8 J	9	6 J	2.7 U	NR	NR	NR	6.8 J	19	2.7 U	2.7 U	NR	NR	NR
Methane	74-82-8	µg/l	-	NR	250	970	420	152	NR	NR	NR	2 J	3.6 J	0.96 J	2.2 U	NR	NR	NR
Nitrate	14797-55-8	mg/l	10	NR	1.5	1.43	0.747 J	0.815	1.2	NR	NR	0.15	0.299	0.578 J	0.642	0.11 U	NR	NR
Nitrite as N	14797-65-0	mg/l	1	NR	NR	NR	NR	NR	0.01 U	NR	NR	NR	NR	NR	NR	0.01 U	NR	NR
Nitrogen, Nitrate-Nitrite	NO3NO2N	mg/l	-	NR	NR	NR	NR	NR	1.2	NR	NR	NR	NR	NR	NR	0.1 U	NR	NR
OXIDATION REDUCTION POTENTIAL	ORP	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
pH	PH	pH units	-	5.23	NR	NR	NR	NR	NR	4.17	7.58	NR	NR	NR	NR	NR	3.74	3.39
Specific Conductance	SC	ms/cm	-	367	NR	NR	NR	NR	NR	1205	154	NR	NR	NR	NR	NR	622	527
Sulfate	14808-79-8	mg/l	250	NR	94	123	130	140 D	10 U	NR	NR	68	68.6	97.6	61.1 D	201	NR	NR
Sulfide	18496-25-8	mg/l	-	NR	0.03 U	0.06	1.9	0.03 U	2 U	NR	NR	0.03 U	0.03 U	0.03 U	0.03 U	2 U	NR	NR
Temperature	TEMP	deg C	-	16.8	NR	NR	NR	NR	NR	15.99	16.53	NR	NR	NR	NR	NR	16	16.17
Total Organic Carbon	TOC	mg/l	-	NR	3.4 J	42	25	5.67	NR	NR	NR	10 U	10 U	10 U	1.35	NR	NR	NR
Turbidity	TURB	ntu	-	4.83	NR	NR	NR	NR	NR	4.98	5.87	NR	NR	NR	NR	NR	12.2	5.04

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				9/24/2014 83.5 - 84 ft	12/2/2014 83.5 - 84 ft	3/18/2015 83.5 - 84 ft	6/10/2015 83.5 - 84 ft	4/14/2014 36 - 51 ft	6/16/2014 36 - 51 ft	9/24/2014 48.9 - 49.4 ft	12/3/2014 48.9 - 49.4 ft	3/18/2015 48.9 - 49.4 ft	6/10/2015 48.9 - 49.4 ft	6/27/2012	4/14/2014 78 - 88 ft	6/17/2014 78 - 88 ft	9/24/2014 87.8 - 88.3 ft	12/2/2014 87.8 - 88.3 ft
Analyte	CAS RN	Unit	GWQS															
Chloride	16887-00-6	mg/l	250	52	67.4	59.9	65.1 D	NR	NR	220	<b>336</b>	172	203 D	NR	NR	NR	86	95.5
Dissolved Oxygen	DISS_OXYGEN	mg/l	-	NR	NR	NR	NR	1.38	0.36	NR	NR	NR	NR	NR	1.47	2.43	NR	NR
Ethane	74-84-0	µg/l	-	1.2 U	1.2 U	1.2 U	5 U	NR	NR	1.2 U	1.2 U	1.2 U	5 U	NR	NR	NR	1.2 U	1.3 U
Ethene	74-85-1	µg/l	-	1.5 U	1.5 U	1.5 U	5 U	NR	NR	1.5 U	1.5 U	1.5 U	5 U	NR	NR	NR	1.5 U	1.6 U
HYDROGEN	1333-74-0	µg/l	-	10.1 J	9	2.7 U	2.7 U	NR	NR	5.9 J	3.8	4 J	2.7 U	NR	NR	NR	9.2 J	2.7 U
Methane	74-82-8	µg/l	-	2.2 J	1.4 J	0.66 J	2.2 U	NR	NR	6.5 J	28	18	2.2 U	NR	NR	NR	3.1 J	1.7 J
Nitrate	14797-55-8	mg/l	10	0.13 UJ	0.1 U	0.087 U	0.1 U	NR	NR	0.13 UJ	0.1 U	0.1 U	0.102	1.3	NR	NR	2.6	2.75
Nitrite as N	14797-65-0	mg/l	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.01 U	NR	NR	NR	NR
Nitrogen, Nitrate-Nitrite	NO3NO2N	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	1.3	NR	NR	NR	NR
OXIDATION REDUCTION POTENTIAL	ORP	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
pH	PH	pH units	-	NR	NR	NR	NR	3.98	2.29	NR	NR	NR	NR	NR	4	3.94	NR	NR
Specific Conductance	SC	ms/cm	-	NR	NR	NR	NR	1843	833	NR	NR	NR	NR	NR	420	371	NR	NR
Sulfate	14808-79-8	mg/l	250	210	190	200	193 D	NR	NR	<b>290</b>	125	<b>388</b>	<b>323 D</b>	66.1	NR	NR	39	59.4
Sulfide	18496-25-8	mg/l	-	0.03 U	0.03 U	0.03 U	0.03 U	NR	NR	0.03 U	0.03 U	0.03 U	0.03 U	2 U	NR	NR	0.03 U	0.03 U
Temperature	TEMP	deg C	-	NR	NR	NR	NR	16.53	20.28	NR	NR	NR	NR	NR	15.08	14.38	NR	NR
Total Organic Carbon	TOC	mg/l	-	10 U	10 U	10 U	1.55	NR	NR	10 U	10 U	10 U	1.43	NR	NR	NR	10 U	10 U
Turbidity	TURB	ntu	-	NR	NR	NR	NR	4.76	12.1	NR	NR	NR	NR	NR	2.13	1.39	NR	NR

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East Windsor, New Jersey  
NJDEP PI #158269

Location ID Sample ID  Lab ID Sample Date Sample Depth				MW-22D MW- 22D_P0334-08	MW-22D MW- 22D_P1054-07	MW-22D2 MW- 22D2_P1054-10	MW-24D MW-24D- 20120626	MW-24D MW- 24D_N2307-13	MW-25D MW- 25D_N2307-14	MW-26D MW- 26D_N2307-15	MW-27D MW-27D- 20120626	MW-27D MW-27D- 20140414	MW-27D MW-27D- 20140616	MW-27D MW- 27D_N1805-09	MW-27D MW- 27D_N2307-16	MW-27D MW- 27D_P0334-09	MW-27D MW- 27D_P1054-27	MW-28D MW- 28D_N2307-07
				87.8 - 88.3 ft	87.8 - 88.3 ft	97 - 97.5 ft	6/26/2012	12/3/2014	12/3/2014	12/3/2014	6/26/2012	4/14/2014	6/16/2014	9/24/2014	12/3/2014	3/18/2015	6/11/2015	12/2/2014
				87.8 - 88.3 ft	87.8 - 88.3 ft	97 - 97.5 ft	6/26/2012	39.5 - 40 ft	49.5 - 50 ft	39.5 - 40 ft		51 - 61 ft	51 - 61 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	76.5 - 77 ft
Analyte	CAS RN	Unit	GWQS															
Chloride	16887-00-6	mg/l	250	91.3	88.6 D	53.9 D	NR	8.75	32.9	10.1	NR	NR	NR	20	26.5	13.2	22.4	194
Dissolved Oxygen	DISS_OXYGEN	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	0.83	0.41	NR	NR	NR	NR	NR
Ethane	74-84-0	µg/l	-	1.2 U	5 U	36	NR	1.2 U	1.3 U	1.3 U	NR	NR	NR	1.2 U	1.2 U	1.3 U	5 U	1.2 U
Ethene	74-85-1	µg/l	-	1.5 U	5 U	18	NR	1.5 U	1.6 U	1.6 U	NR	NR	NR	1.5 U	1.5 U	1.6 U	5 U	1.5 U
HYDROGEN	1333-74-0	µg/l	-	8 J	2.7 U	2.7 U	NR	2.7 U	2.7 U	2.7 U	NR	NR	NR	9.4 J	2.7 U	2.7 U	2.7 U	6
Methane	74-82-8	µg/l	-	0.6 U	2.2 U	9	NR	0.95	13	0.88	NR	NR	NR	7.5	5	2.1 J	2.2 U	37
Nitrate	14797-55-8	mg/l	10	2.58	2.12	0.024 J	2.4	3.41	0.1 U	0.125	0.11 U	NR	NR	0.13 UJ	0.1 U	0.027 UJ	0.009 J	0.1 U
Nitrite as N	14797-65-0	mg/l	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nitrogen, Nitrate-Nitrite	NO3NO2N	mg/l	-	NR	NR	NR	2.4	NR	NR	NR	0.1 U	NR	NR	NR	NR	NR	NR	NR
OXIDATION REDUCTION POTENTIAL	ORP	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
pH	PH	pH units	-	NR	NR	NR	NR	NR	NR	NR	NR	4.47	3.42	NR	NR	NR	NR	NR
Specific Conductance	SC	ms/cm	-	NR	NR	NR	NR	NR	NR	NR	NR	296	135	NR	NR	NR	NR	NR
Sulfate	14808-79-8	mg/l	250	56.1	43.3	40.6	15.4	7.25	27.1	11.3	81.6	NR	NR	54	42.1	57.2	57.8 D	69.6
Sulfide	18496-25-8	mg/l	-	0.03 U	0.03 U	0.03 U	NR	0.03 U	0.03 U	0.03 U	NR	NR	NR	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Temperature	TEMP	deg C	-	NR	NR	NR	NR	NR	NR	NR	NR	15.18	15.98	NR	NR	NR	NR	NR
Total Organic Carbon	TOC	mg/l	-	10 U	0.855 J	94.4	NR	10 U	10 U	10 U	NR	NR	NR	10 U	10 U	2.1 J	1.03	10 U
Turbidity	TURB	ntu	-	NR	NR	NR	NR	NR	NR	NR	NR	12.9	28.9	NR	NR	NR	NR	NR

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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

Location ID Sample ID  Lab ID Sample Date Sample Depth				MW-29D MW-29D- 20120626 JB9796-5 6/26/2012	MW-29D MW- 29D_N2307-17 N2307-17 12/3/2014 90.5 - 91 ft	MW-29D2 MW 29D2_P1162-03 P1162-03 7/9/2015 122 - 122.5 ft	MW-29D2 MW- 29D2_P1054-29 P1054-29 6/11/2015 122 - 122.5 ft	MW-30D MW-30D- 20140617 MW-30D 83 - 93 ft	MW-30D2 MW- 30D2_P1105-03 P1105-03 6/25/2015 122 - 122.5 ft	MW-31D MW-31D- 20140414 MW-31D 69.5 - 79.5 ft	MW-31D MW-31D- 20140617 MW-31D 69.5 - 79.5 ft	MW-31D MW- 31D_N1805-10 N1805-10 9/24/2014 76.5 - 77 ft	MW-31D MW- 31D_N1805-10 N1805-10DL 9/24/2014 76.5 - 77 ft	MW-31D MW- 31D_N2307-18 N2307-18 12/3/2014 76.5 - 77 ft	MW-31D MW- 31D_P0334-10 P0334-10 3/18/2015 76.5 - 77 ft	MW-31D MW- 31D_P1054-08 P1054-08 6/10/2015 76.5 - 77 ft	MW-31S MW-31S-- 20140415 MW-31S 4/15/2014 22 - 32 ft	MW-31S MW-31S- 20140617 MW-31S 6/17/2014 22 - 32 ft
Analyte	CAS RN	Unit	GWQS															
Chloride	16887-00-6	mg/l	250	NR	88.8	219 D	185 D	NR	54.2 D	NR	NR	37	NR	19.2	27.3	37.4	NR	NR
Dissolved Oxygen	DISS_OXYGEN	mg/l	-	NR	NR	NR	NR	1.3	NR	0.45	0.23	NR	NR	NR	NR	NR	0.58	0.53
Ethane	74-84-0	µg/l	-	NR	1.3 U	5 U	5 U	NR	5 U	NR	NR	1.2 U	12 U	1.3 U	1.2 U	21	NR	NR
Ethene	74-85-1	µg/l	-	NR	1.6 U	5 U	5 U	NR	5 U	NR	NR	1.5 U	15 U	1.6 U	1.5 U	5 U	NR	NR
HYDROGEN	1333-74-0	µg/l	-	NR	2.7 U	23	63	NR	55	NR	NR	9.2 J	NR	2.7 U	2.7 U	2.7 U	NR	NR
Methane	74-82-8	µg/l	-	NR	1.3	2.2 U	8	NR	2.2 U	NR	NR	4800 E	6000	110	1000	261	NR	NR
Nitrate	14797-55-8	mg/l	10	0.11 U	0.1 U	0.1 U	0.1 U	NR	0.024 J	NR	NR	0.13 UJ	NR	0.1 U	0.053 U	0.02 J	NR	NR
Nitrite as N	14797-65-0	mg/l	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nitrogen, Nitrate-Nitrite	NO3NO2N	mg/l	-	0.1 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
OXIDATION REDUCTION POTENTIAL	ORP	mg/l	-	NR	NR	NR	NR	120.9	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
pH	PH	pH units	-	NR	NR	NR	NR	NR	NR	7.12	6.88	NR	NR	NR	NR	NR	4.3	4.23
Specific Conductance	SC	ms/cm	-	NR	NR	NR	NR	NR	NR	687	362	NR	NR	NR	NR	NR	2924	2651
Sulfate	14808-79-8	mg/l	250	67	43.2	98.2 D	187 D	NR	64.1 D	NR	NR	63	NR	23.9	35	45.2	NR	NR
Sulfide	18496-25-8	mg/l	-	NR	0.03 U	0.03 U	0.03 U	NR	0.03 U	NR	NR	0.03 U	NR	0.15 U	0.74	0.03 U	NR	NR
Temperature	TEMP	deg C	-	NR	NR	NR	NR	NR	NR	17.16	17.68	NR	NR	NR	NR	NR	16.71	16.54
Total Organic Carbon	TOC	mg/l	-	NR	10 U	14.3	36.9	NR	19.2	NR	NR	24	NR	34	17	24.9	NR	NR
Turbidity	TURB	ntu	-	NR	NR	NR	NR	NR	NR	41.5	6.08	NR	NR	NR	NR	NR	14.8	5.32

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East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-32D MW-32D- 20140414	MW-32D MW-32D- 20140617	MW-32D MW- 32D_N2307-19	MW-32S MW-32S- 20140414	MW-32S MW-32S- 20140617	MW-33D2 MW 33D2_P1162-04	MW-33D2 MW- MW- 33D2_P1054-11	MW-34D2 MW- MW- 34D2_P1054-12	MW-35D2 MW- MW- 35D2_P1054-30
			Lab ID	MW-32D	MW-32D	N2307-19	MW-32S	MW-32S	P1162-04	P1054-11	P1054-12	P1054-30
			Sample Date	4/14/2014	6/17/2014	12/3/2014	4/14/2014	6/17/2014	7/9/2015	6/10/2015	6/10/2015	6/11/2015
			Sample Depth	78 - 88 ft	78 - 88 ft	85.5 - 86 ft	20 - 30 ft	20 - 30 ft	126 - 126.5 ft	126 - 126.5 ft	132 - 132.5 ft	124 - 124.5 ft
Analyte	CAS RN	Unit	GWQS									
Chloride	16887-00-6	mg/l	250	NR	NR	26.6 J	NR	NR	24.8	20	40.5	27.6
Dissolved Oxygen	DISS_OXYGEN	mg/l	-	0.41	0.28	NR	0.33	1.3	NR	NR	NR	NR
Ethane	74-84-0	µg/l	-	NR	NR	1.2 U	NR	NR	5 U	48	5 U	5 U
Ethene	74-85-1	µg/l	-	NR	NR	1.5 U	NR	NR	5 U	36	5 U	20
HYDROGEN	1333-74-0	µg/l	-	NR	NR	2.7 U	NR	NR	33	42	7	2.7 U
Methane	74-82-8	µg/l	-	NR	NR	1.5	NR	NR	2.2 U	2.2 U	2.2 U	2.2 U
Nitrate	14797-55-8	mg/l	10	NR	NR	0.1 U	NR	NR	0.1 U	0.1 U	0.1 U	0.01 J
Nitrite as N	14797-65-0	mg/l	1	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nitrogen, Nitrate-Nitrite	NO3NO2N	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	NR
OXIDATION REDUCTION POTENTIAL	ORP	mg/l	-	NR	NR	NR	NR	NR	NR	NR	NR	NR
pH	PH	pH units	-	5.77	6.2	NR	5.66	4.83	NR	NR	NR	NR
Specific Conductance	SC	ms/cm	-	486	259	NR	359	161	NR	NR	NR	NR
Sulfate	14808-79-8	mg/l	250	NR	NR	85.9	NR	NR	27.5	24.6	107 D	27.7
Sulfide	18496-25-8	mg/l	-	NR	NR	0.03 U	NR	NR	0.03 U	0.03 U	0.03 U	0.03 U
Temperature	TEMP	deg C	-	14.62	16.31	NR	16.19	14.19	NR	NR	NR	NR
Total Organic Carbon	TOC	mg/l	-	NR	NR	3.1 J	NR	NR	10.6	22.2	37.3	47.3
Turbidity	TURB	ntu	-	44.8	10.8	NR	999 >	NR	NR	NR	NR	NR

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East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-4 MW-4_N1805-01	MW-4 MW-4-F_N1805-14	MW-4 MW-4_N2307-11	MW-4 MW-4F_N2307-31	MW-4 MW-4_P0334-01	MW-4 MW-4-F_P0334-14	MW-4 MW-4_P1054-01	MW-4 MW-4-F_P1054-14	MW-4D MW-4D-20120627	MW-5 MW-5-20120627	MW-9 MW-9_N1805-02	MW-9 MW-9-F_N1805-15	MW-9 MW-9_N2307-01	MW-9 MW-9F_N2307-22	MW-9 MW-9_P0334-02	MW-9 MW-9-F_P0334-15
			Lab ID Sample Date Sample Depth	N1805-01 9/24/2014 28 - 28.5 ft	N1805-14 9/24/2014 28 - 28.5 ft	N2307-11 12/3/2014 28 - 28.5 ft	N2307-31 12/3/2014 28 - 28.5 ft	P0334-01 3/18/2015 28 - 28.5 ft	P0334-14 3/18/2015 28 - 28.5 ft	P1054-01 6/10/2015 28 - 28.5 ft	P1054-14 6/10/2015 28 - 28.5 ft	JB9914-4F 6/27/2012	JB9914-2F 6/27/2012	N1805-02 9/24/2014 30.8 - 31.3 ft	N1805-15 9/24/2014 30.8 - 31.3 ft	N2307-01 12/2/2014 30.8 - 31.3 ft	N2307-22 12/2/2014 30.8 - 31.3 ft	P0334-02 3/18/2015 30.8 - 31.3 ft	P0334-15 3/18/2015 30.8 - 31.3 ft
Analyte	CAS RN	GWQS																	
ARSENIC	7440-38-2	3	2 U	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 U	2 U	NR	NR	5.3	2 U	1.1 J	2 UJ	0.8 J	2 UJ	
Cadmium	7440-43-9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Iron	7439-89-6	300	200 U	200 U	200 U	236 J	77.4 J	50.4 J	39.1 B	22.9 B	100 U	100 U	16100	11600	2190	1130 J	1300	120 J	
Manganese	7439-96-5	50	260	253	319	307 J	368	402	305	303	NR	NR	111	110	187	178 J	160	159	

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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID	MW-9	MW-9	MW-9D	MW-11	MW-11D	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	
			Sample ID	MW-9_P1054-02	MW-9-F_P1054-15	MW-9D-20120626	MW-11-20120627	MW-11D-20120629	MW-12_N1805-03	DUPLICATE_N1805-13	MW-12-F_N1805-16	DUPLICATE-F_N1805-25	MW-12_N2307-02	DUPLICATE_N2307-08	MW-12F_N2307-23	DUPLICATE-F_N2307-29	MW-12_P0334-03	DUPLICATE_P0334-11	MW-12-F_P0334-16
			Lab ID	P1054-02	P1054-15	JB9796-9F	JB9914-1F	JB10139-2F	N1805-03	N1805-13	N1805-16	N1805-25	N2307-02	N2307-08	N2307-23	N2307-29	P0334-03	P0334-11	P0334-16
			Sample Date	6/10/2015	6/10/2015	6/26/2012	6/27/2012	6/29/2012	9/24/2014	9/24/2014	9/24/2014	9/24/2014	12/2/2014	12/2/2014	12/2/2014	12/2/2014	3/18/2015	3/18/2015	3/18/2015
			Sample Depth	30.8 - 31.3 ft	30.8 - 31.3 ft				30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft
Analyte	CAS RN	GWQS																	
ARSENIC	7440-38-2	3	0.78 B	2 U	NR	NR	NR	10 U	10 U	10 UJ	10 U	2 UJ	2 UJ	2 UJ	2 UJ	0.31 J	0.31 J	2 UJ	
Cadmium	7440-43-9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
Iron	7439-89-6	300	33200	32600	100 U	100 U	100 U	2570	2430	2460	2910	4640	4350	4770	4200	8310	9000	7570	
Manganese	7439-96-5	50	187	196	NR	NR	NR	89.1	84.6	88.2	91.1	130	129	131	124	239	241	235	

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TABLE 6  
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Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-13D	MW-13D	
			Sample ID	DUPLICATE-F_P0334-24	MW-12_P1054-26	DUPLICATE_P1054-28	MW-12-F_P1054-33	DUPLICATE-F_P1054-35	MW-12D-20120626	MW-12D_N1805-04	MW-12D-F_N1805-17	MW12D_N2307-03	MW-12DF_N2307-24	MW-12D_P0334-04	MW-12D-F_P0334-17	MW-12D_P1054-03	MW-12D-F_P1054-16	MW-13D-20120629	MW-13D_N1805-05
			Lab ID	P0334-24	P1054-26	P1054-28	P1054-33	P1054-35	JB9796-7F	N1805-04	N1805-17	N2307-03	N2307-24	P0334-04	P0334-17	P1054-03	P1054-16	JB10139-1F	N1805-05
			Sample Date	3/18/2015	6/11/2015	6/11/2015	6/11/2015	6/11/2015	6/26/2012	9/24/2014	9/24/2014	12/2/2014	12/2/2014	3/18/2015	3/18/2015	6/10/2015	6/10/2015	6/29/2012	9/24/2014
			Sample Depth	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft	30 - 30.5 ft		55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft	55.3 - 55.8 ft		63 - 63.5 ft
Analyte	CAS RN	GWQS																	
ARSENIC	7440-38-2	3	2 UJ	2 U	10 U	2 U	2 U	NR	2 U	2 U	0.36 J	2 UJ	0.38 J	2 UJ	2 U	2 U	NR	2 U	
Cadmium	7440-43-9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
Iron	7439-89-6	300	7690	2730	3330	2350	2300	1320	1960	2170	6220	4960	5100	4860	2630	2830	100 U	404	
Manganese	7439-96-5	50	242	105	130	96	95.3	NR	200	209	212	202	230	222	246	247	NR	102	

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East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-13D	MW-13D	MW-13D MW- 13DF_N2307- 25	MW-13D MW- 13D_P0334-05	MW-13D MW-13D- F_P0334-18	MW-13D MW- 13D_P1054-04	MW-13D MW-13D- F_P1054-17	MW-14D MW-14D- 20120625	MW-14D MW- 14D_N1805-06	MW-14D MW-14D- F_N1805-19	MW-14D MW- 14D_N2307-05	MW-14D MW- 14DF_N2307- 26	MW-14D MW- 14D_P0334-06	MW-14D MW-14D- F_P0334-19	MW-14D MW- 14D_P1054-05	MW-14D MW-14D- F_P1054-18
			Lab ID Sample Date Sample Depth	N1805-18 9/24/2014 63 - 63.5 ft	N2307-04 12/2/2014 63 - 63.5 ft	N2307-25 12/2/2014 63 - 63.5 ft	P0334-05 3/18/2015 63 - 63.5 ft	P0334-18 3/18/2015 63 - 63.5 ft	P1054-04 6/10/2015 63 - 63.5 ft	P1054-17 6/10/2015 63 - 63.5 ft	JB9796-2F 6/25/2012 83.5 - 84 ft	N1805-06 9/24/2014 83.5 - 84 ft	N1805-19 9/24/2014 83.5 - 84 ft	N2307-05 12/2/2014 83.5 - 84 ft	N2307-26 12/2/2014 83.5 - 84 ft	P0334-06 3/18/2015 83.5 - 84 ft	P0334-19 3/18/2015 83.5 - 84 ft	P1054-05 6/10/2015 83.5 - 84 ft	P1054-18 6/10/2015 83.5 - 84 ft
Analyte	CAS RN	GWQS																	
ARSENIC	7440-38-2	3	2 U	2 UJ	2 UJ	2 UJ	2 UJ	2 U	2 U	NR	2 U	2 U	0.87 J	2 U	1.2 J	<b>10 UJ</b>	1.7 B	1.3 B	
Cadmium	7440-43-9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
Iron	7439-89-6	300	235	<b>654</b>	<b>489</b>	163 J	89.9 J	173 B	139 B	<b>8160</b>	<b>13000</b>	<b>12300</b>	<b>12500</b>	<b>10700</b>	<b>13300</b>	106 U	<b>14300</b>	<b>13900</b>	
Manganese	7439-96-5	50	<b>96.9</b>	<b>133</b>	<b>126</b>	<b>121</b>	<b>121</b>	<b>122</b>	<b>121</b>	NR	<b>109</b>	<b>98.1</b>	<b>121</b>	<b>116</b>	<b>115</b>	10 UJ	<b>119</b>	<b>119</b>	

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.



TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D	MW-18D	MW-20D	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D	MW-22D
				MW- 18D_N1805-07	MW-18D- F_N1805-20	MW- 18D_N2307-12	MW- 18DF_N2307- 32	MW- 18D_P0334-07	MW-18D- F_P0334-20	MW- 18D_P1054-06	MW-18D- F_P1054-19	MW-20D- 20120627	MW- 22D_N1805-08	MW-22D- F_N1805-21	MW- 22D_N2307-06	MW- 22DF_N2307- 27	MW- 22D_P0334-08	MW-22D- F_P0334-21
			Lab ID	N1805-07	N1805-20	N2307-12	N2307-32	P0334-07	P0334-20	P1054-06	P1054-19	JB9914-5F	N1805-08	N1805-21	N2307-06	N2307-27	P0334-08	P0334-21
			Sample Date	9/24/2014	9/24/2014	12/3/2014	12/3/2014	3/18/2015	3/18/2015	6/10/2015	6/10/2015	6/27/2012	9/24/2014	9/24/2014	12/2/2014	12/2/2014	3/18/2015	3/18/2015
			Sample Depth	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft	48.9 - 49.4 ft		87.8 - 88.3 ft	87.8 - 88.3 ft	87.8 - 88.3 ft	87.8 - 88.3 ft	87.8 - 88.3 ft	87.8 - 88.3 ft
Analyte	CAS RN	GWQS																
ARSENIC	7440-38-2	3	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	10 UJ	2 U	2 U	NR	2 U	2 U	0.24 J	2 UJ	2 UJ	2 UJ	2 U
Cadmium	7440-43-9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Iron	7439-89-6	300	1340	791	9160	8760 J	10700	10600	1820	1350	100 U	200 U	212	478	383	224	42.6 J	281
Manganese	7439-96-5	50	234	225	243	231 J	311	337	347	342	NR	89.3	83.9	94	95.2	89	86.2	96.6

**Notes:**  
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CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID	MW-22D	MW-22D2	MW-22D2	MW-23D	MW-24D	MW-24D	MW-24D	MW-25D	MW-25D	MW-26D	MW-26D	MW-27D	MW-27D	MW-27D	MW-27D	MW-27D	
			Sample ID	MW-22D-F_P1054-20	MW-22D2_P1054-10	MW-22D2-F_P1054-23	MW-23-20100218	MW-24D-20120626	MW-24D_N2307-13	MW-24DF_N2307-33	MW-25D_N2307-14	MW-25DF_N2307-34	MW-26D_N2307-15	MW-26DF_N2307-35	MW-27D-20120626	MW-27D_N1805-09	MW-27D-F_N1805-22	MW-27D_N2307-16	MW-27DF_N2307-36	
			Lab ID	P1054-20	P1054-10	P1054-23	JA40070-1	JB9796-4F	N2307-13	N2307-33	N2307-14	N2307-34	N2307-15	N2307-35	JB9796-6F	N1805-09	N1805-22	N2307-16	N2307-36	
			Sample Date	6/10/2015	6/10/2015	6/10/2015	2/18/2010	6/26/2012	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	12/3/2014	6/26/2012	9/24/2014	9/24/2014	12/3/2014	12/3/2014
			Sample Depth	87.8 - 88.3 ft	97 - 97.5 ft	97 - 97.5 ft			39.5 - 40 ft	39.5 - 40 ft	49.5 - 50 ft	49.5 - 50 ft	39.5 - 40 ft	39.5 - 40 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	61.8 - 62.3 ft	
Analyte	CAS RN	GWQS																		
ARSENIC	7440-38-2	3	2 U	1.4 B	2 U	NR	NR	0.36 J	2 UJ	0.73 J	2 UJ	1.9 J	2 UJ	NR	2 U	2 U	2 UJ	2 UJ		
Cadmium	7440-43-9	4	NR	NR	NR	3 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		
Iron	7439-89-6	300	87.1 B	62600	32400	NR	100 U	1040	210 J	3440	1420 J	5620	200 UJ	242	2710	2840	5410	3640 J		
Manganese	7439-96-5	50	94.3	665	668	NR	NR	44.1	39.2 J	39.1	42 J	91.8	6.8 J	NR	35.1	30.8	40.7	38.3 J		

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-27D	MW-27D	MW-27D	MW-27D	MW-28D	MW-28D	MW-29D	MW-29D	MW-29D	MW-29D2	MW-29D2	MW-29D2	MW-29D2	MW-30D2	MW-30D2	MW-31D
				MW-27D_P0334-09	MW-27D-F_P0334-22	MW-27D_P1054-27	MW-27D-F_P1054-34	MW-28D_N2307-07	MW-28D_MW-28DF_N2307-28	MW-29D-20120626	MW-29D_N2307-17	MW-29D_MW-29DF_N2307-37	MW-29D2_P1054-29	MW-29D2-F_P1054-36	MW29D2_P1162-03	MW29D2-F_P1162-06	MW-30D2_P1105-03	MW-30D2-F_P1105-05	MW-31D_N1805-10
			Lab ID Sample Date Sample Depth	P0334-09 3/18/2015 61.8 - 62.3 ft	P0334-22 3/18/2015 61.8 - 62.3 ft	P1054-27 6/11/2015 61.8 - 62.3 ft	P1054-34 6/11/2015 61.8 - 62.3 ft	N2307-07 12/2/2014 76.5 - 77 ft	N2307-28 12/2/2014 76.5 - 77 ft	JB9796-5F 6/26/2012 90.5 - 91 ft	N2307-17 12/3/2014 90.5 - 91 ft	N2307-37 12/3/2014 90.5 - 91 ft	P1054-29 6/11/2015 122 - 122.5 ft	P1054-36 6/11/2015 122 - 122.5 ft	P1162-03 7/9/2015 122 - 122.5 ft	P1162-06 7/9/2015 122 - 122.5 ft	P1105-03 6/25/2015 122 - 122.5 ft	P1105-05 6/25/2015 122 - 122.5 ft	N1805-10 9/24/2014 76.5 - 77 ft
Analyte	CAS RN	GWQS																	
ARSENIC	7440-38-2	3	2 UJ	2 UJ	2 U	2 U	0.48 J	2 U	NR	0.75 J	2 UJ	1.2 B	2 U	0.26 J	0.39 J	0.43 B	0.78 B	4.4	
Cadmium	7440-43-9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Iron	7439-89-6	300	2420	1770	2850	1320	10900	9970	1480	6820	3640 J	15500	200 U	12000	210	36400	2820	5380	
Manganese	7439-96-5	50	29.6	29.4	36.4	35.8	83.1	80.5	NR	277	251 J	235	2 U	170	2.9	549	512	150	

**Notes:**  
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CAS-RN = Chemical Abstract Service Registry Number.  
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A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Location ID Sample ID	MW-31D	MW-31D	MW-31D	MW-31D	MW-31D	MW-31D	MW-31D	MW-32D	MW-32D	Hartz	MW-33D2	MW-33D2	MW-33D2	MW-34D2	MW-34D2	MW-35D2
				MW-31D- F_N1805-23	MW- 31D_N2307-18	MW- 31DF_N2307- 38	MW- 31D_P0334-10	MW-31D- F_P0334-23	MW- 31D_P1054-08	MW-31D- F_P1054-21	MW- 32D_N2307-19	MW- 32DF_N2307- 39	MW- 33D2_P1054-11	MW-33D2- F_P1054-24	MW 33D2_P1162-04	MW 33D2- F_P1162-07	MW- 34D2_P1054-12	MW-34D2- F_P1054-25	MW- 35D2_P1054-30
			Lab ID	N1805-23	N2307-18	N2307-38	P0334-10	P0334-23	P1054-08	P1054-21	N2307-19	N2307-39	P1054-11	P1054-24	P1162-04	P1162-07	P1054-12	P1054-25	P1054-30
			Sample Date	9/24/2014	12/3/2014	12/3/2014	3/18/2015	3/18/2015	6/10/2015	6/10/2015	12/3/2014	12/3/2014	6/10/2015	6/10/2015	7/9/2015	7/9/2015	6/10/2015	6/10/2015	6/11/2015
			Sample Depth	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	76.5 - 77 ft	85.5 - 86 ft	85.5 - 86 ft	126 - 126.5 ft	126 - 126.5 ft	126 - 126.5 ft	126 - 126.5 ft	132 - 132.5 ft	132 - 132.5 ft	124 - 124.5 ft
Analyte	CAS RN	GWQS																	
ARSENIC	7440-38-2	3	3.6	4.2	3.8 J	2.3	1.9 J	2.6	2 B	2.7	2 U	0.45 B	0.35 B	0.43 J	2 U	0.39 B	0.31 B	0.89 B	
Cadmium	7440-43-9	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Iron	7439-89-6	300	4240	1530	611 J	4390	3470	5980	3880	7690	3240	460	200 U	1300	180 J	31 B	200 U	38900	
Manganese	7439-96-5	50	143	152	51.3 J	256	254	228	239	197	192	12.4	1.1 B	77	4	2 U	2 U	438	

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
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J - Indicates that the value was detected and is estimated.  
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TABLE 6  
Comparison of 2010 - 2015 Groundwater Analytical Results to GWQS  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

		Location ID	MW-35D2
		Sample ID	MW-35D2-F_P1054-37
		Lab ID	P1054-37
		Sample Date	6/11/2015
		Sample Depth	124 - 124.5 ft
Analyte	CAS RN	GWQS	
ARSENIC	7440-38-2	3	0.52 B
Cadmium	7440-43-9	4	NR
Iron	7439-89-6	300	37200
Manganese	7439-96-5	50	426

**Notes:**  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
A Lab ID with letters 'DL' indicate a diluted analysis value; letters 'RE' indicate a reanalysis.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
B - Indicates a “trace” concentration below the reporting limit and equal to or above the detection limit.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.



**Table 7**  
**Summary of Horizontal Hydraulic Gradients**  
**Former Lockheed Martin Facility**  
**East Windsor, NJ**  
**NJDEP PI #158269**

Area of Site	Flow Direction	Upgradient Well and GW Elevation	Downgradient Well and GW Elevation	Distance Between Wells (ft)	Groundwater Elevation Difference (ft)	Gradient (ft/ft)	Average Gradient (ft/ft)
Shallow Zone							
NW	ESE	MW-16	MW-17	600	12.42	0.021	0.009
		79.27	66.85				
Central	NE	MW-11	MW-6	1215	0.69	0.001	
		67.08	66.39				
SE	N	MW-31S	MW-6	1200	5.74	0.005	
		72.13	66.39				
Intermediate Zone							
NW	SE	MW-16D	OW-4D	1433	0.86	0.001	0.001
		67.39	66.53				
SE	SE	MW-13D	MW-32D	1230	1.02	0.001	
		66.56	65.54				
Deep Zone							
S	SE	MW-4D2	MW-22D2	1560	3.22	0.002	0.002
		68.49	65.27				

Note: All elevations are in ft amsl.

Water levels are from the June 8, 2015 gauging round.



**Table 8**  
**Summary of Vertical Hydraulic Gradients**  
**Former Lockheed Martin Facility**  
**East Windsor, NJ**  
**NJDEP PI #158269**

Location	Well ID	Screen Interval (ft bgs)	Average Depth to Water (ft bgs)	Screen Midpoint* (ft bgs)	Distance Between Midpoints (ft)	Groundwater Elevations		Vertical Gradients	
						Elevation (ft AMSL)	Difference (ft)	Per Pair (ft/ft)	Average (ft/ft)
						8-Jun-15		8-Jun-15	
Shallow to Intermediate									
MW-4	MW-4	15-30	23.48	26.74	28.26	71.55	-5.10	-0.180	-0.094
	MW-4D	50-60	-	55		66.45			
MW-6	MW-6	17.5-32.5	20.11	26.30	28.70	66.37	-0.03	-0.001	
	MW-6D	50-60	-	55		66.34			
MW-12	MW-12	18.5-33	24.74	28.87	24.63	66.5	-0.03	-0.001	
	MW-12D	49-58	-	53.5		66.47			
MW-13	MW-13	10-32	20.86	26.43	35.32	67.28	-0.72	-0.020	
	MW-13D	56.5-67	-	61.75		66.56			
MW-14	MW-14	22.5-38	31.47	34.73	44.27	66.22	-0.04	-0.001	
	MW-14D	74-84	-	79		66.18			
MW-16	MW-16	20-35	20.86	27.93	32.57	79.27	-11.88	-0.365	
	MW-16D	53-68	-	60.5		67.39			
MW-17	MW-17	20-33	25.99	29.49	29.01	66.85	-0.05	-0.002	
	MW-17D	51-66	-	58.5		66.8			
MW-18	MW-18	9-24	9.55	16.77	26.73	75.16	-8.54	-0.320	
	MW-18D	36-51	-	43.5		66.62			
MW-20	MW-20	13-28	19.01	23.50	21.50	67.05	-0.57	-0.027	
	MW-20D	40-50	-	45		66.48			
MW-21	MW-21	18-33	20.86	26.93	33.07	66.5	0.02	0.001	
	MW-21D	55-65	-	60		66.52			
MW-31	MW-31S	22-32	24.92	28.46	45.04	72.13	-6.25	-0.139	
	MW-31D	68.5-78.5	-	73.5		65.88			
MW-32	MW-32S	20-30	22.61	26.31	56.70	69.63	-4.09	-0.072	
	MW-32D	78-88	-	83		65.54			
Intermediate to Deep									
MW-4	MW-4D	50-60	-	55	11.5	66.45	2.04	0.177	0.018
	MW-4D2	64.5-68.5	-	66.5		68.49			
MW-6	MW-6D	50-60	-	55	27	66.34	-0.18	-0.007	
	MW-6D2	77-87	-	82		66.16			
MW-22	MW-22D	78-88	-	73	24.5	67.35	-2.08	-0.085	
	MW-22D2	95-100	-	97.5		65.27			
MW-29	MW-29D	83-93	-	88	34.5	65.98	0.24	0.007	
	MW-29D2	120-125	-	122.5		66.22			
MW-30	MW-30D	83-93	-	88	34.5	65.97	-0.02	-0.001	
	MW-30D2	120-125	-	122.5		65.95			

Notes: bgs - below ground surface  
ft - feet  
NAVD88 - North American Vertical Datum of 1988  
Negative numbers indicate downward vertical gradients.  
\* - For water tables wells (A), screen midpoint has been replaced by well water column midpoint.  
Water levels from the June 8, 2015 gaging round.



TABLE 9  
Summary of QA/QC Analytical Results - June 2015  
Former Lockheed Martin Facility  
East Windsor, New Jersey  
NJDEP PI #158269

			Sample ID  Lab ID Sample Date	F0 70915- F P1162-05 P1162-05 7/9/2015	F061015_P1054 09 P1054-09 6/10/2015	F061015- F P1054-22 P1054-22 6/10/2015	F061115_P1054 31 P1054-31 6/11/2015	F061115- F P1054-38 P1054-38 6/11/2015	F062515_P1105 01 P1105-01 6/25/2015	F062515- F P1105-04 P1105-04 6/25/2015	F070915_P1162 01 P1162-01 7/9/2015	T061015_P1054 13 P1054-13 6/10/2015	T061115_P1054 32 P1054-32 6/11/2015	T062515_P1105 02 P1105-02 6/25/2015	T070915_P1162 02 P1162-02 7/9/2015
Analyte	CAS RN	GWQS													
General Chemistry															
Chloride	16887-00-6	250000		NR	381 J	NR	486 J	NR	1960	NR	382 J	NR	NR	NR	NR
Ethane	74-84-0	-		NR	5 U	NR	5 U	NR	5 U	NR	5 U	NR	NR	NR	NR
Ethene	74-85-1	-		NR	5 U	NR	5 U	NR	20	NR	5 U	NR	NR	NR	NR
HYDROGEN	1333-74-0	-		NR	4	NR	2.7 U	NR	3	NR	2.7 U	NR	NR	NR	NR
Methane	74-82-8	-		NR	2.2 U	NR	2.2 U	NR	2.2 U	NR	2.2 U	NR	NR	NR	NR
Nitrate	14797-55-8	10000		NR	13 J	NR	36 J	NR	25 J	NR	100 U	NR	NR	NR	NR
Sulfate	14808-79-8	250000		NR	1000 U	NR	1000 U	NR	1000 U	NR	1000 U	NR	NR	NR	NR
Sulfide	18496-25-8	-		NR	30 U	NR	30 U	NR	30 U	NR	30 U	NR	NR	NR	NR
Total Organic Carbon	TOC	-		NR	583 J	NR	413 J	NR	350 J	NR	439 J	NR	NR	NR	NR
Volatile Organic Compounds															
1,1,1-Trichloroethane	71-55-6	30		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	79-00-5	3		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	75-34-3	50		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHYLENE	75-35-4	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	87-61-6	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	120-82-1	9		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	0.02		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	106-93-4	0.03		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	95-50-1	600		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	107-06-2	2		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	78-87-5	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	106-46-7	75		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
2-Butanone	78-93-3	300		NR	5 U	NR	5 U	NR	5 U	NR	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	108-10-1	-		NR	5 U	NR	5 U	NR	5 U	NR	5 U	5 U	5 U	5 U	5 U
ACETONE	67-64-1	6000		NR	5 U	NR	3.1 J	NR	5 U	NR	5 U	5 U	5 U	5 U	5 U
BENZENE	71-43-2	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
BROMODICHLOROMETHANE	75-27-4	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	74-83-9	10		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	75-15-0	700		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	56-23-5	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CFC-12	75-71-8	1000		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CHLORINATED FLUOROCARBON (FREON 113)	76-13-1	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CHLOROBENZENE	108-90-7	50		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CHLOROBROMOMETHANE	74-97-5	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	124-48-1	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	75-00-3	5		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	67-66-3	70		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	74-87-3	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	156-59-2	70		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	10061-01-5	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	110-82-7	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
DICHLOROMETHANE	75-09-2	3		NR	2.1	NR	1 U	NR	13	NR	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	100-41-4	700		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	98-82-8	700		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
M-DICHLOROBENZENE	541-73-1	600		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	79-20-9	7000		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
METHYL N-BUTYL KETONE	591-78-6	300		NR	5 U	NR	5 U	NR	5 U	NR	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether	1634-04-4	70		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
METHYLCYCLOHEXANE	108-87-2	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
STYRENE (MONOMER)	100-42-5	100		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	127-18-4	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
TOLUENE	108-88-3	600		NR	1 U	NR	1	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	156-60-5	100		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	10061-02-6	-		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
TRIBOMOMETHANE	75-25-2	4		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHYLENE	79-01-6	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	75-69-4	2000		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	75-01-4	1		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
Xylenes (Total)	1330-20-7	1000		NR	1 U	NR	1 U	NR	1 U	NR	1 U	1 U	1 U	1 U	1 U
1,4-Dioxane via SW8270C-SIM															
1,4-Dioxane	123-91-1	10		NR	0.1 U	NR	0.1 U	NR	0.1 U	NR	0.1 U	NR	NR	NR	NR
Metals															
ARSENIC	7440-38-2	3		2 U	2 U	2 U	2 U	2 U	2 U	10.6	2 U	NR	NR	NR	NR
Iron	7439-89-6	300		200 U	200 U	200 U	200 U	200 U	200 U	15.5 B	200 U	NR	NR	NR	NR
Manganese	7439-96-5	50		2 U	2 U	2 U	1.2 B	2 U	2 U	0.85 B	2 U	NR	NR	NR	NR

Notes:  
All results are presented in µg/l.  
CAS-RN = Chemical Abstract Service Registry Number.  
GWQS = NJDEP Ground Water Quality Standards.  
A Sample Identifier (ID) with letter 'F' indicate a dissolved (filtered) sample.  
**Bold** values indicate result or reporting limit shown in excess of the GWQS.  
U - Indicates that the analyte was not detected at the Detection Limit shown.  
J - Indicates that the value was detected and is estimated.  
NR = Not Requested for analysis.



**TABLE 10**  
**Receptor Evaluation - Sensitive Properties Within 200-feet of Site**  
**Former Lockheed Martin Facility**  
**East Windsor, New Jersey**  
**PI #158269**

<b>Parcels within 200 feet of Site</b>							
<b>Block</b>	<b>Lot</b>	<b>Property Class</b>	<b>Property Location</b>	<b>Owner</b>	<b>Owner Street</b>	<b>Owner City, State</b>	<b>Owner Zip Code</b>
1	2	15F - Other Exempt	147 MILLSTONE RD	EAST WINDSOR MUA	7 WILTSHIRE DRIVE	EAST WINDSOR NJ	10004
1	3	2 - Residential	93 MILLSTONE ROAD	GUZMAN,HUGO & LOBO,ANNACLETTE	331 DUTCH NECK RD	EAST WINDSOR, NJ	08520
1	4	3 - Farm	366 PRINCETON-HIGHTSTOWN	SHISEIDO AMERICA,INC.C/O M.MORALES	366 PRINCETON-HIGHTST.RD	EAST WINDSOR, NJ	08520
2	1.01	15F - Other Exempt	160 MILLSTONE RD	EAST WINDSOR MUA	7 WILTSHIRE DRIVE	EAST WINDSOR, N J	08520
2	1.02	3 - Farm	120 MILLSTONE ROAD	WINDSOR LIM.PRT.OF NJ C/O GMH CAP.PA	10 CAMPUS BLVD	NEWTOWN SQUARE, PA	19073
2	2.02	4A - Commercial	50 MILLSTONE RD	WINDSOR ACQUISIT.,LLC C/O BLDG 100	50 MILLSTONE RD,SUITE 140	EAST WINDSOR, N J	08520
2	3.02	3 - Farm	432 EDINBURG RD	HOWARD,PHILIP J	RD #4, BOX 24	EAST WINDSOR, NJ	08512
2	5	2 - Residential	26 OLD TRENTON ROAD	PRIMIANO, JOSEPH & ROMEO, GINA F.	295 WOODWARD RD	MANALAPAN, NJ	07726
5	1	15C - Public Property	270 PRINCETON-HIGHTSTOWN	STATE OF NJ DOT	1035 PARKWAY AVE	TRENTON, NJ	08625
5	2.01	4A - Commercial	300-B PRINCETON-HIGHTSTOW	GORDON PRINCETON MAB 2 ASSOC, LLC	1436 EAST ELIZABETH AVE	LINDEN, NJ	07036
5	2.02	1 - Vacant Land	300-C PRINCETON-HIGHTSTOW	GORDON PRINCETON MAB 3 ASSOC,LLC	1436 EAST ELIZABETH AVE	LINDEN, NJ	07036
5	3	4B - Industrial	493 EDINBURG RD	BLACKLIGHT REAL ESTATE C/O R.MILLS	493 EDINBURG RD	EAST WINDSOR, NJ	08512
5	4	2 - Residential	479 EDINBURG RD	SCREWS WILLIE G	479 EDINBURG RD	EAST WINDSOR, NJ	08512
5	5	4B - Industrial	469 EDINBURG RD	INLAND DIVERSIFIED EW SCIPARK,LLC	11995 EL CAMINO REAL#4769	SAN DIEGO, CA	92130
5	27.02	4A - Commercial	304 PRINCETON-HIGHTSTOWN	FIRST WASHINGTON STATE BANK	304 PRINCETON-HIGHTSTOWN	EAST WINDSOR, NJ	08520
5	27.05	4A - Commercial	300-D PRINCETON-HIGHTSTOW	EDINBURG RD INVST.C/O KNOWLEDGE L C	650 NE HOLLADAY ST,S#1400	PORTLAND, OR	97232
22	7	3 - Farm	23 ANCIL DAVISON ROAD	JB NURSERY LLC	949 NEW DURHAM RD	EDISON, NJ	08817
22	8.01	3 - Farm	29 ANCIL DAVISON ROAD	BARTONEK, JOSEPH	949 NEW DURHAM RD	EDISON NJ	08817
22	10	3 - Farm	119 JOHN WHITE ROAD	LUM, KIN F & SHAO LING	119 JOHN WHITE ROAD	CRANBURY, NJ	08512
<b>Sensitive Properties within 200 feet of Site</b>							
<b>Block</b>	<b>Lot</b>	<b>Property Class</b>	<b>Property Location</b>	<b>Owner</b>	<b>Owner Street</b>	<b>Owner City, State</b>	<b>Owner Zip Code</b>
1	3	2 - Residential	93 MILLSTONE ROAD	GUZMAN,HUGO & LOBO,ANNACLETTE	331 DUTCH NECK RD	EAST WINDSOR, NJ	08520
2	5	2 - Residential	26 OLD TRENTON ROAD	PRIMIANO, JOSEPH & ROMEO, GINA F.	295 WOODWARD RD	MANALAPAN, NJ	07726
5	4	2 - Residential	479 EDINBURG RD	SCREWS WILLIE G	479 EDINBURG RD	EAST WINDSOR, NJ	08512
5	27.05	4A - Commercial	300-D PRINCETON-HIGHTSTOW	EDINBURG RD INVST.C/O KNOWLEDGE L C	650 NE HOLLADAY ST,S#1400	PORTLAND, OR	97232












**TABLE 11**  
**Receptor Evaluation Well Search**  
**Former Lockheed Martin Facility**  
**East Windsor, New Jersey**  
**NJDEP PI #158269**

<b>SITE NAME</b>	Former Lockheed Martin Corporation	Enter no information beyond column B
<b>SITE STREET ADDRESS</b>	50 Millstone Road	
<b>SITE COUNTY (select)</b>	Mercer	
<b>SITE MUNICIPALITY (select)</b>	East Windsor Twp	
<b>PROGRAM INTEREST (PI) ID # :</b>	158269	
<b>SOURCE COORDINATE X</b>	475746	
<b>SOURCE COORDINATE Y</b>	530552	
<b>GROUNDWATER FLOW DIRECTION USED (if any)</b>	ESE	
<b>WERE APPLICABLE WELL TYPES FOUND? (Yes/No)</b>	Yes	
<b>IS THIS SUBMISSION AN UPDATE? (Yes/No)</b>	Yes	
<b>AUTHOR (name of company)</b>	AECOM	
<b>AUTHOR STREET ADDRESS (include town and zip code)</b>	30 Knightsbridge Rd, Suite 520, Piscataway, NJ, 08854	
<b>LSRP LICENSE NUMBER OVERSEEING WORK</b>	574867	
<b>LSRP NAME OVERSEEING WORK</b>	David J Russell	
<b>PROFESSIONAL WHO PREPARED SUBMISSION</b>	Ellen Fyock	
<b>EMAIL CONTACT</b>	<a href="mailto:ellen.fyock@aecom.com">ellen.fyock@aecom.com</a>	
<b>PHONE CONTACT</b>	732-564-3654	



**TABLE 11**  
**Receptor Evaluation - Well Search**  
**Former Lockheed Martin facility**  
**East Windsor, NJ**  
**PI # 158269**

Download Document	Permit Number	Well Use	Potentially Potable	Document	Date (permitted/drilled /sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting_X	Northing_Y	Distance (feet)	Depth (feet)	Capacity (gal/min)
	E201402999	Irrigation	Yes	Record	5/13/2014	80 John White Road	Middlesex	Plainsboro	3701	20	GPS	473265	536326	6284	70	20
	E201302926	Agric/Hort/Aqua Irrigation	Yes	Record	5/9/2013	Ancil Davison Road	Middlesex	Cranbury Twp	22	6	GPS	477963	534582	4599	242	750
	E201211710	Agric/Hort/Aqua Irrigation	Yes	Record	11/6/2012	23 Ancil Davison Road	Middlesex	Cranbury Twp	22	7	GPS	478588	533240	3911	130	300
	E201115254	Irrigation	Yes	Record	12/6/2012	174 One Mile Rd	Mercer	East Windsor Twp	6	2	GPS	479439	530062	3725	99	50
	P201015072	Public Non-Community	Yes	Record	1/1/1950	325 PRINCETON-HIGHTSTOWN ROAD	Mercer	East Windsor Twp	3	10	GPS	474526	528778	2153	82	10
	P201002445	Irrigation	Yes	Record	5/25/2010	CRANBURY NECK ROAD	Middlesex	Cranbury Twp	22	3	GPS	476567	536738	6240	100	10
	2800055792	Irrigation Replacement	Yes	Record	3/14/2006	97 CRANBURY NECK ROAD	Middlesex	Cranbury Twp	22	2	Prop Loc - Hard Copy	474264	536161		185	0
	2800055219	Agric/Hort/Aqua Irrigation	Yes	Record	4/27/2005	386 PRINCETON HIGHTSTOWN RD.	Mercer	West Windsor Twp	28	19	Prop Loc - Hard Copy	471296	529910		85	50
	2800002058	Industrial	Yes	Decommissioning	6/26/1981	RT 571	Mercer	East Windsor Twp	63B	1	Prop Loc - Hard Copy	478830	526040		152	0
	2800002937	Industrial	Yes	Record	2/12/1958	RT 571	Mercer	East Windsor Twp			Prop Loc - Dig Image	478287	525467	5684	173	0
	4800000239	Agric/Hort/Aqua Irrigation	Yes	Record	1/2/1960	WHITE RD	Middlesex	Plainsboro			Prop Loc - Hard Copy	472637	535556		180	750
	2800004275	Public Non-Community	Yes	Record	12/1/1961	RT 535	Mercer	East Windsor Twp			Prop Loc - Hard Copy	475234	528730		73	0
	2500015755	Public Non-Community	Yes	Record	2/3/1971	MONROE PLACE & WASHINGTON DR.	Middlesex	Cranbury Twp			Prop Loc - Dig Image	480357	532211	4900	260	0
	2800007050	Non-Public	Yes	Record	11/1/1970	OLD TRENTON ROAD	Mercer	West Windsor Twp			Prop Loc - Dig Image	473121	526820	4563	100	10
	2800014651	Public Non-Community	Yes	Record	10/26/1984	OLD TRENTON ROAD	Mercer	West Windsor Twp	8	37A	Prop Loc - Dig Image	472087	526821	5226	110	24
	2800013701	Non-Public	Yes	Record	8/28/1983	ROUTE 571	Mercer	West Windsor Twp	28	4	Prop Loc - Dig Image	472089	529519	3800	90	10
	2800058111	Irrigation	Yes	Decommissioning	6/28/2010	493 OLD TRENTON ROAD	Mercer	East Windsor Twp	5	3	Digital Image	476523	529204	2871	210	80
	2800035516	Public Non-Community Replacement	Yes	Record	4/10/1995	329 PRINCETON	Mercer	East Windsor Twp	3	8	Prop Loc - Hard Copy	474312	528924		90	10
	2800040294	Public Non-Community	Yes	Decommissioning	6/25/2014	2025 Old Trenton Road	Mercer	West Windsor Twp	37.01	8	Digital Image	472517	527277	4599	111	
	2800048305	Irrigation	Yes	Record	7/6/2001	70 PRINCETON HIGHTSTOWN R	Mercer	East Windsor Twp	6	14	Prop Loc - Hard Copy	480277	525826		130	30
	2800052423	Irrigation	Yes	Record	9/9/2003	571 OLD TRENTON RD.	Mercer	East Windsor Twp	4	2	Prop Loc - Hard Copy	474381	527862		75	22
	4800000273	Agric/Hort/Aqua Irrigation	Yes	Record	1/2/1960		Middlesex	Plainsboro			Prop Loc - Hard Copy	473566	535352		180	750
	2800001276	Agric/Hort/Aqua Irrigation	Yes	Record	2/11/1955	ANCIL DAVIDSON ROAD	Middlesex	Cranbury Twp			Prop Loc - Hard Copy	476619	534208		112	0
	2800006094	Domestic	Yes	Record	12/5/1966	PRINCETON HIGHTSTOWN RD	Mercer	East Windsor Twp			Prop Loc - Hard Copy	474066	529092		140	12
	2800008741	Domestic	Yes	Permit	3/21/1975		Mercer	East Windsor Twp			Prop Loc - Hard Copy	473220	529409		85	15
	2800001501	Domestic	Yes	Record	11/16/1954	366 PRINCETON HIGHTSTOWN RD	Mercer	East Windsor Twp			Prop Loc - Hard Copy	474252	529607		215	50
	353-PH	Unknown	Unknown	Unknown		353 Princeton-Hightstown Rd	Mercer	East Windsor Twp	3	4		473922	529040			



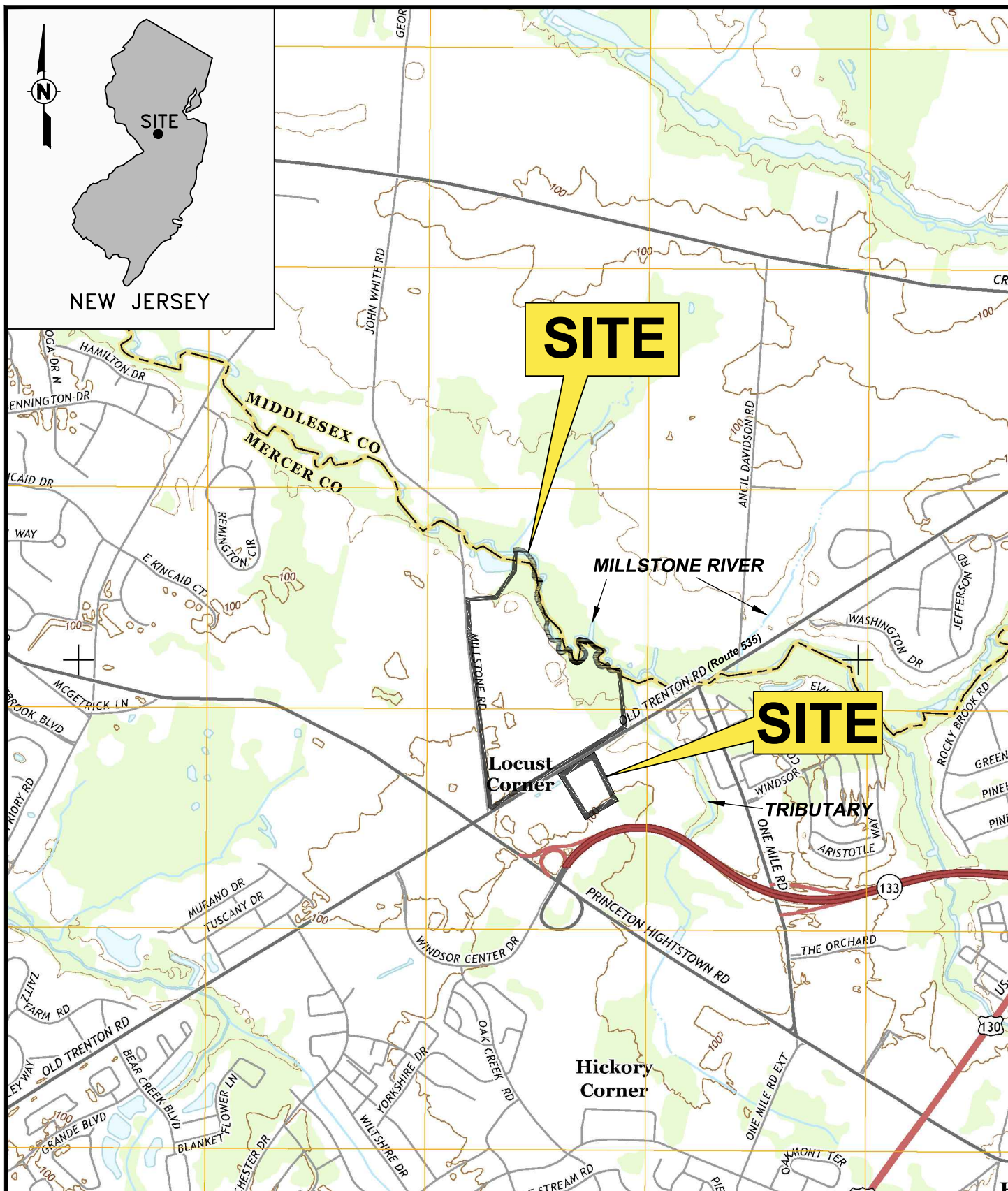
**TABLE 12**  
**BIOCHLOR Modeling Parameters**  
**Former Lockheed Martin Facility**  
**East Windsor, NJ**  
**NJDEP PI #158269**

	PARAMETERS	SHALLOW AQUIFER		INTERMEDIATE AQUIFER	
<b>ADVECTION</b>	Hydraulic Conductivity	125 ft/day		125 ft/day	
		0.0441 cm/sec		0.0441 cm/sec	
	Hydraulic Gradient	0.009 ft/ft		0.006 ft/ft	
	Effective porosity	0.2		0.2	
	Seepage Velocity	1,862.4 ft/year		1,241.6 ft/year	
<b>DISPERSION</b>		Lateral dispersion 300 feet (using a maximum plume length of 2,000 feet and use 15% of that value)		Lateral dispersion 300 feet (using a maximum plume length of 2,000 feet and use 15% of that value)	
<b>ADSORPTION</b>	Soil Bulk Density	1.7 kg/L		1.7 kg/L	
	foc	0.0018		0.0018	
<b>BIOTRANSFORMATION</b>		Used one zone with a TCE 1st Order Decay Coefficient of 0.3 (l) which is the minimum rate constant for TCE		Used one zone with a TCE 1st Order Decay Coefficient of 3.2 (l) which is the maximum rate constant for TCE	
<b>GENERAL</b>	Simulation Time	10/70 years		8/50 years	
	Modeled Width	300 feet		300 feet	
	Modeled Length	3,000 feet		5,500 feet	
	Source Width	300 feet		300 feet	
<b>FIELD DATA</b>	TCE Concentrations and Wells Used	MW-4 (82 ppb)	identified "source area"	MW-22D (52 ppb)	identified "source area"
		MW-9 (55 ppb)	825 feet from source	MW-30D2 6.3 ppb	485 feet from source
		MW-12 (25 ppb)	1,125 feet from source		



## Figures





SOURCE:  
USGS 7.5' TOPOGRAPHIC QUADRANGLE FOR  
HIGHTSTOWN, NJ (2014)

CONTOUR INTERVAL: 100'

APPROXIMATE LATITUDE AND LONGITUDE  
IN NAD 83, FEET:  
475797.535E, 529864.264N  
(40.288102°, -74.558531°)



Scale in Feet

**AECOM**

**SITE LOCATION MAP**  
FORMER LOCKHEED MARTIN FACILITY  
PI No. 158269  
50 MILLSTONE ROAD  
EAST WINDSOR, NJ

PROJECT NO.  
60328624.5.02

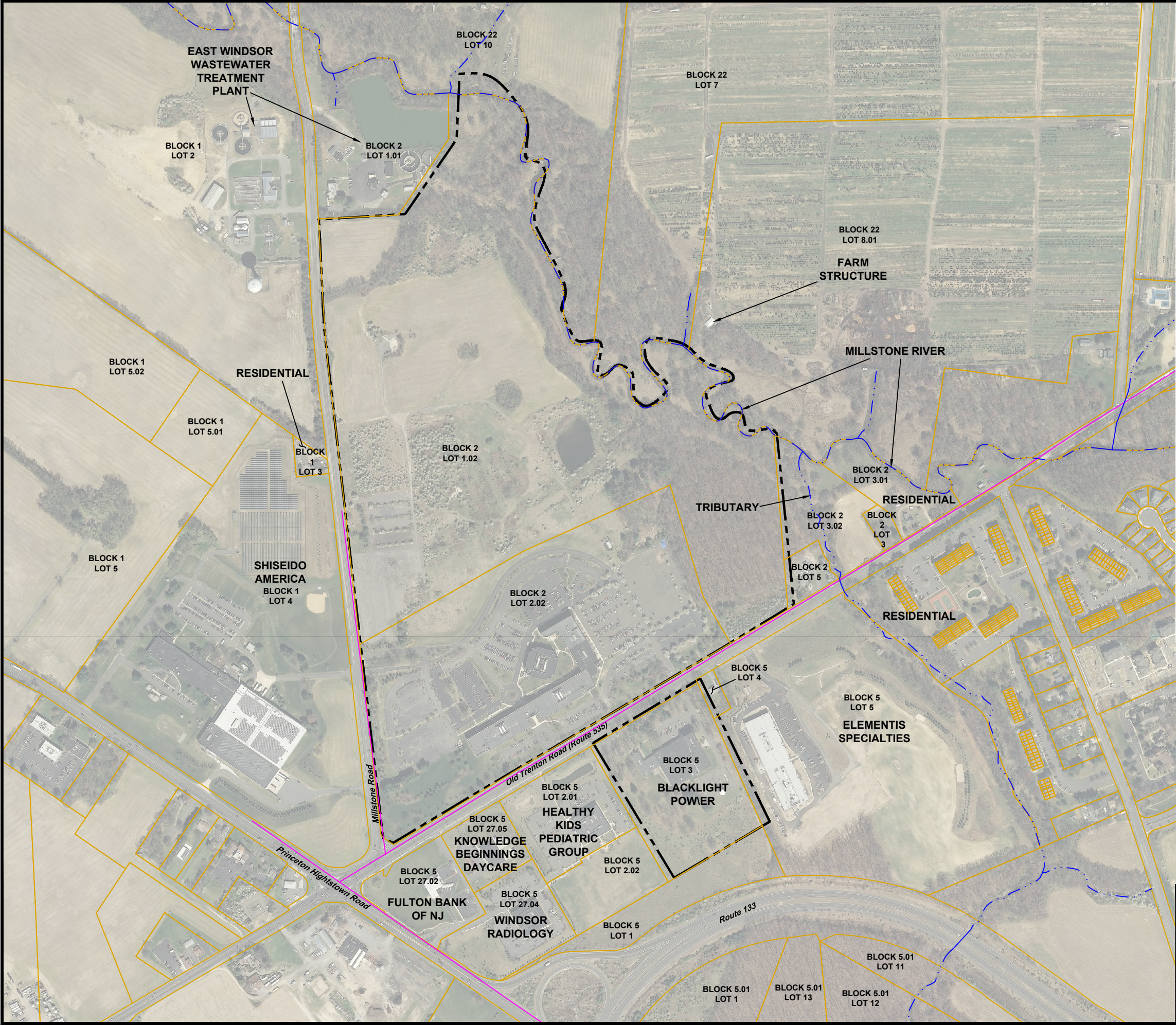
DRAWN BY:  
JK

DATE:  
9/29/2015

**FIGURE 1**



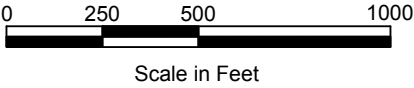
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**Legend**

- SITE BOUNDARY
- PROPERTY BOUNDARY (APPROX)
- - - - - MILLSTONE RIVER AND TRIBUTARY

SOURCES: NJ 2012-2013 HIGH RESOLUTION  
ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET



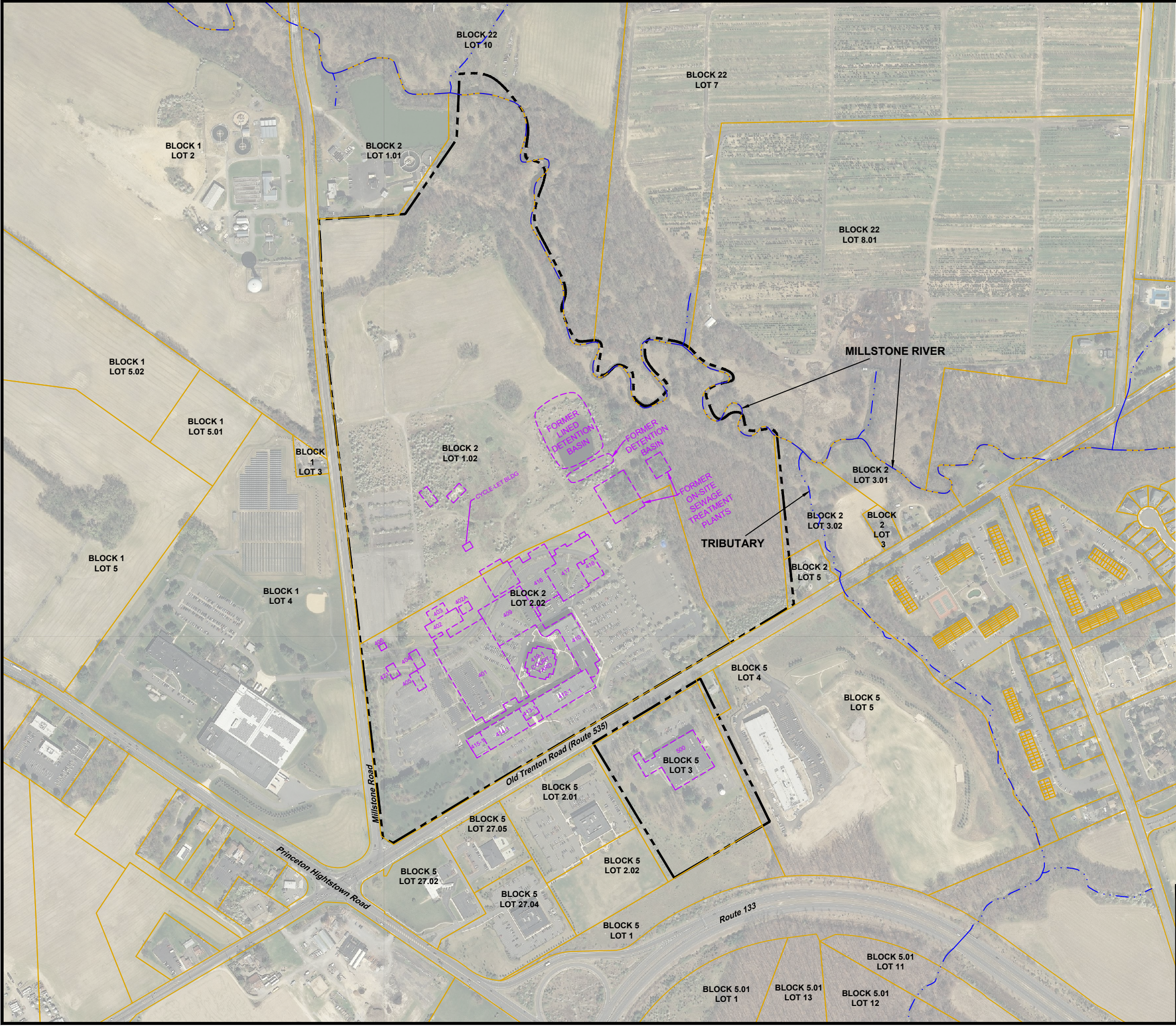
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**SITE PLAN**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	FIGURE 2
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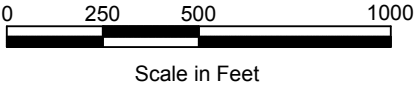




**Legend**

- SITE BOUNDARY
- PROPERTY BOUNDARY (APPROX)
- - - FORMER BUILDING LOCATION (APPROX)
- . - . - MILLSTONE RIVER AND TRIBUTARY

SOURCES: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET  
FORMER BUILDING LOCATIONS TAKEN FROM TETRA TECH'S SOIL GAS SURVEY REPORT, FIGURE 2-2 SITE OVERFLOW, DATED 1999.



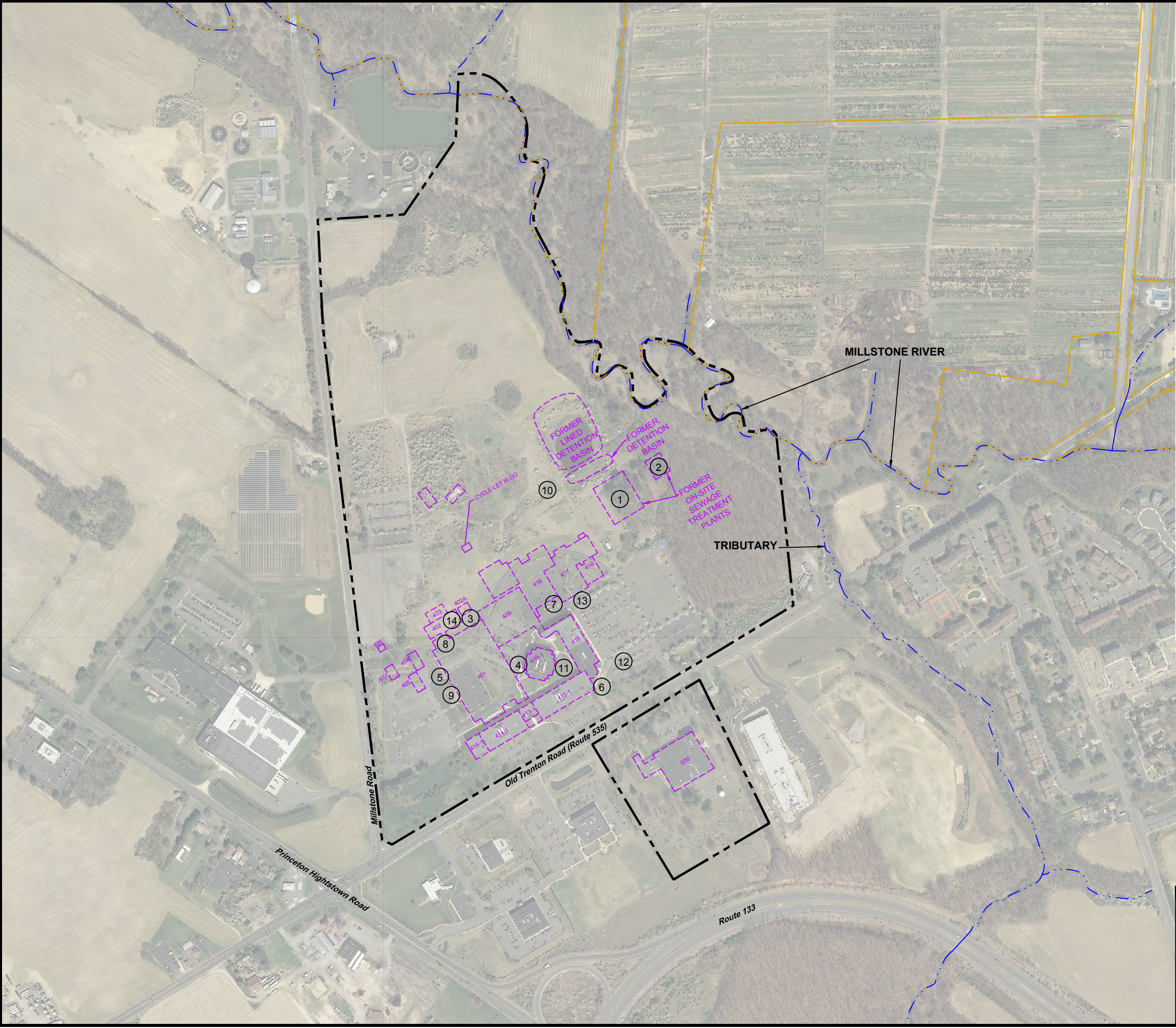
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey



**HISTORICAL SITE PLAN**


PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 3</b>
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Legend

- 
- 

SITE BOUNDARY
- 

AREA OF CONCERN (AOC)
- 

FORMER BUILDING LOCATION (APPROX)
- 

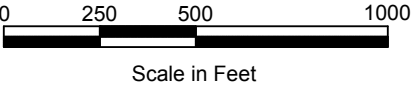
MILLSTONE RIVER AND TRIBUTARY


SOURCES: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET

FORMER BUILDING LOCATIONS TAKEN FROM TETRA TECH'S SOIL GAS SURVEY REPORT, FIGURE 2-2 SITE OVERFLOW, DATED 1999.

Areas of Concern

AOC 1	former on-site sewage treatment plant (1957-1962)
AOC 2	former activated sludge aeration system (1962-1965)
AOC 3	former chemical storage area
AOC 4	former underground neutralization pit
AOC 5	former 2,000-gallon UST
AOC 6	transformer oil spill
AOC 7	diesel fuel spill
AOC 8	stained soils behind compressor room
AOC 9	stained soils around vent pipes and fill ports
AOC 10	former waste disposal area
AOC 11	transformer oil spill
AOC 12	gasoline spill
AOC 13	hydraulic oil spill
AOC 14	vacuum oil spill
AOC 15	soil beneath Bldgs 402 and 403
AOC 16	VOC-impacted groundwater
AOC 17	soil gas





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HISTORICAL  
AREA OF CONCERN MAP

PROJECT NO.  
60328624.05.02

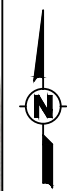
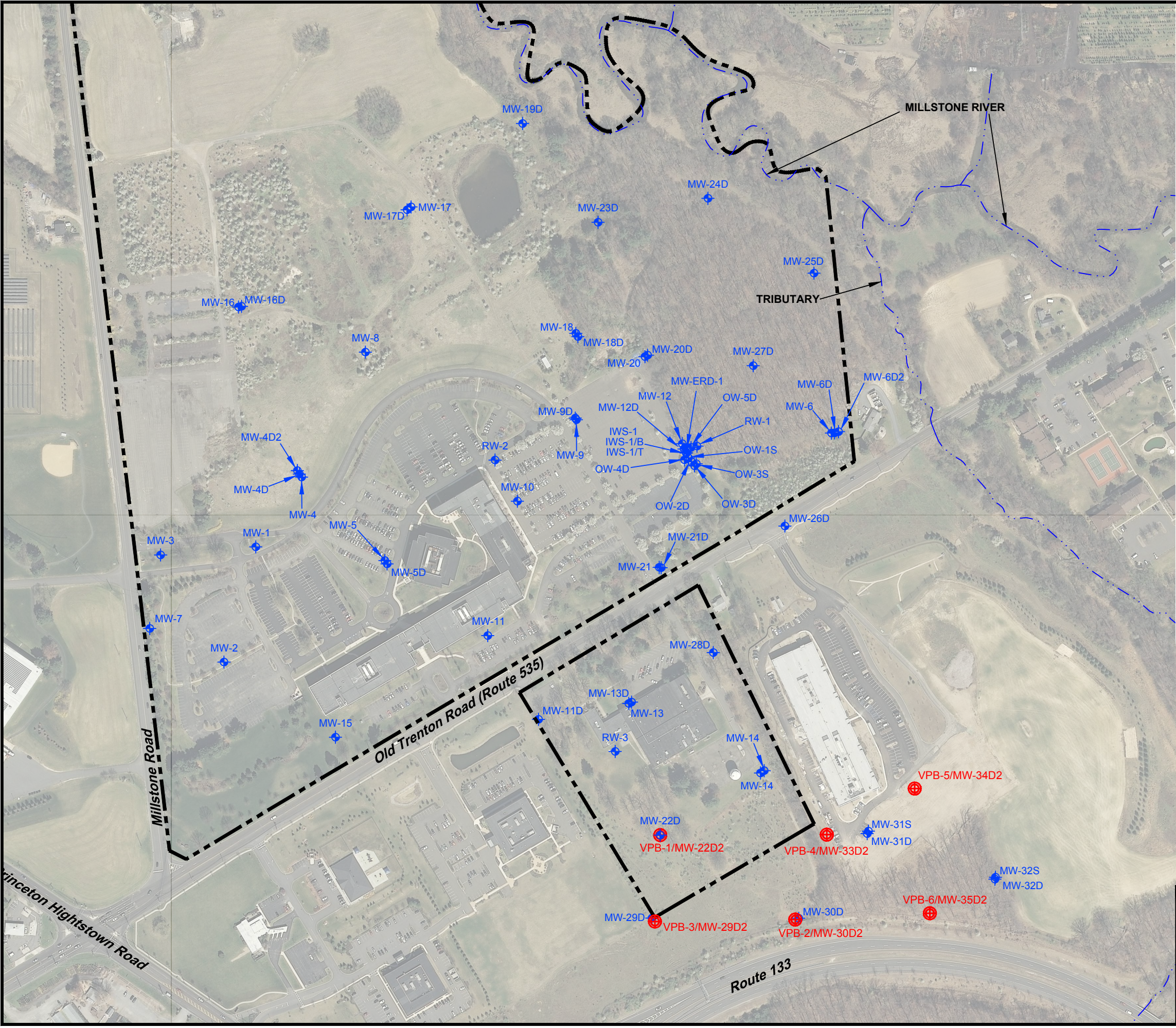
DRAWN BY:  
JK

DATE:  
09/29/2015

FIGURE 4



File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd\Drawings\SupRI\_MW\_locs\_2015-09-03.dwg Layout: Fig5 User: karchj1 Plotted: Sep 30, 2015 - 3:17pm



**Legend**

- EXISTING MONITORING WELL
- SUPPLEMENTAL RI LOCATION
- SITE BOUNDARY
- MILLSTONE RIVER AND TRIBUTARY

SOURCES: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET



Scale in Feet



Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

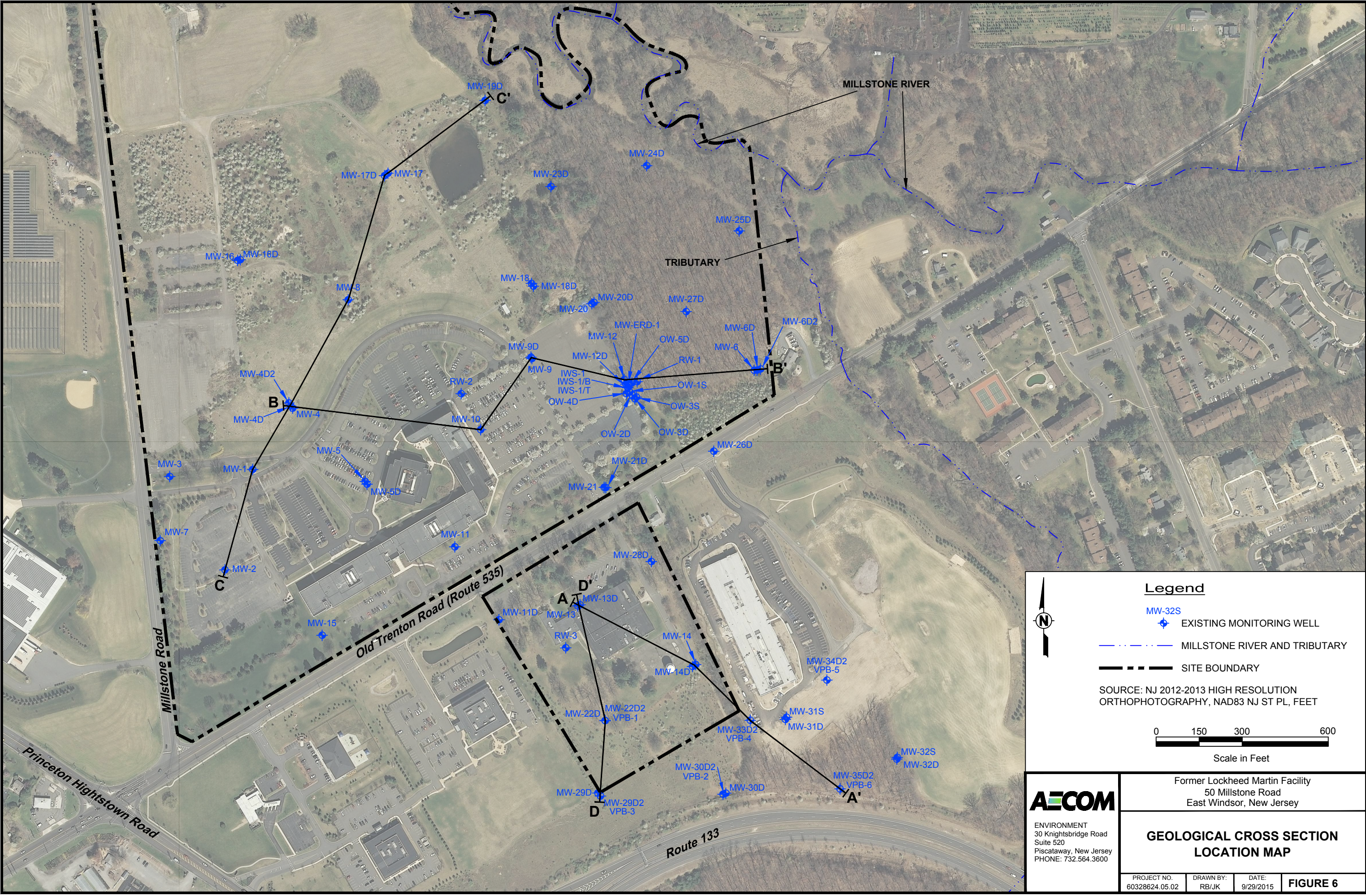
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

**SUPPLEMENTAL  
REMEDIAL INVESTIGATION  
LOCATIONS**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	FIGURE 5
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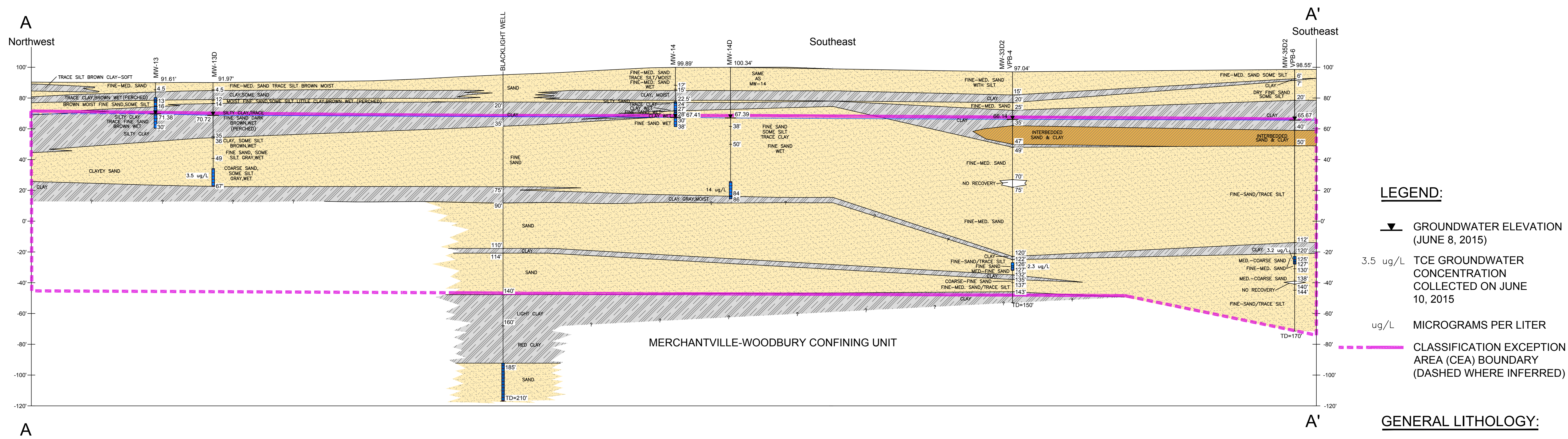


File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd\Drawings\SEC - LocMap\_2015-09-09.dwg Layout: Fig6 User: karchj1 Plotted: Sep 30, 2015 - 3:22pm





P:\cadd\lay on uspsa\2\6\01\01Data\_uspsa\2\6\001\Environment\U  
User: karc31 Plot: Oct 05, 2015 - 4:00pm  
File: J:\Project\LockheedMartin\_E\16.0 Project Input\6.1 Cadd\Drawings\SEC-AA\_2015-09-09.dwg Layout: Fig6a



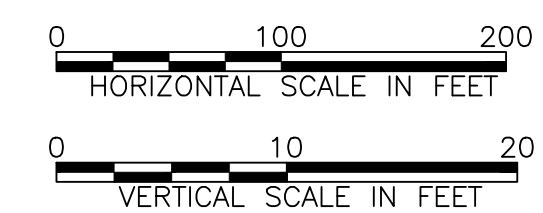
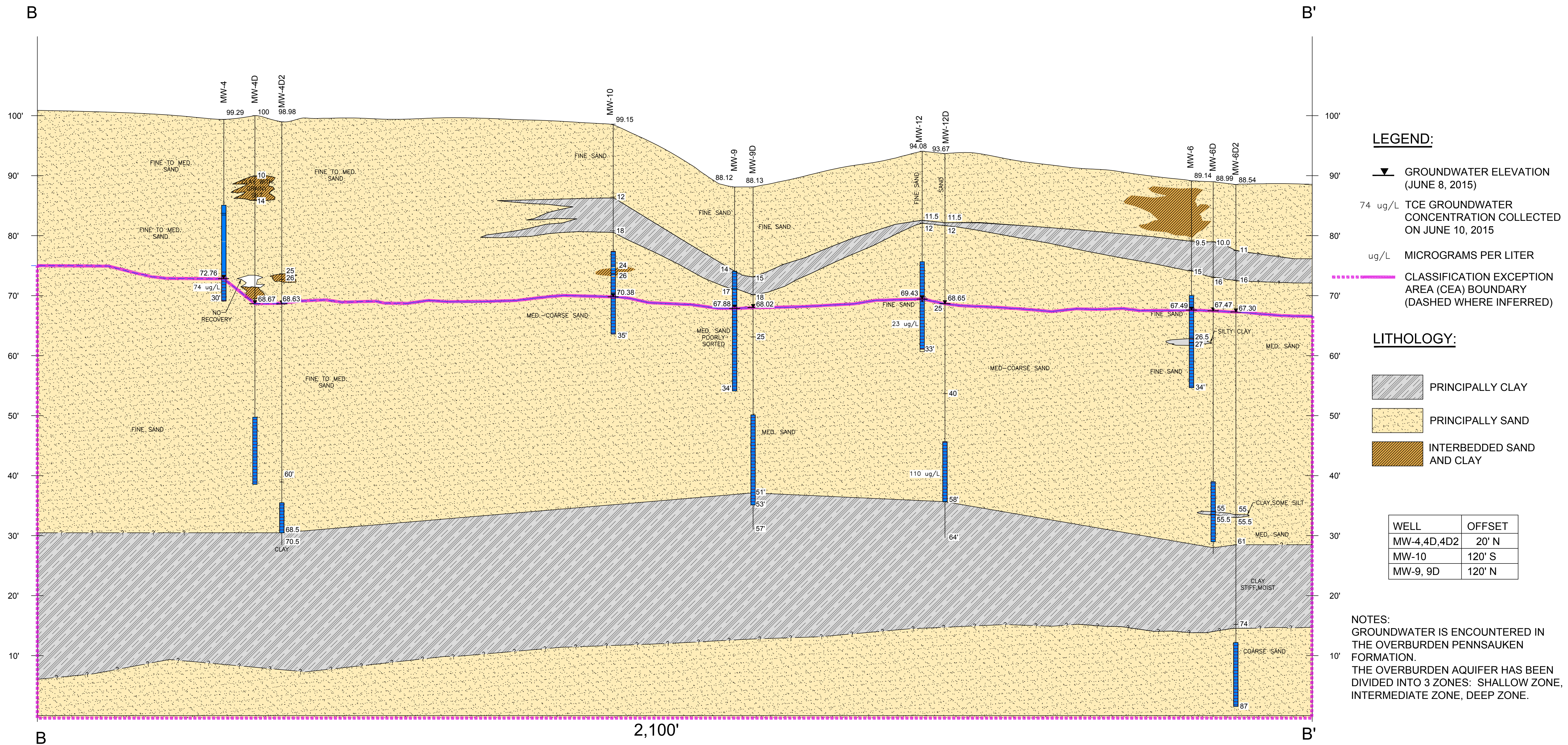
Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**GEOLOGICAL CROSS SECTION A-A'**

PROJECT NO. 60328624.05.02	DRAWN BY: RB	DATE: 10/05/2015	<b>FIGURE 6a</b>
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P:\cadd\env\usa2\p01\01Data\_usa2\p001\Environment\U  
User: krc311 | Plotted: Oct 05, 2015 - 4:35pm  
File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd Drawings\SEC-B-B\_2015-09-09.dwg Layout: Fig6b



SCALE VERIFICATION  
THIS BAR REPRESENTS  
ONE INCH ON THE  
ORIGINAL DRAWING:  
USE TO VERIFY FIGURE  
REPRODUCTION SCALE

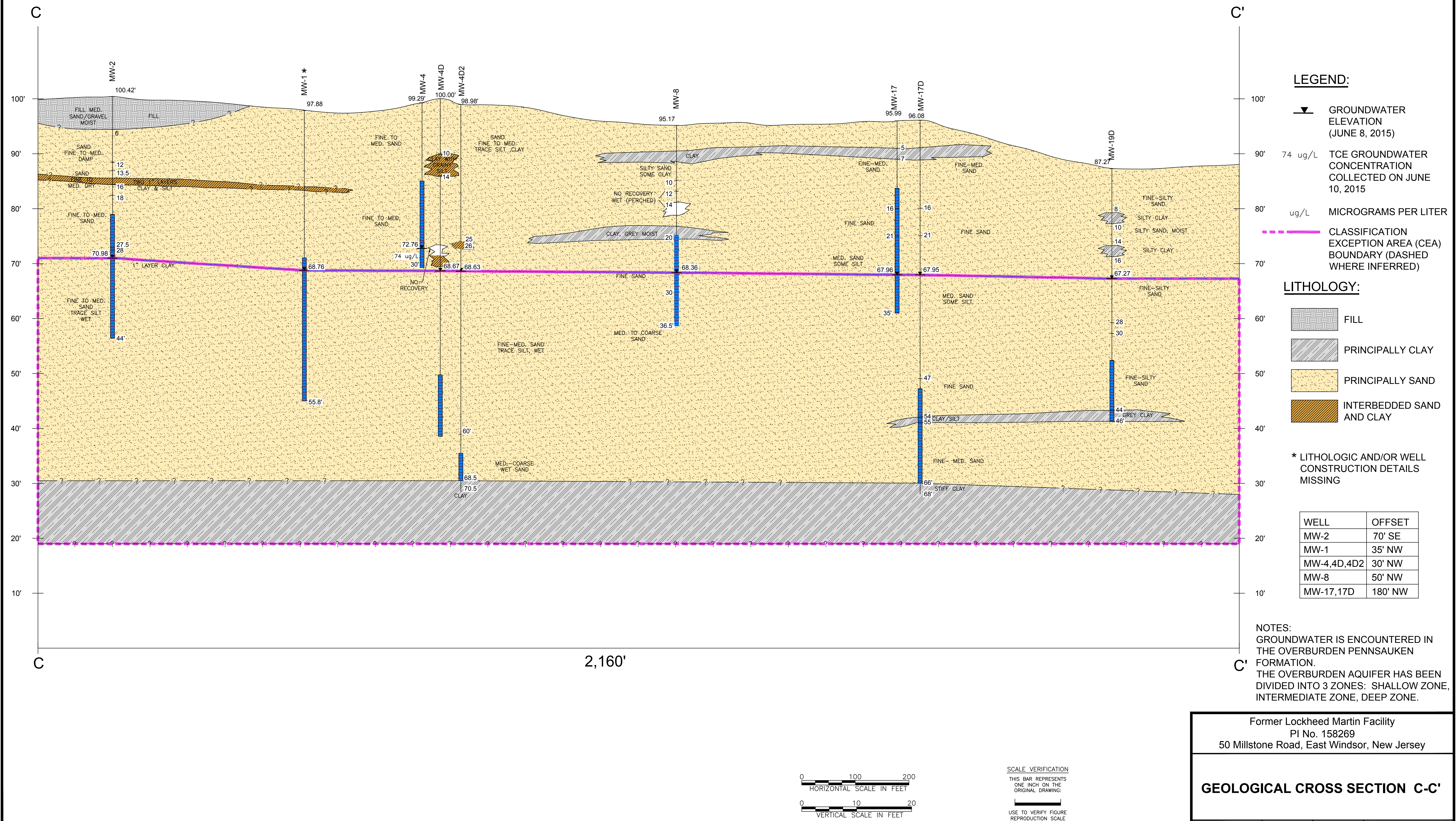
Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**GEOLOGICAL CROSS SECTION B-B'**

PROJECT NO. 60328624.05.02	DRAWN BY: TG	DATE: 10/05/2015	<b>FIGURE 6b</b>
-------------------------------	-----------------	---------------------	------------------



P:\scitaway on uspsw\2\p001\Drawings\SEC-C-C - 2015-09-09.dwg Layout: Fig6c  
User: karchj1 Plotted: Oct 05, 2015 - 4:24pm  
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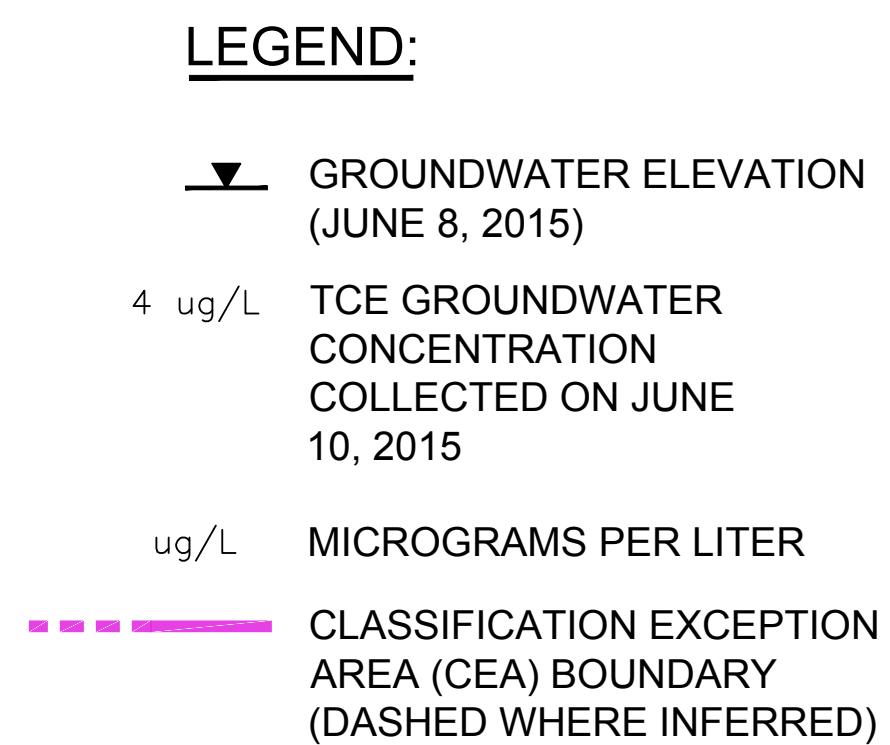


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**GEOLOGICAL CROSS SECTION C-C'**

PROJECT NO. 60328624.05.02	DRAWN BY: TG	DATE: 10/05/2015	<b>FIGURE 6c</b>
-------------------------------	-----------------	---------------------	------------------





PRINCIPALLY CLAY

PRINCIPALLY SAND

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 50 Millstone Road, East Windsor, New Jersey

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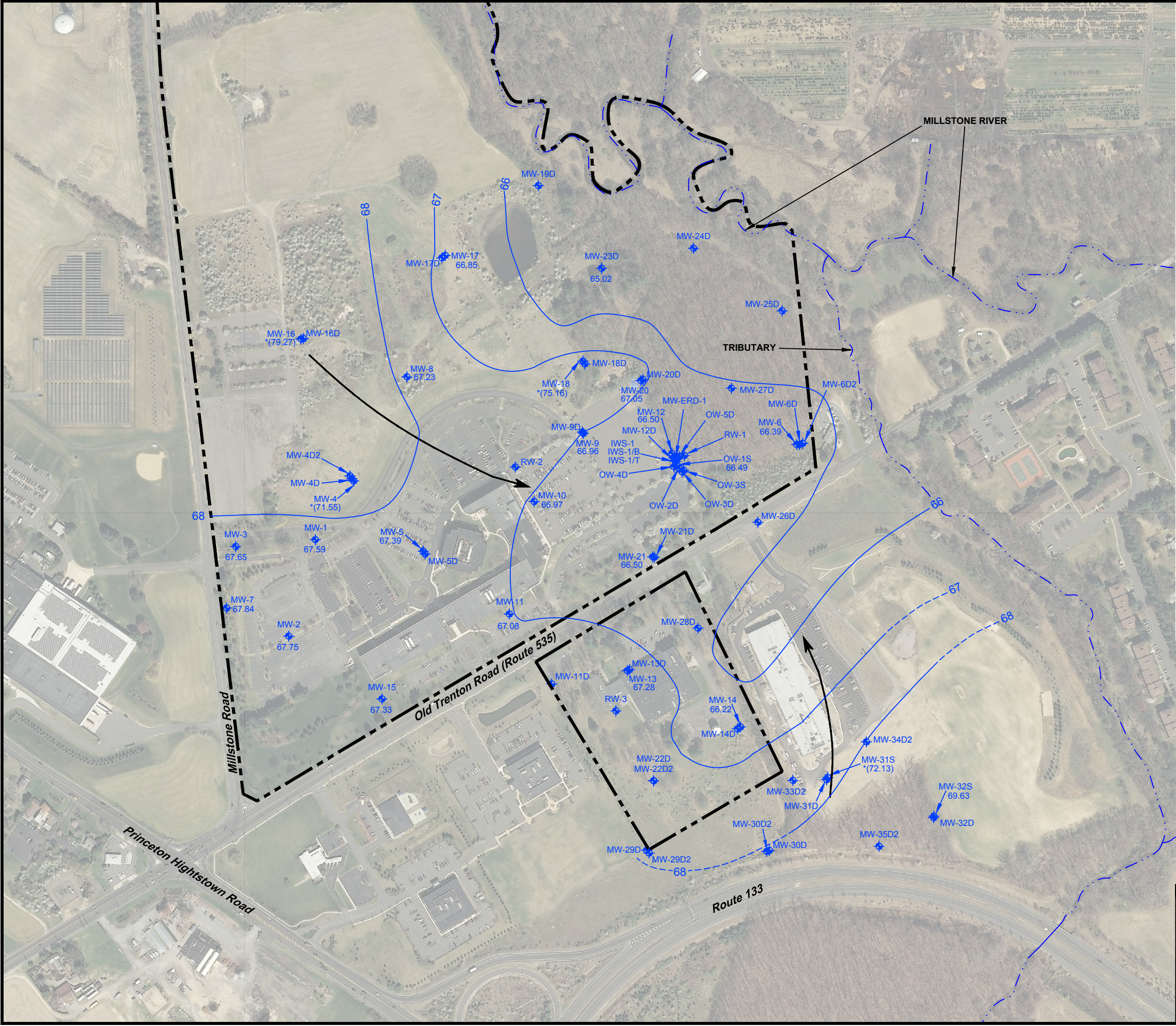
**GEOLOGICAL CROSS SECTION D-D'**

PROJECT NO. 60328624.05.02	DRAWN BY: RB	DATE: 10/05/2015	<b>FIGURE 6d</b>
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NOTE:  
FIGURE ADAPTED FROM ARCADIS FIGURE 2 - SOIL  
GAS SAMPLING RESULTS, DATED JUNE 7, 2007.





**Legend**

- EXISTING MONITORING WELL WITH ELEVATION
- NOT USED IN CONTOURS
- MILLSTONE RIVER AND TRIBUTARY
- SITE BOUNDARY
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET

0150300600

Scale in Feet

ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

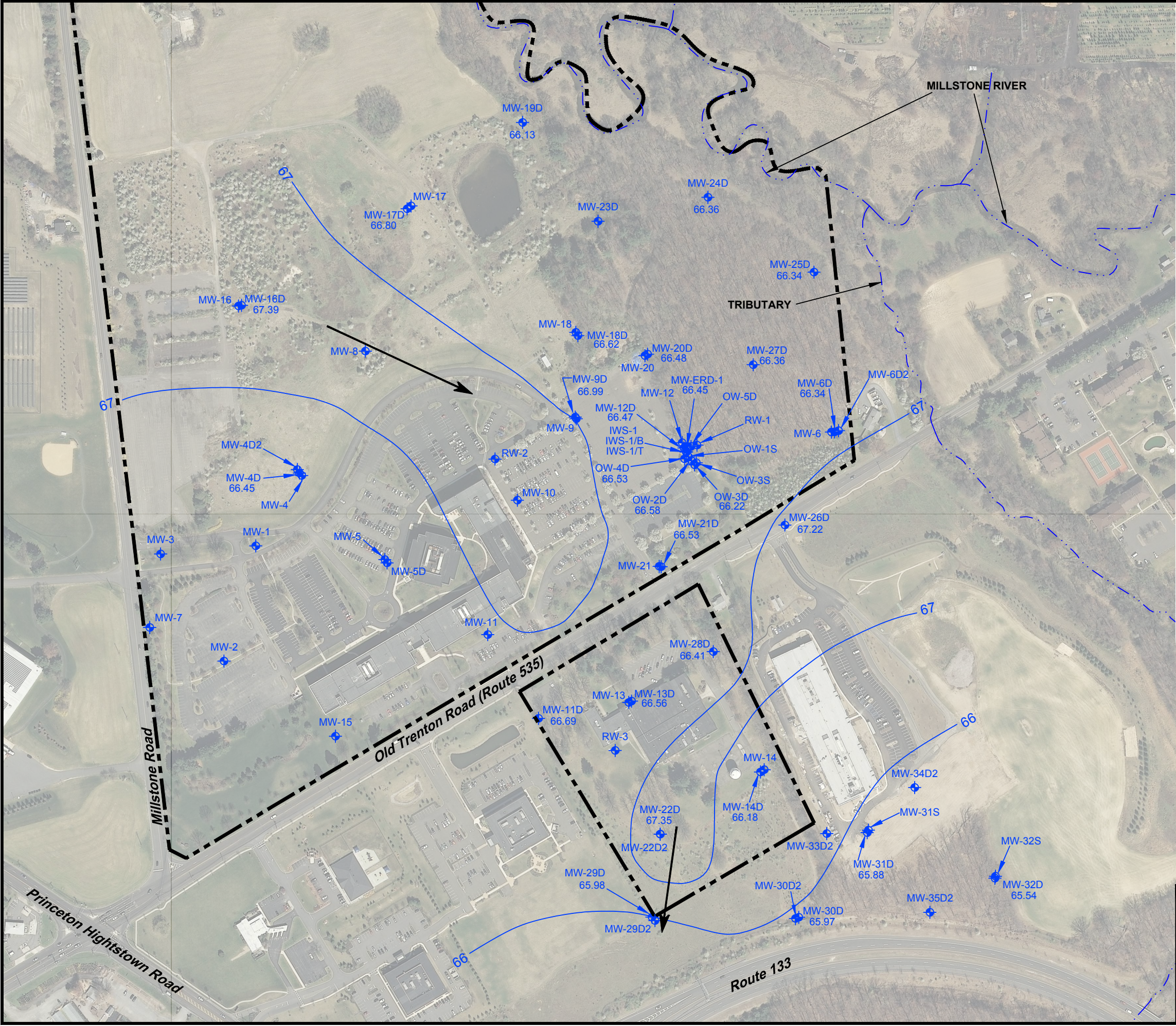
Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**JUNE 2015**  
**GROUNDWATER FLOW CONTOURS**  
**SHALLOW WELLS**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 8a</b>
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File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd\Drawings\GWC-Intermed\_2015-09-03.dwg Layout: Fig8b User: karchj1 Plotted: Sep 30, 2015 - 3:29pm



**Legend**

- MW-32D 65.54 EXISTING MONITORING WELL WITH ELEVATION
- MILLSTONE RIVER AND TRIBUTARY
- SITE BOUNDARY
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION

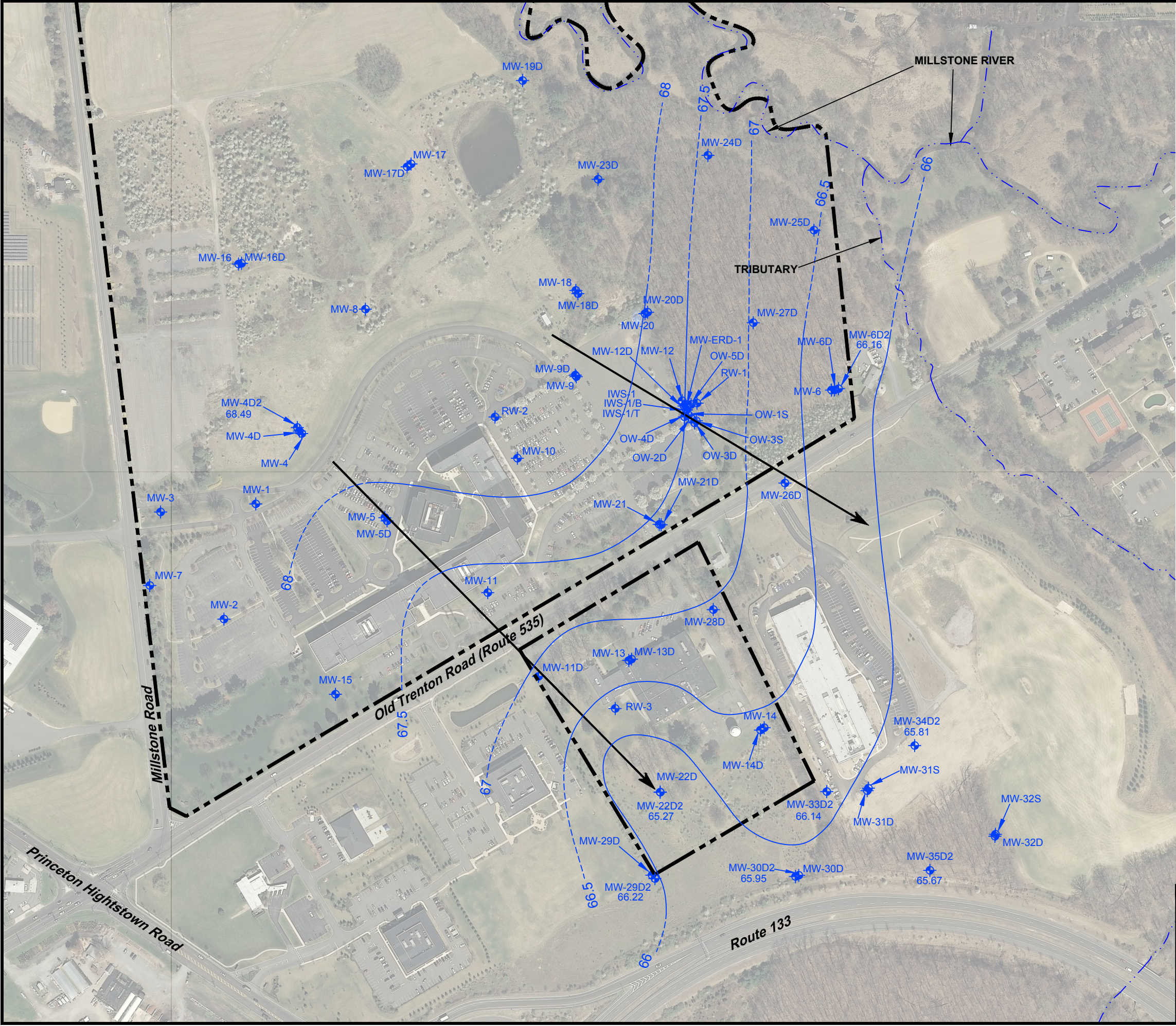
SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET

0 150 300 600  
Scale in Feet







<b>AECOM</b> ENVIRONMENT 30 Knightsbridge Road Suite 520 Piscataway, New Jersey PHONE: 732.564.3600				Former Lockheed Martin Facility PI No. 158269 50 Millstone Road, East Windsor, New Jersey	
<b>JUNE 2015 GROUNDWATER FLOW CONTOURS INTERMEDIATE WELLS</b>					
PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	FIGURE 8b		



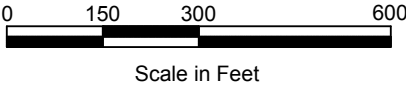
File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd\Drawings\GWC-Deep\_ 2015-09-03.dwg Layout: Fig8c User: karchj1 Plotted: Sep 30, 2015 - 3:32pm



**Legend**

-  EXISTING MONITORING WELL WITH ELEVATION
-  MILLSTONE RIVER AND TRIBUTARY
-  SITE BOUNDARY
-  GROUNDWATER CONTOUR
-  INFERRED GROUNDWATER CONTOUR
-  GROUNDWATER FLOW DIRECTION

SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET



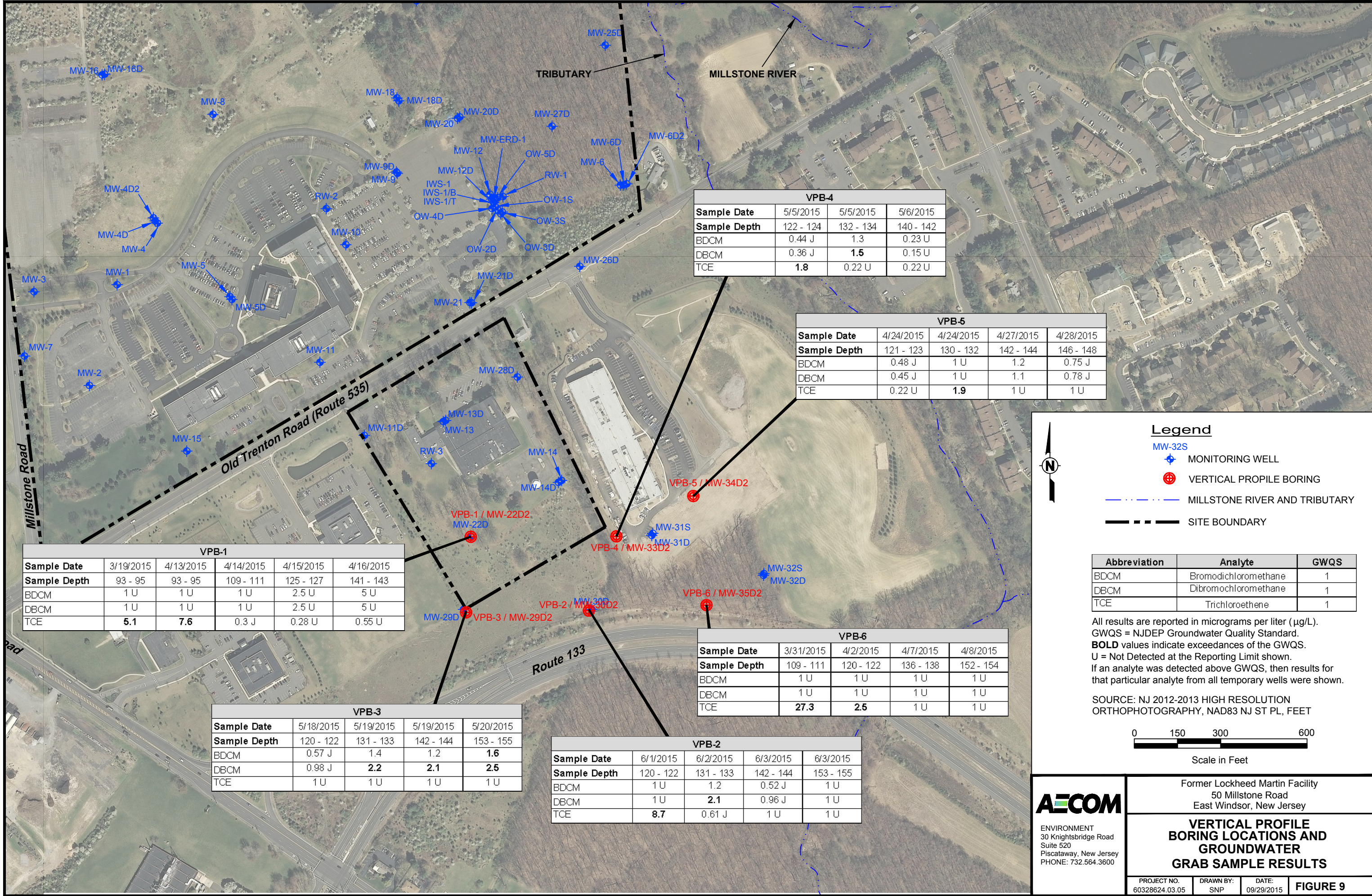
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**JUNE 2015  
GROUNDWATER FLOW CONTOURS  
DEEP WELLS**

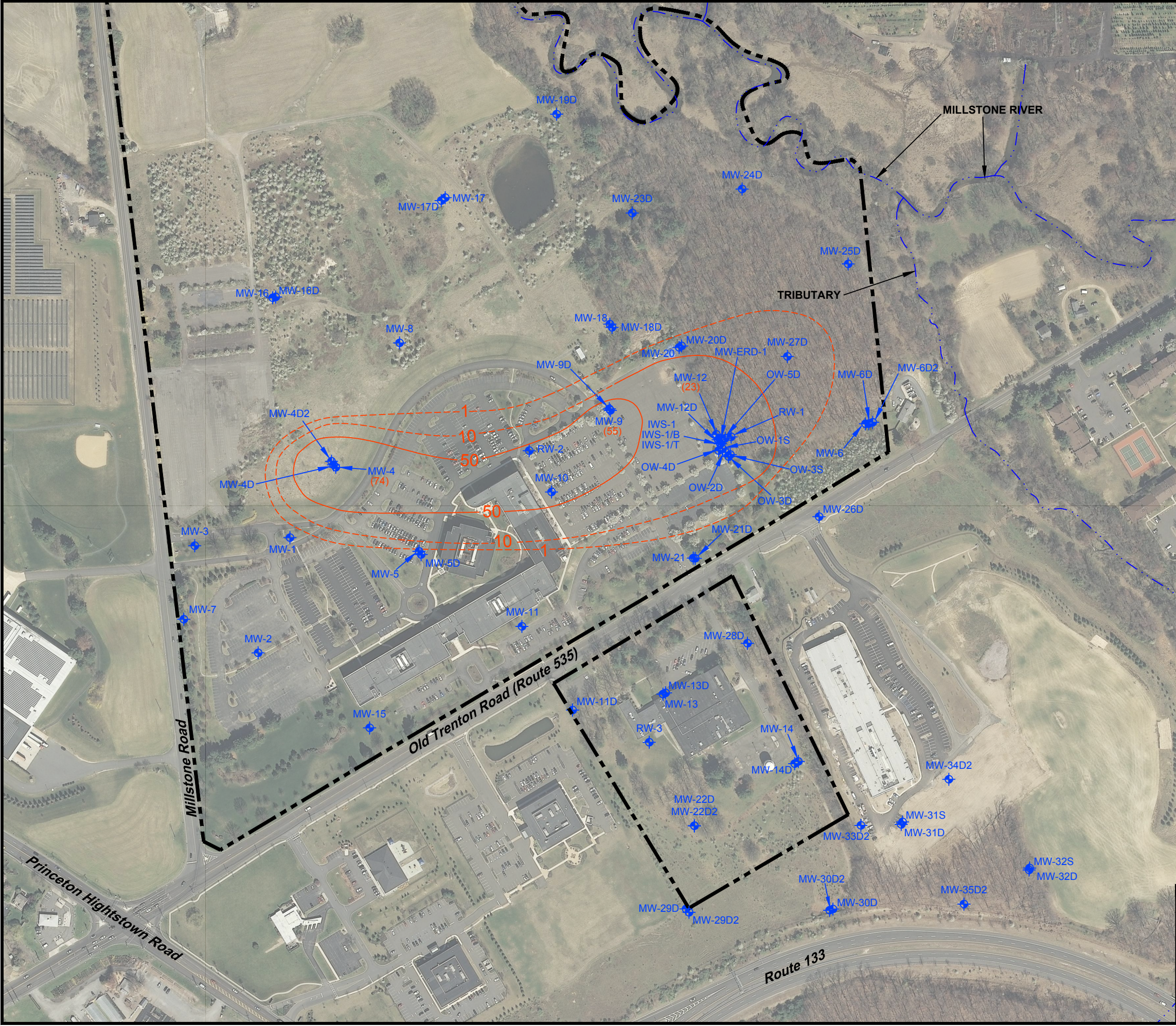
PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	FIGURE 8c
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File: J:\Project\LockheedMartin\_EW6.0 Project Input\6.1 Cadd\Drawings\GWC-June2015\_Shallow\_2015-09-03.dwg Layout: Fig10a User: karchij1 Plotted: Sep 30, 2015 - 3:39pm





**Legend**


- MW-12  
(23)  EXISTING MONITORING WELL WITH RESULTS IN PARENTHESIS.
- MILLSTONE RIVER AND TRIBUTARY
- SITE BOUNDARY
- ISOPLETH CONTOUR WITH CONCENTRATION

TCE = TRICHLOROETHENE  
NJDEP GWQS=1ug/L

SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, FEET

0150300600

Scale in Feet



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Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

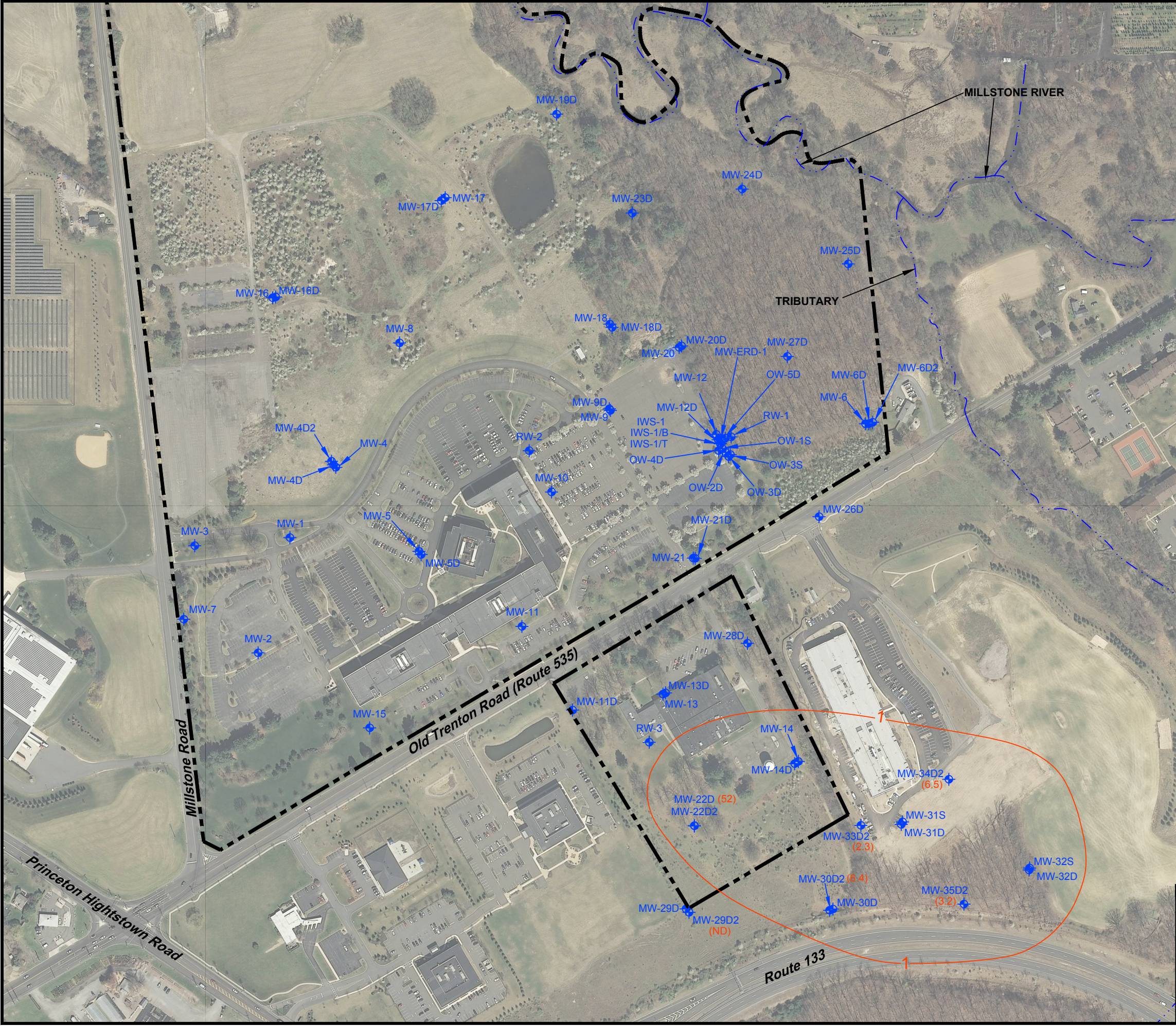
**JUNE 2015 GROUNDWATER  
CONCENTRATION CONTOURS  
SHALLOW WELLS**


PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 10a</b>
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PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 10b</b>
-------------------------------	-----------------	---------------------	-------------------










**Legend**

MW-35D2  
(3.2)  EXISTING MONITORING WELL WITH RESULTS IN PARENTHESIS.

 MILLSTONE RIVER AND TRIBUTARY

 SITE BOUNDARY


 1 ISOPLETH CONTOUR WITH CONCENTRATION

TCE = TRICHLOROETHENE  
NJDEP GWQS=1ug/L

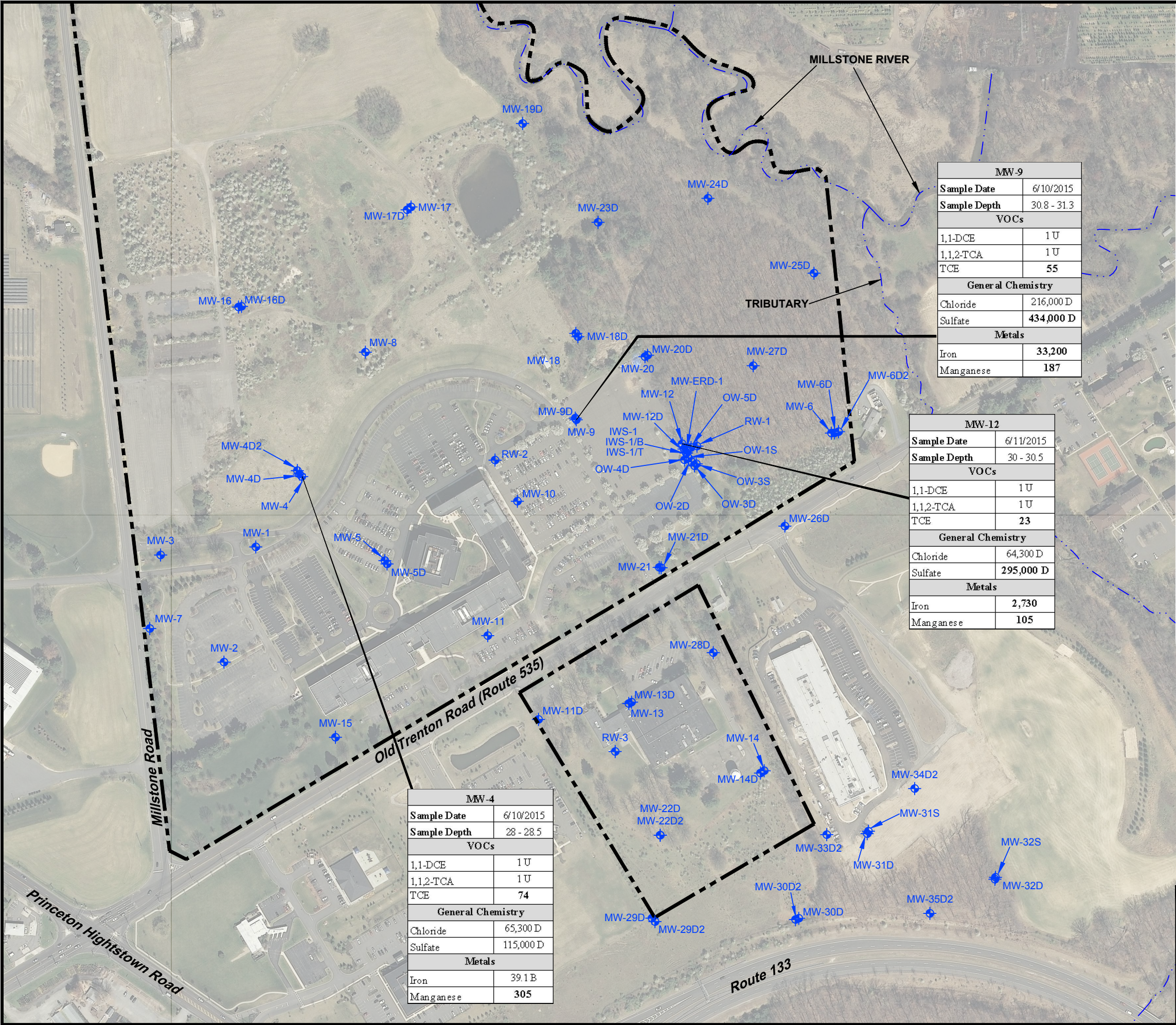
SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, FEET

0150300600

Scale in Feet

	Former Lockheed Martin Facility PI No. 158269 50 Millstone Road, East Windsor, New Jersey			
	<b>JUNE 2015 GROUNDWATER CONCENTRATION CONTOURS DEEP WELLS</b>			
	PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 10c</b>





**Legend**

MW-32S EXISTING MONITORING WELL

MILLSTONE RIVER AND TRIBUTARY

SITE BOUNDARY

SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET

**Key**

Analyte	GWQS
VOCs	
1,1-DCE	1
1,1,2-TCA	3
TCE	1
General Chemistry	
Chloride	250,000
Sulfate	250,000
Metals	
Iron	300
Manganese	50

**Notes:**

All results are reported in micrograms per liter (µg/L).  
GWQS = NJDEP Groundwater Quality Standard.  
If an analyte was detected above the GWQS in March 2015, then results for that analyte from all monitoring well samples were shown.  
VOCs = Volatile Organic Compounds.  
1,1-DCE = 1,1-Dichloroethene.  
1,1,2-TCA = 1,1,2-Trichloroethane.  
TCE = Trichloroethene.  
**BOLD** values indicate exceedances of the GWQS.  
U = Not Detected at the Reporting Limit shown.

0 150 300 600

Scale in Feet

**AECOM**

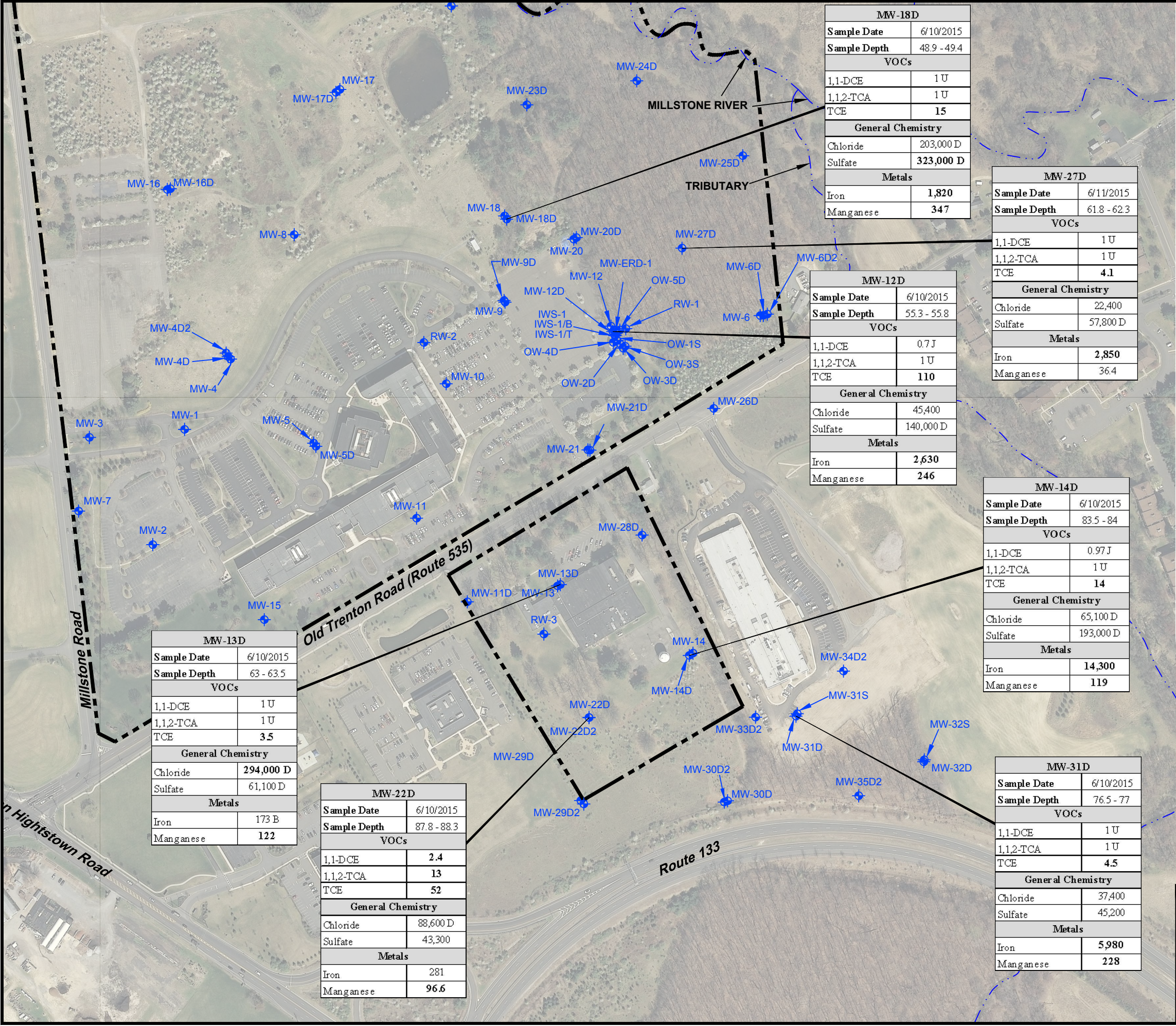
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**JUNE 2015 GROUNDWATER ANALYTICAL DETECTIONS SUMMARY SHALLOW WELLS**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 11a</b>
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**Legend**

- EXISTING MONITORING WELL
- MILLSTONE RIVER AND TRIBUTARY
- SITE BOUNDARY

**Key**

Analyte	GWQS
<b>VOCs</b>	
1,1-DCE	1
1,1,2-TCA	3
TCE	1
<b>General Chemistry</b>	
Chloride	250,000
Sulfate	250,000
<b>Metals</b>	
Iron	300
Manganese	50

**Notes:**

All results are reported in micrograms per liter (µg/L).  
GWQS = NJDEP Groundwater Quality Standard.  
If an analyte was detected above the GWQS in June/July 2015, then results for that analyte from all monitoring well samples were shown.  
VOCs = Volatile Organic Compounds.  
1,1-DCE = 1,1-Dichloroethene.  
1,1,2-TCA = 1,1,2-Trichloroethane.  
TCE = Trichloroethene.  
**BOLD** values indicate exceedances of the GWQS.  
U = Not Detected at the Reporting Limit shown.  
J = Value was detected and is estimated.

0 150 300 600  
Scale in Feet

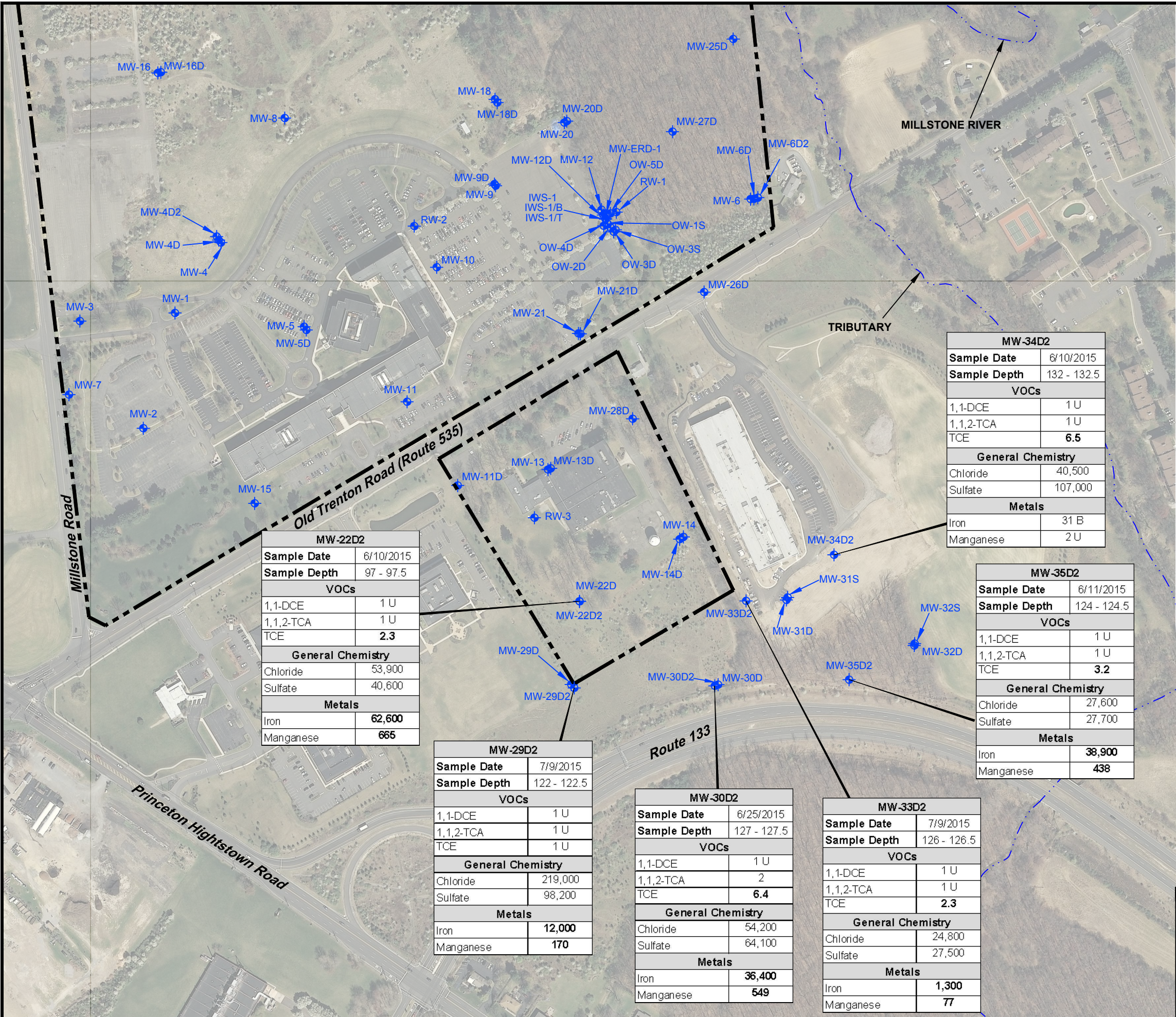
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

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PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

**JUNE 2015 GROUNDWATER  
ANALYTICAL DETECTIONS SUMMARY  
INTERMEDIATE WELLS**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 11b</b>
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Legend

- EXISTING MONITORING WELL
- MILLSTONE RIVER AND TRIBUTARY
- SITE BOUNDARY

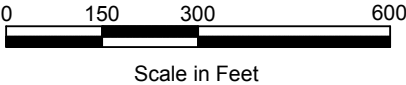
SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, US FEET

Key

Analyte	GWQS
VOCs	
1,1-DCE	1
1,1,2-TCA	3
TCE	1
General Chemistry	
Chloride	250,000
Sulfate	250,000
Metals	
Iron	300
Manganese	50

Notes:

All results are reported in micrograms per liter (µg/L).  
GWQS = NJDEP Groundwater Quality Standard.  
If an analyte was detected above the GWQS in March 2015, then results for that analyte from all monitoring well samples were shown.  
VOCs = Volatile Organic Compounds.  
1,1-DCE = 1,1-Dichloroethene.  
1,1,2-TCA = 1,1,2-Trichloroethane.  
TCE = Trichloroethene.  
**BOLD** values indicate exceedances of the GWQS.  
U = Not Detected at the Reporting Limit shown.



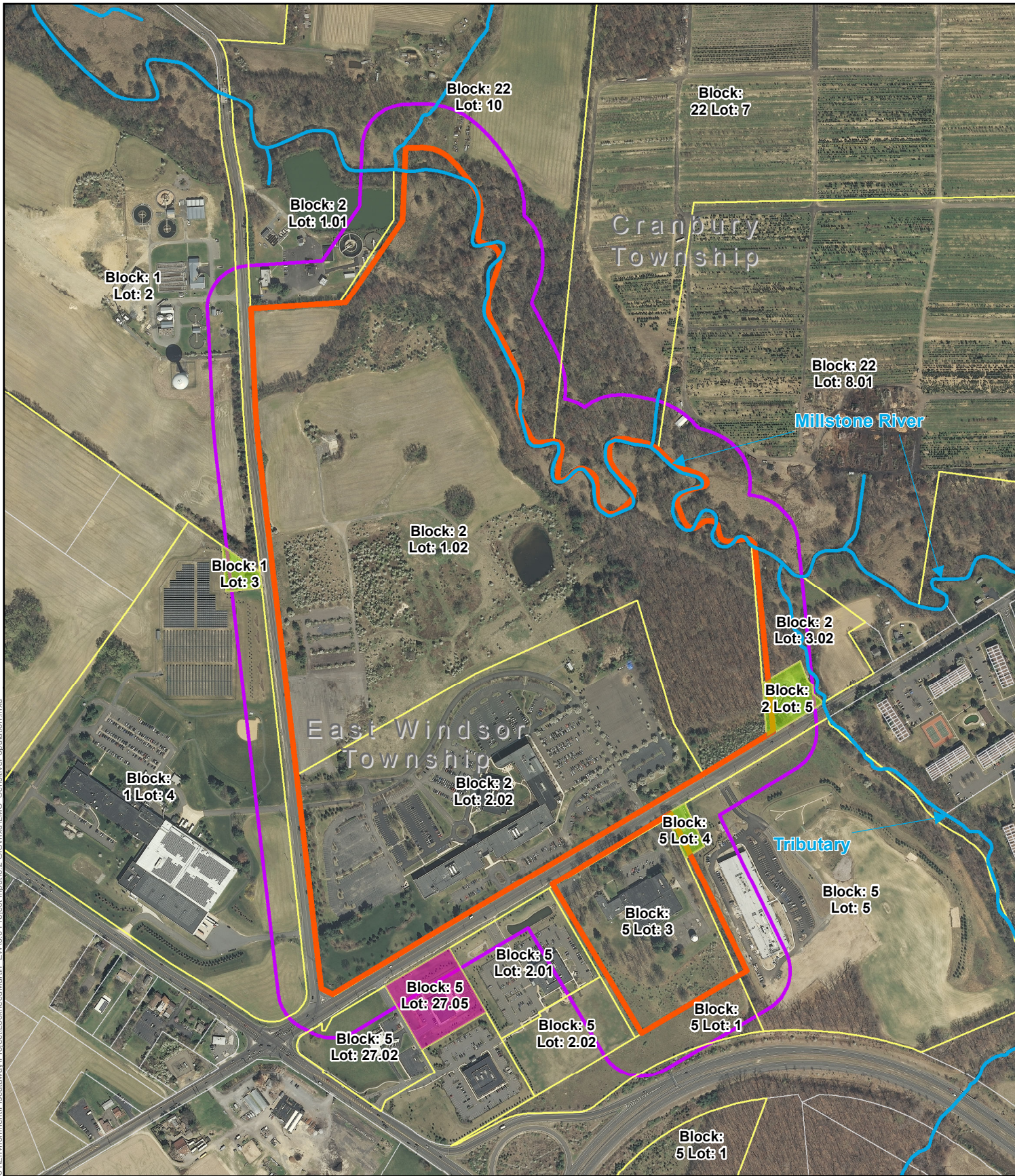
ENVIRONMENT  
30 Knightsbridge Road  
Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road, East Windsor, New Jersey

JUNE 2015 GROUNDWATER ANALYTICAL DETECTIONS SUMMARY DEEP WELLS

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	FIGURE 11c
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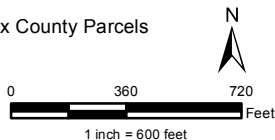


#### Legend

- Site boundary
- 200-foot radius
- Parcels within 200 feet of site
- Mercer and Middlesex County Parcels
- Child care facility
- Residential property
- Stream

#### Notes

1. New Jersey State Plane Coordinate System NAD83, U.S. Survey Feet.
2. New Jersey 2012 High Resolution Orthophotography, Web Map Service (WMS), NJOIT, OGIS, <http://njwebmap.state.nj.us/njimager>.
3. Parcel data obtained from State of New Jersey Composite of parcels Data, New Jersey State Plane NAD83 and MOD-IV Tax List Search Database, NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), Trenton, NJ 20110729.
4. National Hydrography Dataset (NHD) Stream 2002, NJDEP Office of Information Resources Management (OIRM), Bureau of Geographic Information Systems (BGIS), Trenton, NJ 20101101.



**AECOM**

30 Knightsbridge Road  
Suite 520  
Piscataway, NJ 08854  
Phone: 732.564.3600

**Lockheed Martin Corporation**

Receptor Evaluation  
Sensitive Properties within 200 feet  
PI #158269  
50 Millstone Road  
East Windsor, New Jersey

Project #: 60328624

Date: 9/30/2015

1:7,200

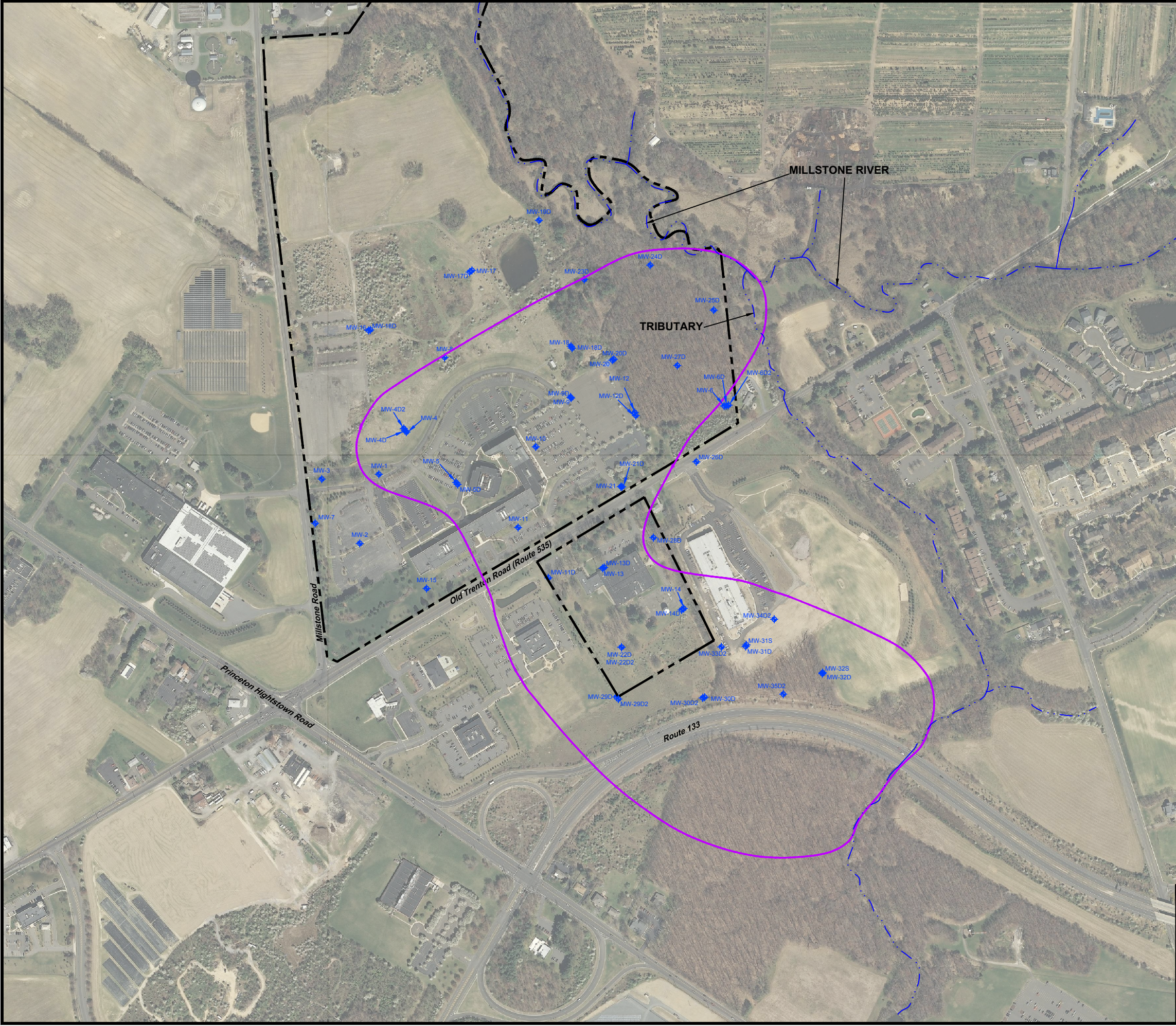
Sheet 1

FIGURE 12





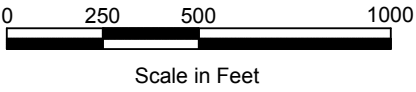




**Legend**

- MW-35D2  
EXISTING MONITORING WELL
- MILLSTONE RIVER AND TRIBUTARY
- SITE BOUNDARY
- CLASSIFICATION EXCEPTION AREA (CEA) BOUNDARY

SOURCE: NJ 2012-2013 HIGH RESOLUTION ORTHOPHOTOGRAPHY, NAD83 NJ ST PL, FEET



ENVIRONMENT  
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Suite 520  
Piscataway, New Jersey  
PHONE: 732.564.3600

Former Lockheed Martin Facility  
PI No. 158269  
50 Millstone Road East Windsor, New Jersey

**CLASSIFICATION EXCEPTION AREA**

PROJECT NO. 60328624.05.02	DRAWN BY: JK	DATE: 09/29/2015	<b>FIGURE 14</b>
-------------------------------	-----------------	---------------------	------------------